European Aviation Safety Agency

COMMENT RESPONSE DOCUMENT (CRD) TO NOTICE OF PROPOSED AMENDMENT (NPA) 2009-02B

for an Agency Opinion on a Commission Regulation establishing the Implementing Rules for air operations of Community operators

and

draft Decision of the Executive Director of the European Aviation Safety Agency on Acceptable Means of Compliance and Guidance Material related to the Implementing Rules for air operations of Community operators

"Part-OPS"

CRD c.1 – Comments received on NPA 2009-02b

I. Comments received on NPA 2009-02b

(General Comments)	-

comment *997* comment by: *Sky Service Netherlands BV*

We are an small compagny in the Netherlands with 1 Cessna 172.

We make seight seing flights(not longer than 60 minutes) from our field EHTE.

The flights we make are always VFR by day light. The flights are singel pilot operations with a commercial pilot (cpl) license.

Now the European EASA has ordered that we shall commit on the EASA OPS NPA'S 2009-02 a,b,c,d,e and f, and also NPA'S 2008 22 a,b,c,d,e and f and also OPS 2008-22 C we can not en may not make these flights without an AOC.

From the 37 small compagny's already 33 compagny's can not make these flights any longer because off these rules.

I urgent ask you to give us permission to make these seight seing flights in a Cessna 172 in the same way we did the last 25 years without an AOC.
In Germany the do not use these rules and that small compagny's may do this flights with out an AOC. In the Netherlands it is forbidden to make these flights without an AOC.

We ask you to make the rules for aeroplanes like the cessna 172 (three passengers) different from the rules for a Boeing 747 and make exemptions for the small operators like me (1 person).

I can not have a AOC and an CAMO because the ruels are to difficult and the price is to high !!

Please help us !!!!!

comment *1039* comment by: *AECA helicopteros.*

Acoording BR Article 1.2 SAR appears to be defined as "similar service" - i.e. not covered by EASA Parts, and thus subject to national regulation. This has not been notified formally.
What is the position?

comment *1041* comment by: *AECA helicopteros.*

The BR/ER indicates that the commander must have this authority, an IR is required to assign it.

comment *1043* comment by: *AECA helicopteros.*

Text in JAR OPS 3085 and IR 6.b l required the commander to "ensure that the pre-flight inspection has been carried out"
It should still be covered in an IRs because, as it is contained within "6. Continuing Airworthiness", it is not clear that there is still an obligation on the PIC to ensure it has been done (and in some cases, it will be the responsibility of the PIC to do it).

comment *1373* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

- **Concern Detail:**

Missing possibility to introduce general comments into CRT.

Comment / Proposal:

The CRT offers no possibility to introduce general comments e.g. on structure or systematic approach. Results of consultations might not display real concerns as these can not be expressed in an adequate form. CRT must be given a special part for general comments.

- **Concern Detail:**

Systematic approach according category of adressee not fully implemented.

Comment / Proposal:

The idea of structuring EASA regulation alongside the specific category of adressee (authority, operator, organisation etc.) has not been realised in a constant manner. Regulation should be reviewed in this regard in case this systematic approach would be maintained.

- **Concern Detail:**

Quality of provisions partly poor.

Comment / Proposal:

Formulations have to be reviewed and be brought in more precise form. Moreover, terminology must be streamlined as it is higly inconsistent all over the NPA. Definitions must be coordinated. Definitions shall be extracted in a special part of regulation which should apply tho the whole of european aviation regulation.

- **Concern Detail:**
  Too many definitions like "suitable", "properly qualified", "acceptable to the authority".

Comment / Proposal:

Constitutional principles of rulemaking and democracy demand for clear,

understandable formulations with a previsible content. If for technical reasons a certain felxibility in details should be given to the competent authority, then at least the criteria used for the assessment must be provided in the formal law. It would be very difficult also for the administrative courts to take legal decisions on appeal.

- **Concern Detail:**

EASA goes beyond the mandate it has been given from the Commission. It creates additional burden on industry and authorities without any measurable progress in safety. Such overboarding rulemaking is detrimental to the european industry policy and the development of competitive aviation service providers in Europe.

Comment / Proposal:

The political mandate of EASA was to transpose existing JAA standards and projects as well as ICAO SARPs into equally binding and clear Community law. The project presented in NPA 2009-02 by EASA goes beyond this clear mandate in several points and puts addidional burden on the industry and the authorities. With this approach the competitiveness of the european industry on the global scale is hampered (e.g. there was never forseen a regular medical examination or attestations for cabin crew). Such additional standards would be costly and useless in terms of safety. EASA has to streamline the project and to delete regulations that go beyond the mandate in order to safeguard a level playing field for the european airline industry on a global scale and, thus, to foster the global development of a competitive european aviation industry.

- **Recommandation:**

Back to JAR-structure or electronic tool to see JAR-structure. Stick to ICAO.

Comment / Proposal:

The EASA OPS-regulation in its present form is too complex to be fully and clearly understood by the majority of the target group in aviation. Though, it does not meet the constitutional principle of clear and understandable rulemaking. We would strongly emphasize to structure the EASA rules along the system of ICAO Annexes and the SARPs therein. This makes the rules clearly understandable on a global scale.

comment *1460* comment by: *E.W.Guess (Holdings) Ltd*

Dear Sirs,

I would like to add my comments as to the proposal, we mainly operate our helicopter on company business with only our company employee's as crew and we are all fully aware of the risks involved in helicopter operations as are our families, I personally have been flying since 1966 totalling 6,000+ hours and have never suffered an in flight incident requiring a PAN or MAYDAY response.

I think you should look carefully into the statistics as regard to light helicopter failures, especially over water, and to which types have repeatedly

failed, before you apply a BLANKET ruling an all types.

Furthermore, helicopter opperations rarther than risking lives SAVES LIVES and rightly so helicopters involved in search and rescue should and do comply with your proposal.

I personally feel the proposal will add additional cost which is totally unnecessary, and is yet another restriction of our personal choice and liberty.

Yours, Ray Guess Ceo

comment *1462* comment by: *ECA - European Cockpit Association*

Several draft NPAs have been taken into account in NPA 2009-02. Several shortcomings, much needed clarifications and amendments to bring the operational regulations in line with certification specifications, notably runway state definitions, have been proposed by the JAA Performance Subcommittee in DNPA-OPS 47. By not considering the proposals from DNPA-OPS 47 inconsistencies existing in the operating rules are not properly addressed. Furthermore, by not incorporating DNPA-OPS 47 the proposed operating rules are not in line with latest scientific knowledge and as such do not reflect state-of-the-art or industry best practices as indicated in NPA 2009-2a.

comment *1481* comment by: *Airbus*

In this case of complete re-codification of rules, it is especially important to have sufficient explanatory material and traceability of requirements.
Although the cross-reference tables between EU OPS 1 / JAA TGL 44 and the proposals of NPA 2009-02 are helpful, there are a number of requirements added, or modified, or with modified applicability, that are not explained and cannot be traced back. The reasons for those changes should be explained, as noted in our comments on some paragraphs.

comment *1492* comment by: *Charles MCCANN*

I am the owner of a Robinson R44 Raven II G.CMCC and have over 1000 hours on type.

EASA consultation document entitled NPA No. 2009-2b is a serious inhibition to the freedoms I currently enjoy and its proposals are a significant threat to fairness as the proposals are entirely disproportionate to the risks particularly to over-water flight.

In the West of Scotland we have over 300 islands, some just a few miles

from the mainland, others as much as 50. It would be impossible to continue the quantity of flying I do within these, which during about 9 months of the year I will fly regularly. For example, I take visitors to a castle and restaurant on the Isle of Skye about 8 times in the summer; this is a two-hour flight from Glasgow with about 40 minutes over water between islands. It would take 7 hours to drive the distance with much of it on single-track island roads.

I also fly guests to the Isle of Islay for golf or whiskey distillery tours. The withdrawal of this and other similar flights would directly affect the high spending tourist industry in Scotland and damage rural communities' income.

In August 2007 I and a co-pilot flew a Robinson R44 from Long Beach California to Lanark in Scotland, a distance of around 7,000 miles, almost 1,800 of which was over the sea between Canada-Greenland-Iceland and Scotland. The helicopter was fitted with a long-range fuel tank, and non-automatic ELT and a radio-ground altimeter. Other than these items, it was a 'non-complex helicopter'. The sea trips were without incident and even in relatively poor weather we completed the longest sea journey of 580 miles from Iceland to Scotland safely. We raised £100,000 for charities (mainly Royal National Lifeboat Institution) on the back of this event.

Your proposals would make either of the above scenarios impossible to continue or be repeated, and I urge you to reconsider and listen to helicopter owners and clubs who would be so adversely affected if your proposals were implemented.

Thank you

Charles McCann

comment *1981* comment by: *Duncan Lee*

The European Parliament states "any new requirements should not inhibit existing recreational flying activities"
The proposals in this document are un-necessary and if implemented will severely inhibit recreational flying.

comment *2241* comment by: *Airbus S.A.S.*

Definite measure values should always be expressed as numbers.
The proposed text contains several measures expressed in words.

comment *2243* comment by: *Airbus S.A.S.*

For consistency reasons, the proposed text should adopt a unique primary measure unit; in example, altitudes are sometimes expressed in "m (ft)", others in "ft (m)".

comment *2244* comment by: *Airbus S.A.S.*

In AMC OPS.CAT.225.A(c) (3)(a), EASA proposes to use the term "Supplementary (S)TC" instead of "Supplemental Type Certificate (STC)" as defined in IR Part 21, Subpart E. It has to be kept in mind that FAR 21 also uses the term "Supplemental Type Certificate (STC)".

To ensure consistency within the EASA regulatory system, and in international certification activities, Airbus proposes to use terms and acronyms that are in accordance with already established implementing rules. A complete check of proposals in NPAs 2009-01, 2009-02 et al may be necessary.

comment *2502* comment by: *Royal Aeronautical Society*

General

There are many references to 'motor-powered *aeroplane(s)'*, yet the definition of 'Aeroplane' on page 22 is, 'An engine-driven fixed-wing aircraft heavier than air that is supported in flight by the dynamic reaction of the air against the wing'. This definition makes the phrase 'motor-powered aeroplane' tautological. **It is suggested that 'motor-powered aeroplane' should, where it appears, be replaced by the single word 'aeroplane' unless the term 'motor-powered *aircraft*' is intended.**

comment *2608* comment by: *JTS Aviation Ltd*

It is difficult to see or understand the rational behind the proposed increased equipment and restrictions for the small private pilot and operator using the 'non complex helicopters'. Specifically the compulsory fitting of floats to small helicopters and fitting of ELTs.

Who is drafting these proposals, is it a body of people who work in a land locked office and only time see water once a year when they fly to Croatia on the annual holiday. Do they understand the implication of people flying in England? Do they realise that putting this restrictions would further restrict where people can fly therefore further congesting the airways available for people to fly? Do they realise the extra costs and

My objections are three fold.

First, just the basic complexity and cost of installing this equipment in relation to the construction of the machine. What value will this add in comparison to the benefits? Frankly I would suggest it is detrimental both to safety as it would add further restrictions as to what can be done with a machine, more to go wrong, more to have to learn to use, more to service and more for EASA to have to inspect. Basically self perpetuating increase in costs and complexity which can not benefit anyone.

Second, what makes you think installing this equipment would make things safer? Have you done the statistics of incidents that would have saved life versus the hours flown in a helicopter for private use? Is it worth it, i.e. benefits vs cost (complexity)?

Third, just because you have fitted floats what makes you think that the helicopter will land and stay upright? If the ELT is fitted to a R44 or R22 in the usual place and the machine turns up side down is it any use, do you get a signal? I suspect not.

Ok, now we have all this stuff fitted and assuming we can take off and we can afford it, the unsuspecting pilot and EASA regulator may be lulled into a false sense of security, somehow thinking that flying excessive periods over is safe and a good idea. Chances are you probably have more accidents anyway.

This leads me to my last point. I am a PPL(H) of 9 years and now training to be a CPL(H). I take safety of paramount importance and frankly I do not like flying over water. So I take practical steps to minimise the risks. I carry 2 personal EPIRBS and I carry a small liferaft. I have done the ditching training, I always pick the shortest route over water and I never do it when the weather is marginal.

My point is that if you don't get into difficult situations in the first place you will not need any of this extra stuff. Therefore why don't you concentrate on education and training, providing better weather reports and generally make pilots safer.

In the end no matter how much equipment you have installed it will be the pilots responsibility and will be likely to be blamed if it doesn't work out.

comment *2609* comment by: *jim reeve*

i am a s ppl h with 50 hours.my hughes 300a is often short of power,and the adittion of any extra weight would be most dangerous.my asi is marked for vne so i fail to see any safety benefit in which units it is calibrated in.an automatic elt would add weight which would detract from flight safety rather than adding to it.for over water flight floats are not available for my aircraft.if they were the extra weight would be far more detrimental to flight safety than any benefits. for night flight again the weight penalty of proposed extra equipment would result in a net reduction in flight safety

comment *2610* comment by: *Richard Reeve*

I have been flying various aircraft for over 50 years and have never had an accident or near accident due to engine failure in flight. Low fuel caused an emergecy landing at an airfield 1n 1967. This was entirely pilot error. Cross water and night flying have been carried out useing appropriate auxiliary equipment. Torches, life jackets, PLBs etc.. I feel therefore, that these proposals are entirely nu-necessary and will not aid flight safety.
Richard Reeve.

comment *2628* comment by: *AOPA-Sweden*

A list of acronyms should have been very supportive.

comment *2629* comment by: *AOPA-Sweden*

AOPA-S has a feeling this ruling is directed to organizations or enterprises, with a flight department and unlimited resources to produce manuals. A small business will not have a chance to follow this ruling.

comment *2630* comment by: *AOPA-Sweden*

Article 8.3, Basic Regulation opens for some alleviations for non-commercial operators of complex aircraft. AOPA-S inquires such a relief for owner of VLJs.

comment *2812* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

There is not any clear definition in the basic regulation or the implementing rules, that says commercial ballooning is Commercial Air Transport. ICAO is defining Commercial Air Transport as international Transport. From our point of view commercial ballooning is a commercial operations other then CAT, which means a new category, because it is onlý partwise "aerial work";but not commercial air transport.
The position of EASA-proposals did not consequently follow the rules ,if commercial ballooning is commercial air transport, why they are not defining a special category of air transport for ballooning. Is it too complicated? Following EASA philosophie "make the rules proportional to the scale and scope and risk of the operation".

EASA has to find lower requirements for the operation of balloons.Balloons are the simplest aircrafts ever and the pilots are doing pleasure-flights normally inside the dimension of 10-20 miles with a flighttime of 1-2 hours. Balloonpilots are not flying for up to 10-14 hours, or at night, or over timezones. So this commercial operation is rather different to the other commercial air transports.
For the technical requirements we can see the EASA is finding differentiated requirements, why not also following that way for Operations? Following that reduced way, there must be also differentiated requirements for Age, Flight- and Resttime, Medical (is actually Class 2, which is o.k.for us) etc.

comment *2886* comment by: *UK CAA*

Page No:

Whole document with regards to performance matters.
Paragraph No: AMC & GM paragraphs relating to performance.

Comment: The Section 1 material from EU-OPS 1 / JAR-OPS 1 which has been transferred to AMC and GM should be transferred (back) to rule material.

Justification: Performance requirements contain important quantitative parameters and criteria (such as climb gradients, definitions and field length factors), which must be complied with unconditionally in order to achieve the intended level of safety. This will not be achieved by relegating them to advisory or guidance material because the resulting "flexibility" and "introduction of alternative creative solutions" will bypass this objective. Obvious examples are the definitions of Classes A, B and C, and the landing distance factors. Both of these requirements are examples of cornerstone operational parameters which need to be upheld uniformly across all MS if the uniform and high level of protection in civil aviation objective of EC Regulation 216/2008 are to be realised. Being relegated to AMC/GM implies that they are open to 'local negotiation' with Member States' oversight system, which will inevitably result in uneven implementation between operators and MS.

Proposed Text (if applicable): EU/JAR-OPS 1 'section 1' rule text should be reinstated as implementing rule material.

comment *2897* comment by: *jim reeve*

pilot steerable night light ! it is a job when autorotating from 2000ft to get half way through emergency checklist,let alone adjust gadgets. what if previous pilots have left it badly positioned? at least a fixed one points in the

right direction.more stuff to manage during an emergency will kill far more people than it saves! extra weight will also cause more fatalities in light helis.

comment *2975* comment by: *CAA-NL*

Comment CAA-NL:

The CAA-NL proposes to EASA to use the definitions related to dangerous goods as identified in ANNEX 18 and the Technical instructions for the safe transport of dangerous goods by air. Part I chapter 3.
(ICAO doc 9284 AN/905).

comment *2987* comment by: *AEA*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *2988* comment by: *AEA*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *2989* comment by: *AEA*

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted AEA comments to this NPA should be considered as the major concerns from AEA to this NPA but additional comments/concerns might be identified after the closure of the NPA comment deadline.

Proposal:

EASA should take on-board all AEA concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency.

comment *3532* comment by: *Trevor Wilcock*

I am commenting as an owner of an Annex 2 light aircraft and as a sailplane pilot.

comment *3578* comment by: *Light Aircraft Association of the Czech Republic*

This is the answer of the Light Aircraft Association of the Czech Republic.
During the work of MDM032 following conclusion was agreed and passed to the OPS WG:
- 1. For aircraft below 2000 kg MTOM the Essential Requirements should be applied directly except for 3 additional Implementing Rules (COM/NAV equipment, safety equipment, fuel reserves)
- 2. For aircraft above 2000 kg MTOM OPS 0 should be applied
see MDM032-DOC082 MoM 2007-04-17-19 Final Version.doc
Why this agreement was rejected?

Proposal: Just follow the recommendation of the MDM032 group.

comment *3596* comment by: *PPL/IR Europe*

Our comments relate solely to non-commerical operations and our general comments are:

1. We recognise the complexity of the task of EASA OPS, and we believe that the NPA, in the main, addresses this task effectively.

2. Our main concern is that there are a small number of areas in which non-commercial IFR is unduly restricted by regulations which read as written primarily for commercial operations, although falling under the "GEN" section. This has been the focus of our comments. We are opposed to the "creep" of commercial regulation into non-commericial operations, especially given EASA's commitments to good, proportionate regulation and recognition of the negligble third party risk posed by aircraft under 5.7t. We recognise the instances of this may be the resulting of text drafting rather than intent.

3. A futher concern is that some of the "complex aircraft - non-commercial" regulations are unnecessarily restrictive on the operation of light (under 5.7t) multi-engine turboprop aircraft, that have different certification requirements from jets or aircraft over 5.7t. We do not see any safety rationale for why a non-commericially operated twin-engine turboprop under 5.7t should need to meet performance criteria more restrictive than those in its type certification and approvals. These TC performance criteria have applied for non-commerical operations throughout the entire history of such aircraft, in Europe and elsewhere, and we believe that the safety record of such aircraft is better than non-complex piston or single-engine turbine equivalents in comparable operations. Therefore there is no 3rd party or any other safety case to recommend such restrictions for non-commerical operations.

comment *3610* comment by: *AUSTRIAN Airlines*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, we would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. We therefore urge EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *3822* comment by: *AUSTRIAN Airlines*

Comment:
The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.
Proposal:
Have a second round of consultation once all elements are available

comment *3823* comment by: *AUSTRIAN Airlines*

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted comments to this NPA should be considered as the major concerns from us to this NPA but additional comments/concerns might be identified after the closure of the NPA comment deadline.

Proposal:

EASA should take on-board all concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency.

comment *3893* comment by: *Austro Control GmbH*

General Comment to NPA 2009-02:

Referring to the explanatory notes in NPA 02a and to the remarks concerning AMC and GM Austro Control generally emphasizes that a distinction between requirements of hard and soft law has very carefully to be done. In case of doubt "essential safety elements" have to be regulated by rules and not by AMC.

Member States of the Austrian/Suiss/German legal systems are used to work with rules and explanations, but not with soft law as it is foreseen in the draft IRs. Besides that, European aviation law with AMC may cause problems with standardisation and national administrative law, especially from the

aspect of legal force (of national decisions and approvals) and legal remedy; this has to be considered.

Furthermore Austro Control states that many items that should be regulated in the rules for safety objectives have disappeared in the AMC and GM. It is feared that the "highly praised" level of flexibility will end in a legal uncertainty. The consideration of flexibility is appreciated but can also be reached by the provisions of Art 14 of the Basic Regulation, what also grants a better involvement of Member States in the rulemaking process.

The transfer of some requirements to "non binding soft law" risks an effect of altering them and causing undesirable effects.

For example standardisation items (forms, reports…) and definitions have to be regulated by the rules and can never be in AMC for a uniform application; as many of the Annex 1 provisions of EU-OPS/JAR-OPS have safety related matters, they shall be in the rules. Generally much more of the AMC provisions have to be retransferred to hard law and the performance based approached has to be moderated.

The more is regulated by hard law, the more legal certainty, standardisation, efficiency and harmonisation will be reached.

The AMC procedure provided by the new EASA rule means a long time expensive administrative burden and bureaucracy for the Member States, EASA and the whole aviation community. Besides that legal certainty and a uniform legal basis are not assured for all stakeholders.

CS, AMC and GM should not be more than guidance and AMC should in every case be limited to really non essential implementation aspects.

Therefore it is urgently recommended that proposed AMC and GM are reviewed and checked if – in the interest of safety impacts – they may be re-transferred to the rules.

Concerning the new structure Austro Control criticizes that its readability and its transparency have to be improved. It is not very easy to understand and makes it very hard (in spite of e-tool) to find all relevant provisions of the concerned stakeholders. E.g. there a three parts to read to find all relevant requirements for cabin crew, there are 5 parts to read HEMS relevant requirements and the risk to overlook relevant requirements is high.

comment *3987* comment by: *Virgin Atlantic Airways*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. These major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA is unlikely to provide legal certainty.

We also note that this NPA is not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, we would like

to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. We therefore urge EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Realign the NPA with EU-OPS.

comment *3991* comment by: *Virgin Atlantic Airways*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented upon (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available.

comment *4088* comment by: *Elvington Park Ltd*

The proposed requirement for Helicopters to carry floats while over water fails to equitably balance all relevant risk factors,

1 Typically most non CAT and many CAT Helicopters are over water Less than 1% of hours flown, the deterioration in flight performance by 5-10% in range and speed with decreased power to weight and handling performance reduction through an increase in drag and weight when floats are carried, this must result in a global reduction in flight safety, offsetting any apparent safety benefit of floats,

2 It is not practicable to fit floats to many Helicopters and the cost where floats can be fitted is not in proportion to clamed benefit particularly in view of point 1.

Floats cannot easily be detached and re fitted or it may not be practicable to do so and even if they could this may not avoid the safety problems of performance reduction described in point 1,

The increase in flight duration of 5-10% caused by the drag / weight impediment of floats results in greater safety risk than any safety benefit gained from the very limited utility of floats,

comment *4229* comment by: *KLM*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *4230* comment by: *KLM*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *4434* comment by: *Deutsche Lufthansa AG*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this

NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *4435* comment by: *Deutsche Lufthansa AG*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *4436* comment by: *TAP Portugal*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *4437* comment by: *TAP Portugal*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some

elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *4438* comment by: *TAP Portugal*

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted AEA comments to this NPA should be considered as the major concerns from AEA to this NPA but additional comments/concerns might be identified after the closure of the NPA comment deadline.

Proposal:

EASA should take on-board all AEA concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency.

comment *4453* comment by: *Deutsche Lufthansa AG*

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted Lufthansa comments to this NPA should be considered as the major concerns from Lufthansa to this NPA **but additional comments/concerns might be identified after the closure of the NPA comment deadline.**

Irrespectively of what the consultation rules say, it is unacceptable to force stakeholders to make detailed, constructive, and comprehensive comments on such a big package which is a MAJOR deviation from the current rules.

Proposal:

EASA should take on-board all Lufthansa concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline without claiming that the public consultation period has run out. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency. The task given to EASA by the Commission was to build upon the heritage of EU-OPS as close as possible. Under this condition, the

consultation rules could have easily been met.

comment *4891* comment by: *CEV (French Flight test Centre)*

CEV "french flight test center" general comment to NPA2009-02b

It is CEV opinion that flight test operation are specific and should need a special section in this NPA.

Following paragraphs provide a proposal which is consistent with nowadays flight test operations.

Proposal

Introduction of a new subpart which has the same format than subpart D

Subpart E Flight test operations

OPS. FTO.001. Competent authority

Notwithstanding OPS.GEN.005, for the purpose of this subpart, the competent authority for flight test operation shall be the authority designated by the member state where the aircraft is registered.

OPS.FTO.002 Flight test operation non applicable paragraphs

Notwithstanding OPS.GEN.005, following paragraphs are not applicable:

OPS.GEN.100

OPS.GEN.105

OPS. GEN.145 to OPS.GEN200. FTOM will define accordingly the flight test policy

OPS.GEN.425 to OPS.500. FTOM will define the safety equipments necessary for safe operation in flight test operations.

OPS.GEN.600

OPS.GEN.605

OPS.FTO.005. Scope

This part establishes the requirements to be met by an approved flight test organisation to qualify for the issue or continuation of flight test operational approval

OPS.FTO.025. Privileges of a approved flight test organisation

The scope of the flight test activities that the flight test organisation is approved to conduct shall be specified in the flight test operational manual

OPS.FTO. 035 Continued validity of a specific approval

Approval shall be issued for an unlimited duration. It remains valid subject to ***a valid DOA and/or POA.***

OPS. FTO. ? Authorised flight test operations

Flight test operations shall be conducted as described in the FTOM

OPS. FTO? Crew member for flight test operation

The composition, the competence and experience of the crew must comply with the requirements contained in FCL for the pilots or the Appendix XII to part 21 for flight test engineers and of pilots engaged in categories 3 and 4 of flight testing.

Part-OR

Chap 1

OR.OPS.100.GEN Operator responsibilities : to be adapted

Section II – Manuals, Logs and Records

OR.OPS.015.MLR Operations Manual : to be replaced by FTOM

OR.OPS.020.MLR Minimum Equipment List (MEL) : to be deleted

Section IV – Air operator certification : to be replaced by DOA/POA

Section V – Flight Crew: To be replaced by FTOM

Chap 3

Additional requirements for commercial operations other than commercial air

Transport

OR.OPS.240.FC Recurrent training and checking Operator

Proficiency Check? : to be discussed in the future flight test group

Section VI – Cabin crew : ASD to check if applicable (Airbus?)

Section VII – Technical crew member in HEMS, HHO and NVIS operations

Section X? – Technical Flight test engineer

OR.OPS.005.FT Scope

(a) This Part establishes the requirements to be met by Flight test engineer in flight test activities.

(b) ***A flight test engineer is assigned by the operator to duties in the aircraft for the purpose of monitoring flight test activities and/ or assisting the pilot in the operation of the aircraft and its systems during those flight test activities****.*

OR.OPS.015.FT Conditions for assignment of technical crew to duties

(a) Flight test engineers in flight test activities shall only be assigned duties if they:

(1) are at least 21 years of age;

(2) are physically and mentally fit to safely perform assigned duties and responsibilities;

(3) are periodically assessed for medical fitness, based on aeromedical best practice, to safely exercise their assigned safety duties;

(4) have been checked as proficient to perform all assigned duties.

OR.OPS.020. FT Initial training

Before being first assigned to operate, each technical flight test engineer shall complete all training required by the Appendix XII to PART 21 for flight test engineers.

OR.OPS.045.FT Checking

(a) Following the completion of training, each flight test engineer shall undergo a check to demonstrate his proficiency in carrying out his flight test duties.

(b) Training and checking shall be conducted for each training course by personnel suitably qualified and experienced for the subject to be covered.

comment *4963* comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5100* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *5109* comment by: *M. LOMBARDI*

I REALLY AGREE WITH YOUR PHILOSOPHIE, ALSO I AM IN LINE WITH THE POINTS YOU DISCUSS IN THE EASA.

comment *5155* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

The overall structure of the OPS-regulation makes the regulation too complicated for private operations of non complex aircraft.

Proposal:

Consider a new structure and divide the IR into categories and single out what is applicable for operations with sailplanes, helicopters, aeroplanes, balloons etc.

comment *5157* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: EASA should closely follow the publication of ICAO State letters about Annex 6 in order to implement changes within the required time frame.

comment *5162* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: There is no balance between hard law (basic regulation and implementing rules) and soft law (acceptable means of compliance and guidance material) e.g. in the case of rules about aircraft performance and operating limitations. Some rules that today are considered to be of a mandatory nature, such as ICAO standards and rules that are put into EU-OPS, are in this proposal degraded to AMC or GM.

Proposal: Recognising the need to have a flexible approach in some cases, a restructuring of the proposal and balancing crucial flight safety rules in IR instead of AMC or GM is needed.

comment *5166* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: The NPA lacks a reference to Part M

Proposal (including ***new text***):

(a) An operator shall not operate an aeroplane unless it is maintained and released to service by an organisation appropriately approved/ accepted in accordance with Part 145 except that pre-flight inspections need not necessarily be carried out by the Part 145 organisation.

(b) Aeroplane continuing airworthiness requirements needed to comply with the operator certification requirements in ~~OPS 1.180~~ (insert new reference***) are those set up in Part M.***

comment *5173* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: There is no reference in the NPA to a nominated post holder responsible for the management and supervision of the Maintenance system.

comment *5180* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

According to Swedish regulations for non-commercial airplanes, start or landing is not allowed in cross wind exceeding the maximum demonstrated cross wind component stated in the Pilot's Operating Handbook.

Private pilots generally do not have the same skill and judgment level as commercial pilots. Hence there is a need to guide their decision making via a

regulation.

Proposal (including ***new text***):

Insert in the OPS.GEN section:

AIRPLANES

For non-commercial operations with non-complex airplanes, start or landing is not allowed in cross wind exceeding the maximum demonstrated cross wind component stated in the Pilot's Operating Handbook.

comment *5234* comment by: *Civil Aviation Authority of Norway*

Comment:

The Civil Aviation Authority of Norway (CAA-N) feels that Part OPS is incomplete as long as there is no Specific Approval for offshore operations conducted more than 10 minutes away from shore.

Norway – among with Great Britain, Ireland, Denmark and the Netherlands – has extensive operations of helicopters between the mainland and oil- and gas-installations. Each of these countries have national regulations aimed especially at these operations. The regulations are designed to minimise the extra risks affiliated with the operation.

Among the subjects that need to be regulated are

- supplementing operating procedures
- performance requirements
- operating minima
- crew training and experience requirements
- crew composition requirements
- equipment requirements

Regarding equipment requirements CAA-N feels it is of the utmost importance that helicopters are equipped with some extra form of Flight Following-system that can inform national FlightServices about its exact position (longitude, latitude and altitude) in real-time. This is the best way for SAR to find an aircraft after an accident and gives the best chance of survival for crew and pax.

CAA-N notes that EASA, when writing Part OPS, has tried to incorporate all the rules in JAR-OPS 3. From what we can understand, EASA has not proposed any regulation on Offshore Helicopteroperations due to the fact that no such rules were to be found in JAR-OPS 3. This is only partly correct.

The JIP for JAR-OPS 3, Section four, Part 2; Operations, describes how the AOC and Operations Spesification is to be compiled. In pages 51 and 55, under the label E) Special Authorisations/Approvals, it is assumed that any operator wanting to perform Offshore Helicopter Operations needs such a Special Authorisation/Approval. The basis for this Authorisation/Approval has

been national legislation.

We therefore feel that the Part OPS does not truly reflect the necessary levels of safety from JAR-OPS 3 unless an SPA for Offshore Helicopter Operations is included in the rules.

comment *5297* comment by: *Light Aircraft Association UK*

The LAA would like to point out that a number of the rules included in this proposal would not be achievable in older types of aircraft [e.g. OPS.GEN.205c), OPS.GEN.405a)1), OPS.GEN.410b), OPS.GEN.430, OPS.GEN.455] and therefore due consideration must be given to the potential impact on the operation of these types if they move out of Annex II in the future.

comment *5340* comment by: *Danish Balloon Organisation*

General Comments:

We suggest that Commercial Ballooning is moved from Subpart B Comercial Air Transport to Subpart C Comercial operations other than Comercial Air Transport.

Justification: Comercial Ballooning should not be regarded as Comercial Air Transport because the nature of this operation is more in line with "other commercial operations".

comment *5377* comment by: *peter barker*

1. I have fully read the detailed comments submitted by the Helicopter Club of Great Britain (HCGB) and agree with every comment made.

2. I attended the HCGB annual general meeting at which there was much discussion regarding the proposed new EASA rules; the following is a very brief summary:

i) There was 100% support for the comments submitted by HCGB to EASA.

ii) There was great concern that EASA, in putting forward the proposed new rules, has demonstrated a fundamental lack knowledge regarding the operation of light helicopters.

iii) In considering the submission by HCGB, members were anxious that EASA should recognise that the HCGB represents a third of all UK and Irish helicopter owners, and several hundred UK and Irish helicopter pilots, and should give proper weight to the HCGB submission.

iv) The proposed new rules were considered to be unfair and

discriminatory to UK pilots, in that, Britain and Ireland are island countries unlike the countries of mainland Europe.

3. With regard to item 2 ii) above it is imperative that, when considering rules relating to light helicopters, EASA employs people who have real expertise and experience with them and their operation. In particular, EASA should take special notice of the solid body of experience in the HCGB and consider very seriously the concerns voiced in the HCGB submission.

comment *5395* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *5396* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

comment *5398* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted AEA comments to this NPA should be considered as the major concerns from AEA to this NPA but additional comments/concerns might be identified after the closure of the NPA comment deadline.

Proposal:

EASA should take on-board all AEA concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency.

comment *5637* comment by: *ERA*

European Regions Airline Association Comment

- There are numerous examples of changes leading to cost impact on the airline industry without any obvious safety gain i.e. the changes proposed by EASA related to the In□Flight Relief of the Pilot□in□Command requiring a command course/Commander for the in□flight relief of a Commander whereas EU□OPS allows for a suitability qualified First Officer above Flight Level 200.
- The new rule□structure is very confusing and not user friendly. More explanations are needed from EASA regarding the changes to EU□OPS and the concepts and reasons behind the changes.
- This NPA is the major part of a package of NPAs that have been put out for comment over a similar time frame with an important underlying relationship between them. The particular size of this NPA and the other related individual NPAs has made it almost impossible to fully appreciate or comprehend the changes proposed and obviously their eventual implication on the operators concerned. This unfortunate state of affairs has been compounded by two additional factors not experienced before.

The first is the addition of the different phraseology in this and the other NPAs that has, unless you're a lawyer, made it very difficult to carry out any meaningful comparison between the new and old regulations. Certain reassurances that have been made regarding this NPA reflecting the latest edition of EU-OPS are not borne out by examples in the NPA. In many aspects fundamental differences have been introduced compared to EU-OPS. There is no legal basis and no safety justification for EASA to fundamentally alter the EU-OPS requirements.

The second factor concerns the fact that this NPA is a 'catch all' rule encompassing for the first time a wide spectrum from Commercial Air Transport to Ballooning operations. This makes it a leviathan in terms a regulatory document and a monumental multi task operation in extracting the relevant regulation appertaining to Commercial Air Transport operations. Despite the EASA e-tool [arriving on the scene far too late] a co-operative

way of working is needed to produce a better regulation. Would it not be an improvement to retain EU-OPS for the moment? This is a regulation already in place for Commercial Air Transport and is accepted by the individual authorities. EASA could then concentrate on the other operators covered by the IR-OPS that as yet have no common operations rule. Amendments to EU-OPS could be made by individual IR changes to the individual subparts over a period of time? This would enable a greater understanding of the proposed changes, reduce confusion and go some way to resolving the concern amongst smaller operators that they may have missed important fundamental changes that could impact them in the long run.

comment *5650* comment by: *bmi*

It is the opinion of bmi that EASA should consider the comments submitted by the United Kingdom CAA and the Association of European Airlines (AEA). bmi concur with the opinions submitted by these organisations.

comment *5760* comment by: *Julian darker*

Dear Sir,

I am a helicopter pilot with a PPL(H) and 700 hours gained privately over the last 17 years and I have owned an R22 for 5 of those years and now returned to renting R22 and R44 types.

I have flown all over Britain and lots of the continent and have always carried an ELT with 121.5 and for the last 3 years have carried a McMurdo GPS beacon.I also seem to remember I objected to plans to fit fixed beacons and floats etc about 4 years ago so why are we having to do it again when it is demonstrably not a safety issue by any informed observer and the costs and weight issues make these ridiculous proposals.

I mostly fly R22 helis and enjoy going overnight somewhere but there is absolutely no room for any extra equipment

with a passenger and bags-imagine having floats and a cylinder on an R22 even if they could be retro fitted-which they can't.

I go across the English Channel by the shortest route about twice a year and as I pilot I am prepared to take the small risk

of that crossing taking maybe 18 minutes - if the helico I was in had a fixed beacon and I had an engine failure over the water

it would sink with the aircraft and be useless which is why I have my beacon attached to my lifejacket so that I can activate it in an emergency.

Please take note of the vote in the European Parliament on 3 February 2009 on the Resolution on an 'Agenda for a sustainable Future in General and Business Aviation'- there was a huge vote in favour- it requires legislators to promote GA, ensure a fair deal through 'proportionate regulation' and encourage rather than restrict activity.

So no more helico legislation- they are just as safe as fixed wing (probably more so) and treat them as you would the ones with wings as they have the same engines after all and nobody needs to make things MORE EXPENSIVE.

Regarda

Julian Darker

comment *5868* comment by: *Norsk Luftambulanse*

Longer commenting period requested

Links to AMC should be added

Avoid vague or complicated wording

As a principle rule training should always be possible under the same alleviations that are applicable to the operation

comment *5882* comment by: *Michael Taylor*

I have found it very difficult to establish what the proposed rule changes are for helicopters.

The document would be greatly simplified if divided into separate sections for each aircraft type and operation.

Most of the definitions section is burdened with fixed wing requirements, which have little relevance to helicopter operations. Rather than having to wade through all of the definitions, I feel that they should be moved to the end of the document and sub divided by aircraft type and operation.

comment *6265* comment by: *DAeC LV NRW e.V.*

Introduction

The Deutscher Aero Club Landesverband Nordrhein-Westfalen (DAeC LV NRW) e.V. is the association of about 250 aviation clubs in the state of Nordrhein-Westfalen in the west of Germany. About 165 of these clubs (non profit) instruct about 2.000 Studentpilots on aeroplanes, sailplanes, micro lights, balloons and parachutes.

This is honorated and supported by die government which installed schoolsportgroupes- In NRW we do have about 75 "Schülerfluggemeinschaften".

By far the most activity in general aviation is happening in these clubs. Here pilots are under close observation and exchange lots of information. Aircraft belong to all members and are often not insured against damage or even complete loss. This leads to quite rigid supervision between the members. This setup contributes largely to the safety consciousness in general

aviation.

It is important to maintain this infrastructure and make sure it is supported by the regulations. This importance is also emphasized in the *„An Agenda for Sustainable Future in General and Business Aviation* COM(2007) 869".

We have structured our comments to the various paragraphs in up to four parts as appropriate:

Full reference to the passage (FCL.nnnn.XX (x)(n)(n))

Wording in the NPA

Here we repeat the passage from the NPA which we are specifically commenting

Our proposal

Here we specify how to change the wording of the NPA. This is either:

Add: for an addition of a passage

Change: changes in the original wording marked in red

Delete: delete a passage

Issue with current wording

A one sentence description of the problem

Rationale

A detailed reasoning why we think the change is needed or perhaps why we support the proposal in the NPA.

Our following general comments apply to many of the rules in this proposal. We therefore gather them here with detailed rationales and will then refer to them in our comments to the individual rules. This avoids repeating the rationales in multiple comments.

General Comments

1. commercial operations

Issue with current wording

According to the definition in Article 3 (i) of the basic regulation any operation with remuneration is a commercial operation. Already in previous comments it has been discussed that operations where the remuneration is limited to cost sharing should not be considered as commercial operations. In case this can not be distinguished some of the defined regulations are not appropriate for operations with non complex aircraft e.g. gliders, touring motor gliders or non complex airplanes.

Our proposal

Either state that Article 3 (i) of the basic regulation does not apply to cases where only costs are shared or compensated and there is no intention to make profit or introduce a class of commercial operations on non complex aircraft and define appropriate regulations for this class.

Rationale

Clubs in Germany have to be open to a certain extent to the communities

where they operate and offer passenger rides. This is necessary for the acceptance and integration of the clubs and their airports by the public. The clubs though can not afford to offer passenger rides for free but must ask for cost sharing or compensation. This should though not lead to the situation that all proposed regulations for commercial operations proposed in this NPA need to be followed. Either these passenger rides can be conducted as non commercial flights or less extensive regulations should apply. E.g. OPS.GEN.310(c) is not appropriate for the described class of operations.

comment *6273* comment by: *Baden-Württembergischer Luftfahrtverband*

Introduction

The Baden-Württembergischer Luftfahrtverband (BWLV) is the association of about 200 aviation clubs in the state of Baden Württemberg in the south west of Germany. About 160 of these clubs instruct on aeroplanes, sailplanes, micro lights, balloons and parachutes.

By far the most activity in general aviation is happening in these clubs. Here pilots are under close observation and exchange lots of information. Aircraft belong to all members and are often not insured against damage or even complete loss. This leads to quite rigid supervision between the members. This setup contributes largely to the safety consciousness in general aviation.

It is important to maintain this infrastructure and make sure it is supported by the regulations. This importance is also emphasized in the *„An Agenda for Sustainable Future in General and Business Aviation* COM(2007) 869".

Our following general comments apply to many of the rules in this proposal. We therefore gather them here with detailed rationales and will then refer to them in our comments to the individual rules. This avoids repeating the rationales in multiple comments.

General Comments

1. commercial operations

Issue with current wording

According to the definition in Article 3 (i) of the basic regulation any operation with remuneration is a commercial operation. Already in previous comments it has been discussed that many activities of non commercial organizations or private persons can not be considered commercial although payments are accepted but only for cost sharing. The Regulations for commercial operations in this NPA must not be applicable for these activities. Burdening clubs with the regulations for commercial operations would severely endanger their role in providing affordable flying for interested persons.

Our proposal

Either state that Article 3 (i) of the basic regulation does not apply to cases where only costs are shared or compensated and there is no intention to make profit or introduce a class of "commercial" operations on non complex

aircraft and state that this class is excluded from the regulations defined for commercial operations.

Rationale

Several activities of private or club operations can not be considered as commercial operations although a certain amount of compensation is paid to share costs. For example clubs in Germany have to be open to a certain extent to the communities where they operate and offer passenger rides. This is necessary for the acceptance and integration of the clubs and their airports by the public. The clubs though can not afford to offer passenger rides for free but must ask for cost sharing or compensation. This should though not lead to the situation that regulations for commercial operations proposed in this NPA need to be followed. These passenger rides should be treated like non commercial flights. E.g. OPS.GEN.310(c) is not appropriate for the described class of operations. An example for other non commercial activities where payments for cost sharing may be involved is the air tow of sailplanes after landing at a site of another club or helping out with tow planes.

comment *6470* comment by: *DGAC*

0 General Comments:

We would like to take advantage of this NPA 2009-02, to confirm previous comments concerning NPA 2008-22, that is to say: the new structure is hard to understand, the reading is complex and an overall view is missing. In France, despite many informatory meetings, stakeholders have had great difficulty in understanding these propositions. This is especially true for the small organizations which experience problems in understanding the measures which are applicable to them. It is indispensable that the simplified measures should be very explicit and that a dedicated consultation should take place.

The new regulatory structure does not seem to be well adapted; at least it appears, in our opinion, to be very far from being mature and we confirm our preference for to an activity-based approach.

We consider this NPA as an advanced NPA

It would have been appropriate to keep the old widespread JAR's structure with JAR OPS 0 (Gen), 1 (Plane), 2 (Corporate), 3 (helicopter) and 4 (aerial work), completed by the modern Safety Management Systems concepts and also to create, as necessary, new ones concerning balloons and other aircrafts (such as UAV, sailplanes…).

A great deal of work needs to be done on the definitions linked to "commercial"

The proposed requirements must not prevent a member State from carrying out, apart from the SAFA programmes and methods, ground inspections of

foreign aircraft on its territory, as specified by the directive 2004/36 item 2 article 1.

The BR 216/2008 5 and 7 recitals allow the member States to deal directly with certain local based operations as local flights, this possibility must be used

The transition measures must be extensive and gradual in scope according to the areas concerned.

1 Structure:

- Here are some examples which show the difficulties in reading those proposals, for the industry as for the Authorities, and which demonstrate the need for a return to a more classical activity-based regulation.
- Equipment: paragraphs are very long, divided by aircraft types, even mixed with activities (airplane & helicopter vs carriage of parachutists), and too complicated to understand which kind of seat belt/harness is required: OPS.GEN.405 "Equipment for all aircraft", items (a) (3) and (a) (4), then OPS.GEN.400 "Seat belts and harnesses" which should contain previous items, but we have to reach the third line to understand that it's only applicable to commercial air transport.
- A lot of time is uselessly spent trying to understand where the relevant information is to be found, and what is applicable to whom.
- The Agency's holistic approach leads for the reader and the future user, to a far less holistic vision of the applicable rules.
- In spite of the Agency's promise (§24 NPA 2009-02a Explanatory Note) to conserve the whole EU-OPS & JAR-OPS 3 dispositions', many differences crop up throughout the proposition, which leads the reader to doubt the rest of the dispositions, and these differences require a careful analysis, which has not been successfully completed yet because of the lack of time.
    - For example: the disappearance of the "commander" (we need to know who is legally responsible on board, during a flight), and the emergence of the "pilot in command" (PIC); moreover, the PIC can delegate only to another PIC, including above the FL 200, which was not the case in the EU-OPS. This new curtailment appears in AMC, which is somewhat out of place/..

All of this leads to, a very partial study of the dispositions, and the necessity to convert this NPA into an A-NPA. The Agency, after studying the comments/ , shall publish a complete NPA which should encompass the 3 NPAs 2008-17, 2008-22, 2009-02.

2 Definitions:

Serious work must be undertaken on the definitions:

(a) The substance:

CAT: a definition is needed consistent with other European rules. On the one

hand, the NPA 2009-02 (point 53, pages 34/123) refers for CAT to the ICAO's annex 6 definition of "commercial air transport operation" which is not consistent with the "commercial operation" definition contained in the basic regulation article 3)i). On the other hand, the EC 1008/2008, chapter II, article 3)3) b) excludes local flights from the obligation to hold an operating license. We propose to define the "commercial air transport" concept by using the BR's (article 3i)) definition of "commercial" and the concept of "air transport" as transportation from A to B, with A different from B, as the EC 1008/2008 suggests.

AMC/CS: Following the Agency's seminar organized on June 23rd, and the large number of explanations asked for, it seems to be necessary to introduce those definitions in the AR.

"Organization": this term shall be defined. Is it an organism or simply the fact of being organized?

(b) The form:

There is a discrepancy with other European Rules (cf previous), which could lead to a legal uncertainty.

Lack of definition: in this case, either we take the ICAO's definitions or we propose one. For example, "flight crew is defined nowhere, whereas "cabin crew" is only defined in Part CC and *"for the purpose of this part"*; so, we do not know which definition should be taken into account for Part OPS. Finally, we have no definition of the *"technical cabin crew"*.

We have found definitions at many different regulation levels, sometimes in IR, AMC, or GM. For example: the list of definitions begins in the IR section, and suddenly ends, to be continued in the GM section.

Sometimes, a definition is given in the AMC section whereas it is used in IRs.

Generally speaking, definitions should be gathered in only one IR "Part Definition" (except, if it were used in a single paragraph). This way, definitions can be used in other parts, allowing for more homogeneity.

3 Security

Some dispositions proposed by the EASA do not seem to be compliant with other Community Regulations already in force about security. The Agency should verify compliance.

4 Part CC (IR personnel annex V) and Medical CC (IR personnel annex II)

We would like to give full support to the Agency's proposition on both CC's certification and medical requirements.

5 Ramp inspections (IR AR section IV)

The exact scope concerning "ramp inspection" should be clarified.

We understand that the dispositions introduced for ramp inspections are taken in application of the article 10.2 of BR 216/2008 which says that a Member State must, on his territory, conduct ramp inspections on aircraft the general supervision of which he doesn't have the responsibility of, and that these inspections must be conducted by following agency-specified

methods, and this would therefore replace the scope of directive 2004/36.

We haven't found any basic regulatory specification in BR 216/2008 to justify the application of Community methods to ramp inspections conducted by a Member State on aircrafts used by operators that it oversees. All references to inspections on all but foreign aircraft must be removed from the agency's proposition in terms of Ramp Inspections.

In addition, the proposed dispositions must not prevent a Member State from conducting, without following the SAFA program (and its methods), ramp inspections of foreign aircraft, as described in paragraph 2 of article 1 of directive 2004/36.

6. Flexibility (use of paragraphs 8.2 and 8.3 of BR216) and subsidiarity

Articles 8.2 and 8.3 make provision for certification of commercial operations and declaration of non commercial operations of complex aircraft "unless otherwise determined in the implementing rules". EASA hasn't made use of this possibility in its propositions whereas we see at least two points where such dispositions could have been made use of.

(a) Fractional ownership and Shared ownership: these two concepts should be better defined. We understand that the agency's propositions do not make provision for a control of air operations conducted under these concepts (except declaration in the case of complex aircraft). We wish that specific dispositions be made.

Regarding fractional ownership, CEAC recommended, a few years ago, that the future European regulation take its inspiration from the American Part 91-K, that imposes conditions on the number of aircraft in the fleet and on the owners, and organises contractual dispositions between the administrator and the co-owners, and between the different co-owners.

(b) Aerial work: as a first step, it seems reasonable to certify only those aerial work activities that are considered as generating the most risk (everything that involves low altitudes: crop-spraying, line surveillance), the rest could be subjected only to a declaration.

(c) Furthermore, certain activities that are restricted to a very small geographical area, should remain in the domain of subsidiarity, taking into account the absence of any competitive aspect and technical requirements linked to a European recognition need.: such as local flights (from A to A, with both time and range limited), and initiation flights. This proposition follows the BR 216/2008's recital n°5, which was initially drawn up to introduce annex 2.

7 FTL

We have found only 4 of the 5 points specified in the article 8.4 of the CR 3922/91 (OPS 1.1105 point 6, OPS 1.1110 points 1.3 and 1.4.1, OPS 1.1115, and OPS 1.1125 point 2.1); the "reduced rest arrangement" is missing.

From our point of view, it seems clear that both the numeric values and the five points specified in article 8.4 should be in the IRs' section. CSs should allow the application of those 5 points. The Agency itself reminds, in the NPA 2009-02-a, that the sub-part Q's substantive provisions shall be included in

IR, according to article 22. Moreover, as specified in the NPA 2009-02-a, page 51 paragraph 41, numeric values are considered as "substantive provisions".

Last but not least, we wish, according to the Agency's statements, national provisions, implemented in compliance with article 8.4, to be taken into account and acceptable for further regulation.

8 Transition measures

The propositions contained in the NPA 2009-02 modify requirements significantly concerning certain kinds of stakeholders; which is the case for aerial work (COM non CAT), that are today, in most member states, under a declarative system (which is changing for a certified system).

Those operators are either badly or insufficiently organised and represented and they are faced with numerous problems to read and comment on those texts (not translated into French). Under those conditions, measures to facilitate an acceptable transition must be scheduled (by giving time and the appropriate means to understanding).

According to the BR 216/2008, the IR must be published before April 2012, but the actual putting into practice may occur later

Taking into account:

- The new rules' structure
- Modifications in existing regulations (EU-OPS/JAR OPS 3)
- A wider scope
- The crisis that airlines are facing

The adopted transition measures should be as long as possible and scheduled depending on the areas. We consider that the requirements for the non commercial air transport activities (areas generally not so strongly regulated), should be delayed.

A two-year period after the 8th April 2012 seems reasonable before applying the requirements concerning commercial air transport, and it is our considered opinion that a schedule should be drawn up on an individual basis for all the other activities.

9. Code share

The IR-OPS toughen the conditions by which European airlines will be able to conclude code share agreements with non-European airlines because the candidate must prove (by initial and regular in situ audits) to its Authority that the airline approached for the code share agreement observes the ER (the foreign airline will furthermore have to be TCO authorized) and certain dispositions of IR OPS. The medical fitness required of cabin crew could for example prevent the agreement.

French airlines are worried about the possible repercussions of these propositions on code share agreements that are already in force.

While we understand the legitimate concern that leads to clarifying the conditions associated with code sharing, we consider it not appropriate to

prevent such operations with a major airline that is supervised by a country that is recognized in terms of safety, on the ground that the non-European country does not conform to such and such disposition of IR OPS.

10. Work priority

If the process cannot be finished within the given time, France proposes that the following domains be treated in the following order from highest to lowest priority:

1. CAT airplane and CAT helicopter
2. Corporate aviation: complex aircraft and fractional ownership
3. other types of aerial work (airplane & helicopter)
4. all other domains

comment *6520* comment by: *BMVBS (MoT Germany)*

The Federal Republic of Germany cannot accept the text of the entire NPA 02-2009 as proposed. The text does not fulfil the requirements set out by the Regulation No. (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008.

First Reason: Endangering a high uniform level of civil aviation safety in Europe

In Article 1 of this Basic Regulation it is stated:

"1. The principal objective of this Regulation is to establish and maintain a high uniform level of civil aviation safety in Europe."

The Agency proposed in its draft an approach of so called "performance-based rulemaking" in order to provide a higher level of flexibility to fulfill the technical requirements of the implementing rules and to incorporate technical innovations more easily. While Germany supports the objective of this approach we have strong concerns that the way it is implemented will have negative consequences on the level-of-safety of European aviation.

The Agency proposes to express safety objectives by means of indefinite terms at the level of binding implementing rules. These indefinite legal terms are substantiated by "Acceptable Means of Compliance" (AMC) which are not legally binding. According to German administrative law, the NAA can only enforce binding law. The Agency or the NAA can publish AMCs and require the applicants to fulfill them as prerequisite e. g. for a certificate. If the applicant does not fulfill the requirements of the AMC the NAA would not issue the certificate. If the applicant does not accept the decision of the NAA he or she might go to court. In this case, the judge of the administrative court will decide whether the requirements set out by the written and binding law are fulfilled by the applicant or not. If the binding law contains indefinite legal terms the judge has a high level of freedom for his or her decision.

The consequence might be that a level-of-safety which is lower than that incorporated within the AMC is acceptable to the court. Moreover, courts of

different member states might come to different decisions. The result would be a level-of-safety which might be lower than today and which is certainly not uniformly applied. Therefore, the drafts of the NPA do not conform to the Basic Regulation.

In order to establish and maintain a high uniform level of civil aviation safety across Europe it is necessary to provide clear and unambiguous rules which conform to the standards of legal certainty. If a higher level of flexibility for the means to fulfill the binding law is desired the concept of performance-based rulemaking as proposed by ICAO might be used. In order not to compromise the level-of-safety, it is essential that performance objectives within the rules are clearly determined by either quantitative or qualitative terms. An indefinite legal term is too generic and is certainly not appropriate for this purpose.

The approach of performance-based rulemaking should be applied with care since even ICAO has identified risks for the conversion of prescriptive rules into performance-based ones. Except for the State Safety Program and the Safety Management Systems concept ICAO has not yet incorporated the performance-based approach into the standards. Therefore, Europe would be one of the pioneers when establishing of performance-based rules and must ensure that the States can still fulfill their obligation to comply with ICAO standards.

Second Reason: Unnecessary Deviation from EU-OPS

In Article 8 Paragraph 4 and 6 as well as in Article 22 Paragraph 2 (a) it is clearly stated that at least for the application area of commercial transport in aeroplanes the implementing measures of the Commission shall initially be based on the common technical requirements and administrative procedures specified in Annex III (EU-OPS) to Regulation (EEC) No 3922/91.

The new structure of the proposed rule text does not, by status and content, mirror the current operational rules, i.e. in EU-OPS and JAR-OPS 3. In case of an enforcement of the proposed rule, AMC and guidance material, the industry as well as NAAs would need to change well established checking survey plans, procedures, manuals and records. We do not see any justification for introducing a new rule structure, especially with the view of enhancing safety. In so far, the RIA to the NPA does not really justify the step taken by EASA to entirely change the structure of future European requirements. It is not understandable why EASA did not consider these inputs, as similar objections were raised by other NAA's as well as by industry's representatives. Initially, EASA argued with legal implications a duplication of rules (such as in OPS 1 and 3) would impose. Hence, so EASA, i.e. only one requirement for an AOC can be enforced, leading to a disruption of the well established EU-OPS/JAR-OPS 1 and 3 requirements. The same applies to the proposed licensing requirements. Legal experts throughout Europe very much questioned the legal position expressed by EASA, and meanwhile, it is very clear that similar requirements in different EU – Regulations are acceptable and, in fact, existent. For example, almost identical Authority requirements apply for EU Regulations 1702/2003 and 2042/2003.

Germany, therefore, proposes not to implement the proposed rule structure for OPS, but to develop dedicated requirements for every single air

operations application, such as JAR-OPS 1, 3 and draft JAR-OPS 2 and 4. We have to accept duplications in order to provide a separate book for each separate application. So, we also have to accept that in case of the need for changing similar requirements by an NPA, it is the task of EASA to steer the associated rule making work as well as to maintain and update the material as required.

Moreover, there is neither the obligation nor the mandate for EASA within the Basic Regulation to promulgate higher requirements for cabin crew attestations or flight time limitation rules than the ones which are already included in EU-OPS.

The way forward:

The quality of a regulatory amendment is highly dependent on the level of maturity of the draft as published for consultation. Ideally, the consultation process should help the Agency to perform mainly a fine tuning to optimize the final rule. The Notice of Proposed Amendment (NPA) No. 2009-02, however, is far from mature. It contains major conceptual mistakes. In consultation with the German aviation industry it has been assessed that the introduction of the proposed amendment would not only undermine aviation safety due to unclear or incomplete requirements, it would also erode the competitiveness of the European aviation industry at large.

The situation is considered extremely startling and the German government is increasingly concerned about these developments. We do not consider the proposed amendment suitable to support a process that would converge towards a consensus in the Committee phase of the regulatory procedure with scrutiny, and therefore would strongly advice EASA to re-consider the NPA as an "advanced" NPA that would be followed by a second round of consultation once a consensus on the conceptual approach has been reached. It is already clear at this stage, that this NPA will have to undergo substantial modification to an extent that would require a second round of consultation, if the principle of "better regulation" was to be respected.

In our view the proposed amendment not only fails to achieve the objective to base the implementing rules as much as possible on existing JAA material, it also fails to safeguard the highly important regulatory continuity, thereby creating incalculable risks for affected stakeholders potentially jeopardizing their very existence.

Against this background the Agency would be well advised to apply a sound change management strategy keeping the risks induced by the regulatory changes for the European aviation industry in mind.

Due to the extent and complexity of this rulemaking proposal the deadline of 31st July 2009 was still insufficient to coordinate a complete response by the German MOT. The German Ministry of Transport therefore generally endorses and supports the comments brought forward by the Luftfahrt-Bundesamt and German aviation stakeholders whose comments could not be collated and reproduced in due time.

comment *6533* comment by: *European Gliding Union (EGU)*

General Comment

Situation:

According to Article 3 (i) of the Basic Regulation "'commercial operation' shall mean any operation of an aircraft, in return for remuneration or other valuable consideration, which is available to the public or, when not made available to the public, which is performed under a contract between an operator and a customer, where the latter has no control over the operator."

In earlier comments in regards to Pilot Licensing and Authority Requirements we have mentioned that operations were the remuneration is limited to cost sharing should not be considered as commercial operations. In case this can not be distinguished some of the defined regulations are not appropriate for operations with non complex aircraft e.g. gliders, touring motor gliders or non complex airplanes.

Rationale

Clubs in Germany have to interact to a large extent with the communities where they operate and offer passenger rides. This is necessary for the acceptance and integration of the clubs and their airports by the public. The clubs are unable to offer passenger rides for free but must ask for cost sharing. This must not lead to the situation that all proposed regulations for commercial operations have to be followed. Either these passenger rides can be conducted as non commercial flights or less extensive regulations should apply.

Our proposal

Either state that Article 3 (i) of the basic regulation does not apply to cases where only costs are shared or compensated and there is no intention to make profit or introduce a class of commercial operations on non complex aircraft and define appropriate regulations for this class.

comment

6549 comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

European Powered Flying Union, or EPFU, is an European Organisation grouping National powered flying organisation of ten European countries :

Austria, Denmark, Finland, France, Germany, Norway, Luxembourg, United-Kingdom, Sweden and Switzerland.

EPFU acts at all European level to promote and defend the powered flying as a private sports and recreational flying activity. As a consequence, EPFU is involved in non complex aeroplanes operations and private flights.

EPFU comments are written in order to support general topics and principles agreed by its members, leaving them to comment directly to EASA their own detailed opinions and comments.

comment

6584 comment by: *FNAM (Fédération Nationale de l'Aviation*

Marchande)

The NPA 2009-02 introduces many changes in comparison with EU-OPS that are not justified regarding safety.

The comments hereafter SHALL BE considered as :

·A identification of some of the major issues FNAM asks EASA to discuss with third-parties before any publication of the proposed regulation, consistently with, and prior to, the above common and constructive approach In consequence, the comments hereafter SHALL NOT BE considered : As a recognition of the third-parties consultation process carried out by EASA · As an acceptance or an acknowledgement of the proposed regulation, as a whole or of any part of it · As complete : the fact some articles refer to not yet-published (or even not yet-established) pieces of regulation or are not self-consistent prevented FNAM to understand and comment them · As exhaustive : the fact some articles (or any part of them) are not commented does not mean FNAM has (or may have) comments about them, neither FNAM accepts or acknowledges them All the following comments are thus limited to our understanding of the effectively published proposed regulation, not withstanding their consistency with any other pieces of regulation, including with the Basic Regulation 216/2008, giving mandate from the Commission and Parliament to EASA.

comment *6585* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Small organizations should know how and in which way they will benefit of less complicated requirements. This must be more explicit and a part should be dedicated to this type of operators as when reading the whole legislation, it is really confusing to understand what they are expected to do.

comment *6587* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Publishing Part TCO (Third Country Operators) after the end of the consultation period of NPA 2009-02 (Part-OPS) does not allow stakeholders to fully comment this NPA. This implies that comments induced by this new publication may interfere with comments from NPA 2009-02 (part OPS). As a result , EASA should make a commitment to stakeholders to keep on taking into account OPS comments during the period of consultation of PArt-TCO as there are many interconnections between those legislations.

comment *6693* comment by: *Icelandair*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds

and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *6694* comment by: *Icelandair*

Comment:

The various EASA NPAs (NPA 2008-17, NPA 2008-22, NPA 2009-1, NPA 2009-2 and the NPA TCO) are all closely linked. The fact that they are not open for consultation in one NPA package leads to the fact that some elements of this NPA cannot yet be fully commented (due to missing elements) and that some additional comments might have to be provided after the closure of the NPA comment deadline.

Proposal:

Have a second round of consultation once all elements are available

Comment:

The whole NPA package is more than 3000 pages to be checked in detail within a very limited time-frame. For that reasons, the submitted AEA comments to this NPA should be considered as the major concerns from AEA to this NPA but additional comments/concerns might be identified after the closure of the NPA comment deadline.

Proposal:

EASA should take on-board all AEA concerns to these NPAs even when they have been identified after the closure of the NPA comment deadline. For commercial air transport we already have EU-OPS as a safe and practical regulation available. Therefore there is no justification to completely redraft the rules as suggested by EASA through this NPA and there is no matter of urgency.

comment *6796* comment by: *EFLEVA*

General Comment

The EFLEVA points out that a number of the rules included in this proposal

could not be met by some older types of aircraft. Many of these types are presently Annex II, but may be moved out of Annex II to come under EASA control at a later date.

e.g.

OPS.GEN.205c), "Fuel reserves" 30 minutes reserve would restrict some of these types to local flights only.

OPS.GEN.405a)1), "Carriage of Fire Extinguishers". Not of much use in an open cockpit. Additional weight of onboard equipment.

OPS.GE.430, "carriage of ELTs", Additional weight.

OPS.GEN.455, "First Aid Kits". Further added weight.

comment *6815* comment by: *DCAA*

Draft Opinion and Decision Part - OPS

It is our oplnion that Part OPS shall be a complete mirror of EU-OPS and JAR OPS.

Denmark cannot support the NPA in the actual version.

comment *7047* comment by: *British Airways Flight Operations*

British Airways Flight Operations department has been actively involved with the industry working groups which have been assessing NPA 2009-02, both within the United Kingdom and internationally. In general, our opinions about the material presented in NPA 2009-02 agree wholeheartedly with those of the Association of European Airlines (AEA), which, we note, has submitted several hundred comments. We have also worked closely with the UK Civil Aviation Authority, which has also submitted several hundred comments.

We have decided to submit this general comment about NPA 2009-02 so that EASA will be aware, unambiguously, of British Airways' concerns about the material presented in the NPA. It is our opinion that NPA 2009-02 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered. The reasons for this conclusion will be discussed below. As well as making this general comment, British Airways has also submitted many individual comments about the NPA, from a number of different sources within the company; however, all should be seen in the light of this opinion: **that NPA 2009-02 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.** In making other comments British Airways does not seek to endorse NPA 2009-02, but rather to limit the damage which would be done to the industry if the material was adopted into implementing rules.

As the Chairman of the EASA Management Board is on record as saying: the Agency has set out to produce idealistic, holistic perfection; regrettably, it has failed in that task. British Airways' first concern is with the structure of

the rule material presented. It is undeniably the case that safety proceeds from simplicity, not complexity. Therefore, for EASA to choose to move from a clear and unambiguous set of rules – published in one or two volumes (EU Ops / JAR Ops 1) – to a complicated and diverse set in many volumes causes us great concern. Furthermore, we note it was specifically the Agency's own decision to create a rule set based on the GERT: NPA 2009-02A makes it clear that neither the SSCC nor the AGNA endorsed that decision. We are also aware from conversations with some of the Agency's Rulemaking Officers that they were specifically instructed to use a different rules structure from that which had gone before "because EASA had to be different." We think such a policy decision - essentially to try to destroy the JAA heritage - by senior personnel from the Rulemaking Directorate (both those formerly employed and those still employed by the Agency) constitutes a serious error of judgment. We believe rules for commercial air transport should be published altogether in one volume, and not mixed with rule material for other types of aviation operations.

Another consequence of the Agency's desire to have one set of rules covering all types of operations is the combination of rule material for aeroplane operations and helicopter operations in the published NPA. Having had experience of the JAA rulemaking processes for Sub Parts D and E, we are aware that helicopter operations were never considered in the development of JAR Ops 1 material, and neither should they have been, by definition. Therefore, to propose rule material which is applicable to both types of operation in one document constitutes a serious mistake, which could give rise to what is called colloquially in English 'the law of unintended consequences'; in this case unintended, adverse, safety consequences. We are aware that one of the arguments the Agency has advanced for putting all rules in one place is the need for legal certainty in rulemaking. We are also aware that the Agency believes the same type of activity should not be regulated in more than one place. However, we believe those arguments are flawed: if rules were to be published separately for 'helicopters' and 'aeroplanes' they would be mutually exclusive and unambiguous, even if they contained similar material.

Many comments will doubtless be received by the Agency expressing disquiet that the material in NPA 2009-02 has departed greatly from EU Ops. We are very concerned that the Agency appears to have forgotten its mission – to promote SAFETY – and strayed into areas of social policy. Much new material has been introduced with no safety justification and with little, if any, meaningful regulatory impact assessment.

Leaving aside the concerns expressed above, much of the material proposed in NPA 2009-02 seems ill thought out and lacking in maturity. We are aware that the Agency has expressed concerns to the European Commission about its resourcing for the rulemaking tasks associated with the extension of scope to Air Operations. Of course, if EASA is really short of resources, it would have made much more sense for the Agency to base its rulemaking on the existing EU Ops material rather than branching off in new directions. We are aware this latter opinion is shared by the European Commission. Furthermore, we would have expected rule material to be presented in a mature form; instead, we see rule proposals which seem like early drafts rather than finished material. It seems ungracious to say "we told you so"; however, the Agency will be aware that the AEA in particular expressed

concern about the scope of the work required of the Agency versus the amount of time and resource available to it, and suggested the establishment of stakeholder working groups to help with the rulemaking tasks. Of course, those suggestions were firmly declined.

Throughout the rulemaking processes which lead to the publication of NPA 2009-02 *et al* various bodies have been engaged with EASA to offer help with its task and, latterly, to express concerns about the direction in which the rulemaking was proceeding. In particular, the AEA has been very proactive in discussing its thoughts and concerns with the Agency. Furthermore, we know the Agency's Executive Director has recently visited the CEOs of several major European operators to discuss issues of concern. Therefore, the Agency should be under no illusions that there is major dissatisfaction among the operators with the direction in which the rulemaking task has proceeded (although we are concerned that some people within the Agency still do not seem to have acknowledged or accepted that fact). Overall however, the Agency has resolutely refused to engage with the operators; has refused to acknowledge that its rulemaking proposals might be flawed; and has failed to understand its responsibilities to the organisations for which it is creating regulations. This lack of accountability is a major cause for concern.

Lastly, we are very concerned that we are being expected to comment on a large amount of new material, to tight timescales, but without all the relevant material having been published. Since EASA has produced a large amount of interdependent material, it is unacceptable for us to be expected to assess that material without all of it being available. The quality of the comments which the Agency receives will undoubtedly be adversely affected thereby, because interested parties are not in possession of all the relevant information.

Therefore, to summarise British Airways' position. We are greatly concerned with the material presented in NPA 2009-02 because:

- It is presented in many volumes in a way which makes it difficult to understand.
- It mixes material for helicopters and aeroplanes in the same document.
- It departs greatly from EU Ops and introduces new material with no safety justification.
- It is ill thought-out and not mature.
- It demonstrates a lack of accountability to operators by the Agency.
- It relies on unpublished material.

In isolation, any of these issues would give us significant cause for concern. Taken together, they lead us to conclude, unreservedly, **that NPA 2009-02 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.** All of the comments which will be entered by British Airways Flight Operations will be suffixed to that effect.

comment *7097* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

There are references to OPS.CAT.435, OPS.CAT.435 - Table 1, OPS.CAT.435 - Table 2, and AMC OPS.CAT.435(c)(3) in the EU/JAR-OPS/EASA references in NPA 2009-02f, but these items are missing in NPA 2009-02b

comment *7148* comment by: *Fédération Française Aéronautique*

The "Fédération Française Aéronautique", FFA, represents some 600 powered flying aero-clubs or associations in France and 45,000 private pilots. Almost all those aero-clubs offer flight training to their members up to VFR SEP PPL(A). The FFA is the national largest powered flying federation within the European Community.

comment *7194* comment by: *AIR FRANCE*

Comment :

This NPA contains several changes in term of structure, new concepts and content in comparison with the EU OPS which leads to additional complexity. The various NPAs (2008-17, 2008-22, 2009-01, 2009-02 and the NPA TCO) which are all closely linked have been open for consultation at different dates which make the reading difficult as some elements were missing. It means that additional comments may be provided after the closure of the NPA comment period. Moreover the size of these NPAs (more than 3000 pages) and the limited period of time left for reviewing this material make it impossible to review everything into details. Therefore the comments provided cannot be comprehensive.

The proposed structure which mix type of aircraft and type of operations add a lot of complexity and leads also to difficulties of understanding.

Proposal :

Consider a second consultation of the whole package following this consultation

comment *7219* comment by: *Peter Moeller*

As the people who have to comment and later on transfer the regulation into real live are also busy in daily business the commenting period for such a huge set of rules seems to be too short.

Wording is often vague and very complicate. It will open doors for future interpretations among the NAA and the operators

Training for HEMS, HMS HHO must be possible with same alleviations that are applicable to the operation.

comment

7255 comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU is of the opinion that some equipments must be required only if they are necessary in the airspace to be used.

So EPFU is of the opinion that it must be possible in some areas, as uncontrolled airspace, to fly without useless equipments (for example, radio communication or transponder, etc.). It must be up to the operator to decide the use of its aeroplane and to install equipments needed for that use.

comment

7344 comment by: *K Franzen*

The overall structure of the proposed operational regulation is too complicated for private operation of non-complex aircraft.

comment

7377 comment by: *A. Mertz*

Definition von "commercial operation"

Die Einstufung von Flügen, die von nicht kommerziellen Organisationen oder Privatpersonen durchgeführt werden, und für eine Vergütung ausschließlich zur Kostendeckung /Kostenteilung anfällt, als "commercial operation" einzustufen, ist nicht angebracht und widerspricht der Zielstellung der EU, den Luftsport zu fördern.

Besonders schädlich wäre diese Einstufung bei Flügen zum Schleppen von Segelflugzeugen und bei Passagierflügen in Flugzeugen mit nicht mehr als 4 Sitzplätzen, wie sie von den Flugsportvereinen zur Nachwuchswerbung durchgeführt werden.

comment

7413 comment by: *David ROBERTS*

These comments are in a personal capacity, though the reviewers will know my role as President of Europe Air Sports, Chairman of the Royal Aero Club of the UK and immediate-past 1st Vice President of the European Gliding Union, and past Chairman of the British Gliding Assocation.

I have focused primarily on issues in these proposed IRs for gliding and power flying, leaving to other specialists in ballooning and helicopter operations to comment. I would however draw your attention to the submission by the Helicopter Club of GB and the associated submission from the European Private Helicopter Alliance. Their concerns are serious; the costs implications enormous, and must be taken on board by EASA if that sector of private aviation is not to be crippled by some of the proposed rules.

Obviously I support the comments made by Europe Air Sports, the European Gliding Union and the British Gliding Association (these being the response

documents I have seen at a late draft stage).

I have focused on a few issues. Some of my comments refer to matters on which I made strong representations during the drafting stages, through the MDM.032 working group. It is disappointing to see that some of those draft rules are still in the texts, despite my clear exposition of why they would be inappropriate or impractical (e.g. carriage of documents, especially flight manuals, in sailplanes)

It is essential that when these comments (and the many others that no doubt EASA will receive from the S&RA sector) are reviewed, that they are screened against the criteria laid down by the Parliament when endorsing the Commission's paper on a Sustainable Future for General and Business Aviation. Such criteria as 'proportionality' and 'cost' in particular. The danger with the EASA approach of using a single template for all forms of civil aviation, from CAT to S&RA - something that EASA was 'warned against a long time ago - is patently obvious when reading the proposed OPS rules.

EASA should take on board the constructive criticms from many quarters over the last few years, and now determine to produce rules that meet the critaria referred to above, work more closely with the relevant 'industry' sectors in a partnership mode, and aim to 'get it right first time'. Any failure to do this will lead to considerable annoyance by 'industry' with EASA. That is not the basis of a healthy and respectful relationship between the regulator and regulated.

comment *7417* comment by: *European Sailplane Manufacturers*

The European sailplane manufacturers have two fundamental obervations regarding all of NPA 2009-02.

1) Adding more and more layers of regulation will not improve safety levels in non-commercial aviation like recreational and sporting aviation.

Here motivation would be a much better tool than regulation and punishment.

For a more elaborate comment about this observation see our comment No. 7418.

2) Using the same approach of regulation and actually identical rules for commercial air transport and small aviation is disproportionate ad will impose unneccessary burden upon small aviation.

Main reason is that ICAO regulation was never intentend for small aviation conducted locally with small aircraft on a non-commercial basis.

Application of such ICAO regulation into this context makes no sense.

More about this observation in our comment No. 7431.

For these reasons the European sailplane manufacturers oppose the principal method of application of such complicated community law into such a diverse community as small aviation.

Furthermore special proposed regulations are not practically within the

gliding context and this is commented accordingly in the regarding parts of this NPA.

comment *7418* comment by: *European Sailplane Manufacturers*

The European sailplane manufacturers do not agree with the RIA in regard to sailplanes.

Adding additional layers of regulation will not improve flight safety or lower accident rates.

Contrary to commercially driven variants of aviation the only really sustainable effect to get improvement in recreational aviation is by motivation and not by punishment.

Quite contrary adding new regulation will demotivate the most important people like the flight instructors, club presidents and other persons instrumental for looking after safety issues.

If the effort and money spent for regarding rulemaking and law enforcement actions would be spent into efforts to inform about safety aspects and to create incentives to promote safety this would have a much better impact than any type of new regulation.

As long as only the options "do nothing" and "regulate more" are compared always the "do nothing" variant will not be favoured.

(Because who wants to be accused of doing nothing?)

Therefore a "promote something" option should be added.

Forseeing all the money, efforts, frustration and uselessness in creating more and more regulations the manufacturers cannot agree with this RIA and the proposed regulations in the OPS NPA 2009-02.

If the European Community, the European Commission and the EASA are really interested to promote small aviation including gliding in order to give aviation a better position they should decide to asist by adding incentives and not to to hinder by adding regulation.

If EASA claims that it can only add new regulation then it should be considered either to give EASA the option also to offer incentives or to give the job to another type of organisation.

comment *7431* comment by: *European Sailplane Manufacturers*

(i)

Reference GM OPS.GEN.400(b)

The European sailplane manufacturers share the views of the Helicopter Club of Great Britain regarding application of the proposed regulation upon small aviation – in our case application to gliding.

Therefore the comment of HCGB was modified accordingly and now fully

reflects our opinion:

Our following objections are primarily based on the fact that the proposals do not distinguish enough between private flying (i.e. recreational and sport aviation) and commercially motivated operations.

Private, non-commercial operations should be regulated with a lighter touch than CAT. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them.

The proposals referred to in our following comments to the consultation would severely and detrimentally affect the majority European sailplane owners and pilots, for no perceptible benefit. Matters that EASA should consider are:

The proportionality of the proposals as regards sailplane use

The lack of legal necessity of ICAO compliance

The unreasonableness of ICAO standards as applied to private operations.

The safety benefit of the proposals, if any

The practicality of the equipment which is proposed to become mandatory

The cost of the equipment which is proposed to become mandatory

The need as perceived by a substantial majority of glider pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to sailplanes

(ii)

Proportionality

European Parliament resolution of 3 February 2009 on an Agenda for Sustainable Future in General and Business Aviation (2008/2134(INI)

Proportionate regulation and subsidiarity

2. Stresses the need to take into account the interests and specificities of general and business aviation in the development of future air transport policy initiatives, with a view to strengthening its competitiveness; in this respect calls on the Commission to ensure the application of the proportionality and subsidiarity principles in the design and implementation of both existing and future aviation legislation;

3. Reminds the Commission of the need to carry out, on a systematic basis, segmented impact assessments to provide for differentiation of regulations affecting different categories of undertakings and airspace users, if necessary and in so far as this does not compromise safety;

4. Calls on the Commission when adopting implementing rules on aviation safety, to ensure that they are proportionate and commensurate to the complexity of the respective category of aircraft and operation;

32 Considers as essential the promotion of recreational and sport aviation, as well as of European aero clubs, which constitute an important source of professional skills for the entire aviation sector

33 Calls on the Commission to take account of the important role that this aviation sector plays and can continue to play in the development of vocational training for pilots.

(iii)

EU Commission statement

Brussels, 11.1.2007COM(2007) 869 final

3.3. "One size does not fit all" – the importance of proportionate regulation

31. Many General and Business aviation stakeholders have expressed concerns related to the proportionality of regulations affecting them.32. Diversification of General and Business aviation as well as high proportion of SMEs and not-for-profit organisations in this sector calls for special vigilance in proper application of proportionality and subsidiarity.

33. The basic EASA Regulation16 and Commission's proposal for its amendment are good examples of the new proportionate rulemaking approach. Only the essential requirements are applicable to all operators while more stringent standards are added subsequently, if justified on the basis of the relevant criteria. This approach should be used in future rulemaking initiatives like aerodrome safety or air traffic management.

34. The Commission will monitor the application of the principles of subsidiarity and proportionality, to ensure that not only the policy and rulemaking processes but also the actual interpretation and implementation of the Community law has due respect for these principles. This monitoring will cover also technical mandates given by the Commission to specialised agencies, such as Eurocontrol.

(iv)

The EU Parliament has also stated that:

'Any new requirements should not inhibit existing recreational flying activities' and 'Implementation of the proposals should not impose significant additional costs on domestic private flying'.

(v)

ICAO Compliance.

EASA perceives the need to comply fully with ICAO standards. However, Article 37 of the Chicago Convention states " Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards and procedures...." and Article 38 of the Chicago Convention states "Any State which finds it impracticable to comply in all respects with any such international standard or procedure (.....) shall give immediate notification to the International Civil Aviation organisation of the differences between its own practice and that established by the international standard". The emphasis being what is practicable.

There is no suggestion that ICAO standards are in some way superior to current member state law, or safer. Actually any statistical accident data for gliding suggest that the safety in our type of aviation depends much more on geographical differences (e.g. mountainous regions) than the different

types of regulation existing in the different states.

Whilst ICAO Contracting States are obliged to notify differences to International Standards under Article 38 of the Convention, they are only invited to 'extend such notification to any differences from the Recommended Practices….when the notification of such differences is important for the safety of air navigation.

Thus the picture emerges that there is no necessity for total ICAO compliance. The actual safety case does not support the proposed equipment fit changes or other proposed regulations for gliding.

(vi)

The unreasonableness of ICAO standards as regards private helicopter operations.

Private non-commercial sailplane operations were certainly not though after when the ICAO standards and recommended practices were written, and ICAO make no provision for such operations to be more lightly regulated.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for gliding.

This is clearly unreasonable and disproportionate. Proper, less stringent, provision for gliding has not been made in the ICAO standards. The ICAO standards used are simply not fitting, and do not take into account present day sailplane operational safety and reliability.

(vii)

The safety benefit of the proposals (if any)

EASA does not suggest anywhere in the consultation letter that the safety of the current gliding regulations is in any way deficient. Indeed there is a complete lack of proven statistical useful data (e.g. accident data based on the number of aircraft or number of take-offs or flight hours.

Examples from different gliding communities within Europe point into the direction that not increased regulatory effort but better information coupled with incentives for safe operations would be of much higher value.

The proposed more stringent rules will in the contrary lead towards less motivated people like flight instructors or other decision makers in the gliding community thereby actually being detrimental for the safety case.

Additionally also motivation for the pilots will be affected leading possibly to less flying and thereby lowering the training status also clearly a detrimental effect.

(viii)

The need as perceived by a substantial majority of helicopter pilots

There is no perceived need for these additional requirements as proposed

There is overwhelming opposition amongst the members of the gliding community within Europe to these proposals. Our typical member is a high achieving and intelligent person, well used to evaluating risk. Where there is no risk to third parties, they are content to make their own informed choices

regarding their own flight safety. They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

The role of authorities should not be as being to protect the private pilot from himself. We trust EASA will follow this example.

(ix)

Summary

The European sailplane manufacturers strongly oppose the proposed regulations commented upon herein. It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists. We thus urge EASA to either withdraw these proposals entirely, or to amend them accordingly.

comment *7465* comment by: *ADAC Luftrettung GmbH*

Eine längere Kommentierungsphase ist dringend notwendig!!

Über 1000 Seiten mit zum Teil sehr schwer verständlichen und oftmals ungenauen Sprachgebrauch, und das nicht in der Muttersprache geschrieben, da braucht es mehr als die zur Verfügung gestellte Zeit.

Viele Zusammenhänge sind so komplex (z. B. Helicopter Operation without safe forced landing capability) , dass eine Kommentierung im vorgesehenen Umfang nicht ausreicht. Hier braucht es Arbeitsgruppen, die - besetzt mit Spezialisten aus allen Bereichen (nicht nur Offshore) - in erster Linie sichere aber auch praktible und wirtschaftliche Lösungen erarbeiten.

Ein wichtiger Punkt, der gemeinsam mit den anderen EHAC Mitgliedern erkannt wurde ist der, dass es möglich sein muss, das geforderte Training unter den gleichen Erleichterungen durchzuführen zu können, wie die jeweiligen Einsatzprofile (HEMS, HHO, NVIS etc.)

Es wäre von Vorteil, wenn in den zukünftigen Entwürfen (Hyper)Links zu den jeweiligen AMC, GM geschalten werden, um ein ständiges hin- und herblättern zu vermeiden! Die Studie der Vorschrift wäre dadurch wesentlich einfacher.

Ich möchte schon hier auf die Problematik der geforderten Leistungklassen in HEMS hinweisen. Auch mit den modernsten nach CAT A, CS 27/29 zugelassenen Hubschraubern ist nicht unter allen Umgebungsbedingungen PC 1,2 möglich. In Workshops zur Kommentierung der NPA 2009-02 wurde deutlich, dass es europaweit Probleme mit der Umsetzung dieser Leistungsklassen über das gesamte Einsatzspektrum von HEMS gibt (HEMS Operating Site, Hospital Landing Site). Diese Problematik wurde selbstverständlich in den jeweiligen Vorschriften kommentiert.

comment *7477* comment by: *Norwegian Air Sports Federation, Gliding Section*

The Gliding Section of the Norwegian Air Sports Federation supports the comments submitted by the European Gliding Union.

comment *7495* comment by: *D.Weatherhead ltd.*

We have owned and operated a Westland Gazelle helicopter G-CBGZ based in England for the past 8 years.

We have read the above documents and believe the proposals are unnecessary and will be expensive to install and operate, also that the proposals do not distinguish between private and commercial use.

We are members of the Helicopter Club of Great Britain and have read their comments, we wholeheartedly agree with their comments to you. Rather than writing all this out again in a very similar vein PLEASE ACCEPT D.WEATHERHEAD LTD'S INDEPENDENT BACKING to the Helicopter Club of Great Britain comments to you.

comment *7496* comment by: *Daryl Willcox*

I fully support all commenrts made by the Helicopter Club of Great Britain and add that these proposals are disproportionate and unecessary when applied to private helicopters.

I would go so far as to say that these proposals, if ther were to be implemented, would prevent many pilots from gaining relevant experience in over-water and night flying (as suitable aircraft would be very

scarce) and therefore the rules would have a potentially negative effect on safety overall.

comment *7512* comment by: *Christian Taylor*

I currently own a share in a light helicopter which has limited power. Firstly I would like to say that costs in owning a helicopter are already astronomic, without adding further unnecessary costs, for instance with all the proposed regulations regarding flights over water. How come EASA think that helicopters have to have all this extra regulation whereas fixed wing owners do not have to have such onerous rules? Why should we have to pay and the fixed wing owners don't? It's not even as if the fixed wing flights are any safer. Another concern with all this extra equipment is how do EASA expect my already ridiculously underpowered aircraft to cope with more sophistication and more weight? It would never leave the ground, let alone make it to another country! AND that's always assuming that there is room to fit all this extra gear in, there's certainly no room for a second attitude indicator, let alone a life raft, having a life raft flapping around in the cockpit is likely to cause an accident defeating the whole object.

Anyway it's nearly midnight here now and I want to get this in by the end of

the 31st July, so my point is to please note the problems and costs involved in running a light helicopter that's 35 years old, and at least change your paper so that private light aircraft like mine are allowed to continue flying as they are already. After all, this system has worked fine for years and years!

comment *7546* comment by: *AOPA UK*

A list of acronyms is very important for better understanding.

AOPA UK sees this ruling is directed towards organisations with flight departments and large resources to produce manuals. A small business will not have the same ability to follow this requirement.Article 8.3, Basic Regulation allows for some alleviations for non-commercial operators of complex aircraft. AOPA UK requires a consistent approach towards all non commercial operations.

comment *7637* comment by: *Bettina Schleidt*

I am private helicopter pilot and actually work towards my professional helicopter licence and have a PhD in psychology and engineering. This just for your information about my background and what kind of profession private helicopter pilots can have.

From my point of view flying helicopter on a private basis in Europe and especially in Germany is compared to e.g. the US a very expensive, complex and highly restricted affair. In addition to the strong reglementations private pilotes have to fullfill a lot of requierements and have to pass strong and very professionally oriented examinations on their way to become a private pilot. If I compare the effort I had with my private licence and compare it with what I learn in the professional helicopter training I don't see so many differences.

If now - on top - new regulations make our hobby helicopter flying even more expensive and complex this is from my point of view one more point that will lead to a reduction of private owned helicopters and private helicopter pilots. If this is the goal behind the NPA 2009-02b you are on the right way.

I recommend a revision that differentiates stronger between private and professional usage of helicopters and hereby protest against the NPA 2009-02b.

TITLE PAGE p. 1

comment *15* comment by: *George Knight*

Ambiguities

There are ambiguities in these regulations with respect to Powered Sailplanes. There are essentially three categories:

- Self-sustaining sailplanes (turbos) which are incapable of launching under their own power but which may sustain themselves for relatively short periods using a retractable engine or propeller. With the engine and/or propeller retracted they have the characteristics of sailplanes.
- Self Launching Sailplanes (SLMGs) that have retractable engines or propellers. They are able to take off under their own power and sustain themselves for relatively short periods. With the engine and/or propeller retracted they have the characteristics of sailplanes.
- Touring Motor Gliders that do not have retractable engines or propellers.

It is not clear from the proposed regulations which of the above should be treated as sailplanes and which should be treated as aeroplanes.

The regulations should make it clear throughout that self-sustaining and self-launching sailplanes (powered sailplanes) should be treated as if pure sailplanes and that TMGs should be treated as aeroplanes.

comment *16* comment by: *George Knight*

IMC and sailplanes

The definition of Visual flight includes the limitation that to remain in VMC the aircraft must, when above 3,000', remain 1,000' vertically and 1,500 metres horizontally from cloud with a flight visibility of 5 km up to 10,000' and 8 km above 10,000'.

The nature of soaring flight is that the best thermal, wave and frontal lift is often to be found in the vicinity of clouds. Forcing gliders to remain VFR as defined above at all times excludes them from those parts of the atmosphere where the best lift are to be expected for much of the time. A sailplane pilot should be permitted to fly less than 1,000' vertically from cloud and within 1.5 km horizontally, with a reduced flight visibility, as long as he remains clear of cloud – even if above 3,000 feet.

It is probably not within then scope of this NPA to consider if a sailplane **pilot** should be permitted to fly within 1,000' vertically of a cloud when above 3,000', but it does address the equipment to be fitted to a sailplane should pilot licensing rules permit a sailplane pilot to do so.

To require a sailplane or powered sailplane to be equipped for IFR as laid down in the rules proposed within this NPA are extreme and unjustified.

comment *1022* comment by: *British Gliding Association*

These comments are the view of the British Gliding Association.

EASA operational regulations, which will replace existing rules for commercial and complex aircraft, are not relevant to the sport of gliding within which appropriate, requirements have been uniformly developed through international bodies, for example the IGC and FAI. We know of no safety or operational case for the application of these implementing rules to gliding. The requirements are disproportional and will introduce an unacceptable layer of bureaucracy and increased costs. All comments within this response are made with this position in mind.

comment *1473* comment by: *John Henshall*

Overall, these proposals discriminate against GA helicopters. There are sensible relaxations for Aeroplanes used for GA flight which have not been applied to helicopters. They must also be applied to helicopters. Categorisation could be by way of weight - ie below 3,175kg.

The rules are disproportionate to the risk. Helicopters below 3,175kg not involved in commercial work should not be subject to such draconian measures, some of which they simply cannot comply with - floats on an R22, for example, are impossible. The cost of these ideas makes the "no significant cost" statement in the impact assessment nonsensical for GA aircraft. For my machine (which has fixed parts for floats, but not the bags) purchase and installation of flaot bags, ELT, raft etc is over Euro 60,000.

These proposals could add risk. Requiring an ELT for helicopter is not sensible as a single PLB would be of more benefit. Multiple ELT/PLB interfere (as shown in recent N Sea accident) so it is snsible for helicopters to carry a single item of equiment most likely to be of benefit in a real emergency - a PLB.

comment *2249* comment by: *Charles Barratt*

Floats cannot be fitted after.

How do I get my helicopter to France if I want to sell it.

What would it be worth??

I have not been trained to fly a helicopter fitted with floats.

How can the cost be justified when I do not fly over water that often

With all this equipment proposed to be fitted will I be able to take off??

comment *3405* comment by: *George Knight*

These operational regulations may be appropriate to replace existing rules for CAT and complex aircraft, but they are not relevant to the sport of

gliding and in most cases flight in simple single engined piston aircraft.

There are no operational or safety reasons to apply these disproportionate rules to gliding. They will increase cost and bureaucracy with no beneficial impact on safety whatsoever. These proposals discredit EASA which claims to be a Safety Agency.

The remaining responses are made within this context.

comment *3450* comment by: *Aero-Club of Switzerland*

The Aero-Club of Switzerland is of the opinion, that many elements of this NPA are well prepared, but also thinks, that some requirements proposed simply cannot be fulfilled for technical reasons, and that some increase the burden on the shoulders of its members by adding more bureaucracy to something that is intended to make fun.

We think the Agency wishes to create a perfect system, consequently costs will rise and, especially within clubs, less will be flown, to the detriment of safety.

Too strict regulations on gliding and on helicopter operations will in the end reduce glider flying on the one hand, reduce the number of available helicopters and of well trained helicopter pilots, simply because the Agency's proposals are, in our view, not well balanced and not based on operationally proven facts. We furthermore think, that it is not appropriate to propose the same rules for a light, a medium weight or a heavy helicopter.

We also think that the contents of the Commission Paper COM 2007/869 have to be taken into consideration, as well as the European Parliament Resolution of February 3, 2009 on an Agenda for a Sustainable Future in General and Business Aviation.

Very often we miss the necessary proportionality of the rules and we think that the helicopter industry is dealt with in an unhappy manner.

In reading the Agency's proposal several times to understand it our most important conclusion is that this one size does really not fit all.

Aero-Clubs and other organisations with the same scope create safety, constitute an important source of skills, are socially important to thousands of aviatiors. Unproportional rules will have negative impacts. safety will decrease when too much money has to be invested in equipment not really necessary instead of investing it in flying hours, and if the density of regulation will further increase aviation as a whole, GA in particular, will no longer attract young people looking for a promising career.

Our comments are written with these elements in mind.

comment *5099* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Relalign the NPA with EU-OPS

comment *5639* comment by: *ERA*

European Regions Airline Association Comment

- NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

- The ERA Directorate note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, we would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. We therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

ERA propose to re-align the NPA with EU-OPS.

comment *6069* comment by: *Mike Chadwick*

I consider myself to be a responsible private helicopter owner and pilot, and accept the need for a strict regulatory structure to protect the welfare of myself and others.

However, regulation is only effective where the rules can be applied in a practicable, usable and enforceable framework.

Having studied NPA 2009-02b, I have to conclude that the proposals

relating to the fitments of floatation equipment, elts and the extensive night flying equipment would be prohibitively onerous and of no clear benefit to most operators of light helicopters.

Reference to the air accident records should confirm that the cost and implementation of these measures would bear no relationship to the minimal risk reduction that might be achieved. Surely the rules for light, non-complex, private helicopters should be the same as fixed wing light aircraft?

I believe the Helicopter Club of Great Britain have studied these proposals in detail and their assessment, and my own view, in consultation with other helicopter operators, supports the same conclusions.

EASA should adopt option 4C, as defined in para 2.9 of notice of Proposed Amendment no. 2009-02G.

I sincerely trust that this consultation process recognises the flaws in these over-zealous proposals, and EASA are able to apply a workable, common sense policy that is respected by the very conscientious helicopter community and serves everyone's best interests.

comment *6320* comment by: *EUROPEAN GLIDING UNION*

These comments are the view of the European Gliding Union (EGU).

comment *6432* comment by: *Hugh Edeleanu*

The proposals in this respect regarding floats over short stretches of water are totally unnecessary and unworkable. Private fixed wing aeroplanes are allowed to fly over water and there is no significant difference in the risk of failure during flight between a correctly maintained helicopter and a correctly maintained fixed wing aircraft. There is absolutely no safety case whatsoever for this proposal.

The cost implications of the necessary work to comply with these proposed regulations are absolutely out of all proportion with the negligible increase in safety that would apparently follow.

comment *6457* comment by: *andy ballantyne*

I am writing to object to these proposed regulations which are absolutely crazy! The cost of completing the appropriate modifications which include the addition of floats as well as the modifications required for night flying are out of all proportion. I know of no instances where these measures would have been effective and if these rulings come into place then this will add a significant unnecessary cost to helicopter operations, including maintenance. I absolutely object to these proposals which are totally unreasonable.

comment *6462* comment by: *darren kinslow*

These proposed standards are unreasonable and discriminate against private helicopters. There is also no genuine safety reason that I can see as floats are a troublesome item, add weight to the helicopter, increase drag, increase cost and increase maintenance cost. In the unlikely event of the floats having to be needed these would often prove to be totally ineffectual due to sea conditions etc. I totally appose these proposed rules.

comment *6467* comment by: *Linda Champion*

I wish to lodge a seveer compliant against these proposed ridiculous new rules. The requirement to carry a life raft if the flight is more than three minutes from land when flying over water is crazy, This should be at the discretion of the pilot and would obviously also depend upon the time of the year, sea temperature and conditions and swimming ability of the occupants of the helicopter. In the event of ditching in the sea, I severely doubt that a life raft would be of any use in the circumstance. Mandatory floats for private flights over short water crossings are also unworkable and would be prohibitively expensive to retro-fit on most private helicopters. I would object strongly to the implementation of these proposed regulations.

comment *6532* comment by: *European Gliding Union (EGU)*

TITLE PAGE

These comments are the view of the Deutscher Aero Club e.V..

EASA operational regulations, which will replace existing rules for commercial and complex aircraft, are mostly not relevant to the air sports community. The requirements of the NPA are disproportional and will introduce an unacceptable layer of bureaucracy and increased costs to the voluntary work of the German Aero Clubs federations and local clubs. All comments within this response are made with this position in mind.

TABLE OF REFERENCE FOR NPA 2009-02 p. 2

comment *1876* comment by: *Aeromega*

This is a classic example of EASA attempting to implement legislation to simplify its own task without adequate research or justification. Safety Legislation must be propotionate to the risks involved and therefore be statistically lead. Proposing regulation without adequate statistical justification is a mis-use of EASA's powers. It is not EASA's remit to regulate small helicopters out of operation. The ICAO standards are unreasonable,

dispropotionate and wildly excessive in relation to small non commercial helicopters. They are not appropriate to be applied to private or training flights.

It is, at best, misleading and at worst, a blatent lie for EASA to state that there are no significant additional costs of compliance - for an R44, the cost of additional equipment could run to £50,000. For other types it may not even be possible to fit the proposed additional equipment.

comment *5262* comment by: *bmi REGIONAL*

It is the opinion of bmi regional that EASA should seriously consider the recently submitted comments made by the CAA and those of the AEA and we align our opinion with those submitted by these organisations.

comment *7324* comment by: *Europe Air Sports, VP*

Europe Air Sports is commenting on NPA 2009-02 because we are the only pan European Organisation for recreational and air-sports aviation. Of course, we trust the competence and expertise of our members and therefore ask to consider and incorporate the inputs of the following organisations as delivered on behalf of EAS:

Those organisations are:

Austrian Aero Club

Danish Aero Club

German Aero Club

Swiss Aero Club

Norwegian Aero Club

European Gliding Union

British Gliding Association

British Helicopter Club

German Helicopter Club

PPL IR Europe

We have evaluated the contributions and found them in line with our position, representing and endorsing our opinion.

TABLE OF CONTENTS FOR NPA 2009-02B p. 3-21

comment *1* comment by: *Francis Fagegaltier Services*

Editorial comment

Two logics seem to have been applied in the numbering : a "5,10,15, ..." logic and a "1,2,3, .." logic. The majority of the table of contents is based on the first one. The following references are based on the second one. It is suggested using only one logic.

OPS.GEN.001
OPS.GEN.147
OPS.GEN.222
OPS.CAT.001
OPS.CAT.111
OPS.CAT.116
OPS.CAT.156.A
OPS.CAT.156.H
OPS.CAT.316.A
OPS.CAT.326.A
OPS.CAT.327.A
OPS.CAT.406.A
OPS.CAT.407.A
OPS.CAT.416
OPS.CAT.417.A
OPS.CAT.418.H
OPS.CAT.424.A
OPS.CAT.426.H
OPS.CAT.427.H
OPS.CAT.432
OPS.CAT.442.A
OPS.CAT.447.A
OPS.CAT.457.A
OPS.CAT.462.A
OPS.CAT.482
OPS.CAT.516
OPS.CAT.517
OPS.CAT.518
OPS.CAT.519.A
OPS.CAT.526
OPS.COM.316.A
OPS.COM.406
OPS.COM.426.H
OPS.COM.486
OPS.COM.487
OPS.COM.488
OPS.SPA.001.GEN
OPS.SPA.001.SPN
OPS.SPA.001.RVSM
OPS.SPA.001.LVO
OPS.SPA.001.DG
OPS.SPA.001.SFL
OPS.SPA.001.NVIS
OPS.SPA.001.HHO
OPS.SPA.001.HEMS

comment *1095* comment by: ***EHOC***

Titles of AMCs

The index can contain, for some rules, many AMCs with identical titles; it is therefore not possible to see/understand what the content of each individual AMC might be; for an example see the series of AMCs associated with OPS.GEN.150 (17 almost identical titles - i.e. "Instrument Flight Rules (IFR) operating minima").

Each of these AMCs (GM) does contain its own title - e.g. "AERODROME MINIMA - TAKE-OFF MINIMA"; "AERODROME MINIMA - NON-PRECISION, CATEGORY 1 AND APPROACHES WITH VERTICAL GUIDANCE"; "AERODROME MINIMA - CRITERIA FOR ESTABLISHING RVR/CMR" etc.

It is this subject title that should appear in the index - not the rule title.

comment *1153* comment by: ***Stefan Huber***

Art.16 : When this difficult subject was considered previously, it was decided that any regulation for Aerial Work (AW) had to include non-commercial operations. Hence the scope of JAR-OPS 4 did not exclude that activity. AW now appears to have been included in the scope of 'Commercial operations other than Commercial Air Transport' thus excluding non-commercial AW. There are no requirements for non-commercial AW other than those contained in Subpart GEN; whilst this category of AW might not be large, it probably should be regulated and also be permitted the derogations from some requirements contained in Subpart GEN.

comment *1154* comment by: ***Stefan Huber***

Art.47 : The definition of 'non-complex operations' could be VFR day with an aircraft with a MPSC of 9 or less (with the specific exclusions contained in the appendices); 'local' could be (non-complex) operations within a limited and defined area (which would have an AMC attached) which start and end at the same location within the same day.

The definition and substitution of these terms within the text would permit simplified rules and resolution of the errors of omission and commission seen in the draft.

comment *1155* comment by: ***Stefan Huber***

Art.36 : Because CAT and AW are both also undertaken with non-complex aircraft, a more basic GEN would permit construction of any higher regulation to be undertaken in a much more logical way - without the necessity for the 'notwithstanding' and 'except that' constructs which are now required. Whilst it is accepted that all aircraft will have to comply with a

rule for basic GA for non-complex aircraft, attempting to construct requirements in CAT for non-complex aircraft, and requirements for AW with all aircraft, from a GEN text that is addressed at complex (where these aircraft are performing mostly Corporate Transport) as well at non-complex aircraft, is much more difficult.It has long been accepted that the regulation of AW - i.e. the working of aircraft on specific tasks, is of a different order to that where passengers are carried. Most understand that the prime objective for the regulation of AW is the protection of the environment and third parties; the protection of the crew is important but does not approach that required for fare paying passengers - the crew know and understand the risks involved.

comment *1156* comment by: *Stefan Huber*

Most AW operations are subject to individual risk assessment which will produce a mitigated work regime; attempting to apply the passenger-related requirements that are currently in Annex 6 Part II Section 3 - i.e. for complex aircraft, may not be appropriate. A revision of the model to have only basic GA rules in GEN, would assist in the production of a proportionate regulation for AW when inheritance is taken into consideration.It is suggested that the regulation be re-partitioned so that GEN addresses basic GA with non-complex aircraft; Complex Aircraft, CAT and AW should be addressed in additional requirements that sit, in parallel, above GEN and inheriting from its requirements.

comment *1663* comment by: *Fferm Abergelli*

I wish to object to the new EASA rules proposed as this would create very high costs for basic private helicopters.

Such costs are not sustainable for private operators in view of the low risks of visual flight over water and for night flying, if these rules are enforced then I can see many operators having to sell their aircraft myself included.

comment *3204* comment by: *Austro Control GmbH*

General Comment to the Content:

OPS.SPA.

It is suggested to add a Section X for ETOPS operation.

The key requirements from the ETOPS AMC shall be mentioned here; a requirement in the rules is in the interest of safety and legal certainty.

comment *3552* comment by: *Walter Gessky*

General comment to the content: OPS.SPA.

It is recommended to add a Section X for ETOPS operation. The key requirements from the ETOPS AMC shall be mentioned here, a requirement in the rules is in the interest of safety and legal certainty.

comment *4128* comment by: *DGAC*

Proposal:

Delete the following line :

"GENERAL-COMMERCIAL AIR TRANSPORT……128"

Justification:

Those words are only a subtitle for "AMC OPS.GEN.125 Portable electronic devices" and therefore should not appear in the table of content.

comment *7329* comment by: *Europe Air Sports, VP*

Again the repeat of a comment already stated earlier. Due to the huge number of items in the content the document is consisting of a huge number of pages making it nearly unreadable. As it was said by the Agency itself the user should benefit, therefore we again recommend to develop separate books for different categories of aircraft.

A private balloon pilot who wants to comply with the rules has to study 57 pages of the General Requirements to find out that most of the requirements are of no concern to him

B. I. Draft Opinion - Part-OPS p. 22

comment *1157* comment by: *Stefan Huber*

SAR appears to be defined by EASA as "similar service" - i.e. not covered by EASA Parts, and thus subject to national regulation. This has not been notified formally. SAR shall stay a state regulation due to diversity of systems (gov, private, fundation) and geography (sea, mountain, etc).

comment *2914* comment by: *Pietro Barbagallo ENAC*

1) General Comment: With the new set of regulations, consisting of different Parts, it may be difficult for the applicant to establish an easy compliance with the applicable requirements. It is necessary to go through different Parts and find which requirements are applicable. It could be better to

have, like it is today, specific set of regulations for each kind of operation. This is more significant if the search of the applicable requirements through the electronic tool box (available on EASA web site) is not a certified result.

Justification: It may be difficult for the applicant to establish compliance with applicable requirements.

2) General Comment: Several of present requirements included in EU OPS and JAR OPS 3 amend. 5 will be moved to AMC and GM.

Justiifcation :opening up to a wide range of alternative AMCs throughout the EU before the Agency can assess their validity in such a potentially wide range of applications and with an even longer lag before standardisation audits can sugggest remedial actions, seems us to carry a significant safety and business risks. The NPA does not suggest that the Agency should give prior approval to alternative AMCs to be adopted by NAAs, and recognise that this would not be approriate given the legal responsability to member States to ensure relevant implementation of the relevant Essential Requirements and Implementing Rules. However, if alternative AMCs are to be widely developed and promulgated throughout the community, it seems to us that the Agency and the NAAs should explore urgently what kind of processes could be developed to provide that, as far as possible, the Agency is able ot carry out its assessment before alternative AMCs are authorised by an applicant.

3) General Comment: a list of definitions is shown on each Part and relevant guidance material. It could be more useful to have a unique list of definitions because a term may be referred in more than one Part while its definition is provided only in one specific Part.

comment *2919* comment by: *Pietro Barbagallo ENAC*

General Comment: Consideration should be taken for including in Part OPS the operation of a single-engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Condition (ref. ICAO Annex VI ch.5 emend. 31 dated 22/11/07).

Justification: Implementing rules for commercial air transport by aeroplanes are based essentially on EU-OPS. However some changes have been proposed through NPA 2009-02 to align, as far as possible, the forthcoming regulation to the correspondent provisions already contained in ICAO Annex VI. Anyhow the alignment to provisions of ICAO Annex VI is partial for obvious reasons. Having said that, we would like to draw to the attention of the EASA Rulemaking to take into consideration the possibility to include in the regulation for air operations also "additional requirements for the operation of a single-engine turbine-powered aeroplanes at night and/or in Instrument Meteorological Condition" as defined in the ICAO Annex VI, chapter 5. National stakeholders are in favour of such kind of operation, especially for cargo operations, because they have several business opportunities which couldn't be developed within current regulation framework.

comment *3553* comment by: *Walter Gessky*

1. **OPS.GEN** shall include a generic point with regard to reporting like EU-OPS 1.420 where parts are responsibility of the pilot in command. For the moment reporting is spitted in different parts. Commander reporting according EU-OPS shall than be mentioned at least under OPS.GEN.015 or 020.

comment *3768* comment by: *KLM Cityhopper*

Comment:

NPA 2009-02B is a major departure from EU-OPS both in content/concepts and structure. Those major changes cannot be justified on safety grounds and would lead to unjustified costs and additional complexity for the airline industry. The confusing structure and unclear drafting of this NPA will not provide legal certainty.

We note that this NPA is also not in line with the mandate which was given to EASA by the EU legislator which clearly referred to the need for EASA rules to build on EU-OPS and the JAA heritage. In this context, the AEA would like to make reference to the clear concerns expressed by the European Commission and EASA Member States at the June 2009 EASA management board meeting. The AEA therefore urges EASA to stick to its safety role and the clear instructions from its Management Board that this NPA should be withdrawn and realigned with EU-OPS.

Proposal:

Re-align the NPA with EU-OPS

comment *6157* comment by: *EUROPEAN GLIDING UNION*

Sailplanes are not covered by the paragraph? Should say for example "other than complex motor-power aircraft".

comment *7432* comment by: *Axel Schwarz*

I strongly suggest to include Annex II - aircraft in the scope of Parts OR and OPS (and also Part FCL). While different regulations in the areas of certification and continuing airworthiness are necessary due to the nature of Annex II aeroplanes, the operation of these aircraft (and also the competency elements and proficiency required of flight crews of such aircraft) does not differ.

Should certain aspects of Parts OPS and FCL prove to be not suited for certain Annex II aircraft, a general provision, enabling the Competent Authority to make exceptions could ensure the required flexibility.

Excluding Annex II aircraft would make any approvals obtained under Parts OR, OPS or FCL only national approvals, thus creating an uneven playing field for pilots and operators. Also several aircraft now normally included in JAR-FCL and OPS 1 provisions (e.g. PA-18 as part of the rating SEP(land)), would have to be excluded from such ratings, without sufficient justification for such a differentiation.

B. I. Draft Opinion - Part-OPS - Subpart A p. 22

comment *4129* comment by: *DGAC*

The use of "shall" and "may" is not consistent throughout the text. [comment also made about NPA 2008-17 Part FCL]

For instance, in OPS.GEN.010, some definitions read "XX shall mean YY", while others read "XX means YY"

- See OPS.GEN.330.A (misuse of "may")

Justification:

- "shall" should be used for requirements only, not for statements.

- "may" should be used only for options or recommendations.

Proposal:

Check out the whole document

comment *4130* comment by: *DGAC*

Many paragraphs in OPS GEN apply only to complex aircraft or aircraft operated in CAT or in COM. This makes the text difficult to read. For example in OPS.GEN.155 Selection of alternate aerodrome, there is a specific requirement in paragraph (d) for helicopters in CAT. It should be in sub-part CAT.

Proposal:

Create a specific section containing the requirements applicable to complex aircraft used in non-commercial operations. (similar to A-NPA JAR-OPS 2), and gather the requirement for CAT in CAT section, for COM in COM section.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I p. 22

comment *3184* comment by: *Austro Control GmbH*

OPS.GEN shall include a generic point with regard to reporting like EU-OPS 1.420 where parts are responsibility of the pilot in command. For the moment reporting is spitted in different parts Commander reporting according EU-OPS shall than be mentioned at least under OPS.GEN.015 or 020

comment *6056* comment by: *DGAC*

We do not understand the rationale for mentioning R 216/2008 in the scope of part OPS subparts GEN, CAT & COM and not mentioning it in the scope of both part OR subpart OPS and part OPS subpart SPA?

If, as explained by EASA, the mere application of those subparts is not enough to ensure compliance with the BR, then mentioning the BR in the scope should be avoided as it is confusing and misleading.

"OPS.GEN.005 Scope

This subpart establishes the requirements to be met by an operator to ensure that air operations are conducted in compliance with Article 8 in conjunction with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations)."

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.001 Competent authority p. 22

comment *118* comment by: *AgustaWestland*

In accordance with NPA2009-02a page 26 at Para 3 the heading of

OPS.GEN.001 shold be **Scope** and **OPS.GEN.005 Competent authority.**

comment *671* comment by: *ECA - European Cockpit Association*

Comment onOPS.GEN.001: change as follows:

For the purpose of this subpart, the competent authority shall be **responsible**:

Justification:

The first sentence is incomplete.

comment *678* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.001: add the following text:

Each aeroplane shall be operated in compliance with the terms of its certificate of airworthiness and within the approved limitations contained in its aeroplane flight manual.

Justification:

Missing requirements from EU OPS 1.005 (c).

comment *906* comment by: *CAA-NL*

Comment regarding:

b) for the oversight of commercial operations and non-commercial operations of complex motor-powered aircraft, the authority designated by the Member State where the operator has its principle place of business.

Suggetion CAA-NL:

Definition of competent Authority needs more clarification.

comment *1005* comment by: *KLM*

The inclusion of Helicopter requirements make this a mess and very difficult to find a requirement and whether a requirement is applicable for what kind of aeroplane.

Split the different types into separate parts.

comment *1021* comment by: *British Gliding Association*

comment *1390* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

for non commercial operation ~~of non complex motor-powered aircrafts~~…

Comment / Proposal:

Oversight over non commercial operations only possible based on the registry. Moreover: Duplication with OR.GEN.001 (NPA 2008-22c). Not necessary in OPS.

comment *1391* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Definitions in general.

Comment / Proposal:

All definitions used in european aviation regulations should be listet in a separate comprehensive volume. Moreover, many definitions have already been set in other regulations and should not be duplicated in OPS.

comment *1751* comment by: *Swedish Soaring Federation*

Sailplanes are not covered by the paragraph? Should say for example "other than complex motor-power aircraft".

comment *2631* comment by: *AOPA-Sweden*

It can not be taken for given that an operator of a complex aircraft has a business, the aircraft can be owned as a non-complex aircraft and used in the same way. Such an owner does not have a "place of business" as defined in OPS.GEN.010 (60). This paragraph is not clear which competent authority has the over-sight responsibility. Shall an entity with a place of business outside Europe go to that authority? Also compare with rules for OPS.SPA.001.GEN, where it is stated the State of registry is responsible for those approvals, coordination is needed.

comment *2722* comment by: *Southern Cross International*

Would a commercial operator other than CAT, for which any Member State ensures oversight of operations, still be able to conduct a contracted one-time test flight or ferry flight assignment with a (complex motor-powered) aircraft registered in a third country and owned cq operated by a non-Community operator? Is the Operator Certificate applicable for these kind of operations?

Example: maintenance carried out within or outside the Community by a MRO-provider and the associated test/ferry flights carried out (or contracted) by the MRO-provider.

comment *2887* comment by: *UK CAA*

Page No: 22

Paragraph No:

OPS.GEN.001 and OPS.GEN.005

Comment:

According to OPS.GEN.005 this subpart is intended to establish the requirements to be met by an operator to ensure compliance with Article 8 of 216/2008. That Article covers the operation of aircraft referred to in both Article 4(1)(b) and (c). However, the definitions for "competent authority" in OPS.GEN.001 do not appear to establish clearly such an authority in any Member State capable of overseeing compliance by operations covered by Article 4(1) (c).

Justification:

Since all aircraft covered by Article 4(1) (c) are registered in a third country, no Member State would be able to designate a competent authority for the oversight of non-commercial operations in accordance with OPS.GEN.001 (a). As for operations covered by 001(b), it is not certain that an operator "established or residing in the Community", as described in Article 4.1(c) of 216/2008, will necessarily also have its "principal place of business" in the Community.

It would appear that the Implementing Rules are expected to cover the operation of aircraft referred to in Article 4(1)(c), since Article 8(6) specifically refers to such measures in its last indent. Clarity is required as to how this is to be achieved.

comment *3183* comment by: *Austro Control GmbH*

(b) for the oversight of commercial operations and non-commercial operations of complex motor-powered aircraft, the authority designated by the Member State where the operator has its ***principle place of business****.*

Comment:

It is recommended to add a definition for the "principle place of business" since not all operators are effected by Regulation (EC) 1008/2008.

It has to be mentioned that the definition of this term is different in EC 1008/2008 and EC 2042/2003 (new version).

comment *3275* comment by: *Aero-Club of Switzerland*

We do not find the sailplanes under (a)!

Please change the text into "...operations of other than complex motor-powered aircraft..."

Justification: In doing so, the sailplanes are included.

comment *3554* comment by: *Walter Gessky*

2. OPS.GEN.001 Competent authority

"(b) for the oversight of commercial operations and non-commercial operations of complex motor-powered aircraft, the authority designated by the Member State where the operator has its **principle place of business**."

Comment:

It is recommended to add a definition for the "principle place of business" since not all operators are effected by Regulation (EC) 1008/2008.

It should be notified that the definition of this term is different in EC(1008/2008 and EC 2042/2003(new version accepted by the Committee at the meeting on 7.7.2009)

comment *4131* comment by: *DGAC*

Proposal : Rewrite the beginning of the paragraph as follows :

"For the purpose of this ~~sub~~part, the competent authority shall be…"

Justification : the competent authority is not only used in subpart GEN of Part OPS but also in subparts CAT & COM without the terms "competent authority" being redefined at the beginning of those subparts.

comment *4132* comment by: *DGAC*

Some cases are not addressed by this paragraph (although IR OPS are meant to be applicable to those cases) :

Who shall be the competent authority in the following cases ?

(i) (i) operations of aircraft registered in a Member State when the operations take place outside of the Community

(ii) (ii) operator established in the Community, performing non commercial operations of aircraft registered in a third country (ex. US registered aircraft)

comment *4133* comment by: *DGAC*

Amend the text as follows to take into account the fact that the term "principal place of business" is not adapted to private owners, except in the case of fractional ownership where this term could apply to the principal place of business of the program manager:

"For the purpose of this subpart, the competent authority shall be:

(a) for the oversight of non-commercial operations of non-complex motor-powered aircraft, the authority designated by the Member State where the aircraft is registered; and

(b) for the oversight of commercial operations and non-commercial operations of complex motor-powered aircraft :

(i) **when the aircraft is managed by a third party mandated by the owner**, the authority designated by the Member State where the operator **or the manager** has its principle place of business,

(ii). **when the aircraft is not managed by a third party mandated by the owner, the authority designated by the Member State where the aircraft is registered**

comment

4857 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Spelling error in (b).

Proposal (including ***new text***):

(b) for the oversight of commercial operations and non-commercial operations of complex motor-powered aircraft, the authority designated by the Member State where the operator has its ~~principle~~ ***principal*** place of business.

comment

5113 comment by: *Ryanair*

This defintion of "competent authority" to be used throughout the IRs/AMCs/GM.

comment

5312 comment by: *Norwegian Air Sports Federation*

Sailplanes and balloons are not covered by the paragraph.

comment

5880 comment by: *Civil Aviation Authority Finland*

Comment:

The Competent Authority supervising the non-commercial operations of non-complex motor-powered aircraft and also the commercial or non-commercial operations of hot-air balloons and gliders is missing.

The Competent Authority for this kind of operations shall also be defined.

Justification:

We have in EU States many operators, training organisations, flying clubs and private aerial work operators using continiously leased aircraft registered in other States, also in third countries. The Authorities of these

other States and third countries do not have practical means to supervise this kind of operations based in another State. This may lead to unsupervised wild operations, also non-legal commercial commercial air transport operations, as we have in some cases found.

comment *5981* comment by: *Konrad Polreich*

For some SPA's, the state of registry provides the competent authority. Here may exist a conflict of authority, when the operation is based in one member state and the aircraft is registered in another member state. This duplicates some administrative work for the operators and authorities.

Suggestion:

For operators, which have their principle place of business in a Member State (EASA-member) and operate aircraft registered in another Member State, the competent authorities shall agree about delegation of the oversight or issuance of SPA's to only one authority.

comment *6407* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

"Competent authority" is not consistently defined. "Competent authority" is defined in OPS-GEN.001, but the definition is restricted to "the purpose of this subpart" (General operating and flight rules).

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to provide consistent definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading

comment *6692* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

Paragraph (a) does not include sailplanes but we can not see any specific purpose for such exclusion. We suggest the paragraph (a) to be modified for example: "…*of non-commercial operations other than complex motor-power aircraft*."

comment *7429* comment by: *David ROBERTS*

The scope definition in sub part (a) excludes non-powered aircraft (sailplanes / gliders) and balloons. If this is intended, then no other comments on the rest of the document are necessary. But I suspect that is not the case.

Proposal: include in (a) 'and non-powered aircraft (and balloons?)'

comment *7547* comment by: *AOPA UK*

It can not be taken for granted that an operator of a complex aircraft has a business, the aircraft could be a non-complex aircraft and used in the same way. Such an owner does not have a "place of business" as defined in OPS.GEN.010 (60). This paragraph is not clear which competent authority has the over-sight responsibility. Any entity with a place of business outside Europe should go to which authority? Also compare with rules for OPS.SPA.001.GEN, where it is stated the State of registry is responsible for those approvals. Better coordination is needed.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.005 Scope p. 22

comment *118* comment by: *AgustaWestland*

In accordance with NPA2009-02a page 26 at Para 3 the heading of

OPS.GEN.001 shold be **Scope** and **OPS.GEN.005 Competent authority.**

comment *672* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.005: change as follows:

This subpart establishes the requirements to be met by an operator ~~**to ensure that air operations are conducted in compliance with Article 8 in conjunction with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations).**~~

Justification:

Everything necessary to comply with the BR must be found in the IR/AMC/GM. Reference to BR 216/2008 is inappropriate. See also comment 678.

comment *1386* comment by: *EUROCOPTER*

This Regulation should not apply to Flights performed by aircraft manufacturers (Development flight tests, Production flight tests, Technical

check flights following maintenance, demonstration flights for sales support, …) as this activity is already regulated in PART 21. Eurocopter wish that EASA conducts an action towards the European Commission in order to modify the Basic Regulation 216/2008 in this way.

comment *3185* comment by: *Peter SCHMAUTZER*

In this implementing rules for air operations is also included the operation of sailplanes. Gliders are mainly used for sporting activities and not for commercial operations.

The basic regulation stipulates that the operation of simple designed aircrafts is excluded from EASA competency. This new regulation will cause higher costs for the glider sporting community.

According to Article 1 2. this regulation shall not apply to military … or similar service. Therefore it should be made clear that fire fighting and HEMS operations performed on behalf of a government is not regulated under Part-Ops.

CRD:

It is forbidden to use not installed equipment in flight. This obviously refers to GPS or COMS which are carried on board as a backup. To forbid generally the use of this equipment will cause a safety hazard and is against the standards, e.g. That a pilot should take all the help he can get (CRM).

comment *3536* comment by: *Trevor Wilcock*

Throughout the document there are features which seem relevant to commercial and/or complex aircraft operation but which have been extended to embrace all aeroplanes. These are often disproportionate and would have an adverse impact on the cost and flexibility of operation with no obvious benefit to operational safety. I will make comment on the more significant of these, but I am sure that the representative organisations for light aviation and sailplanes will assess in full detail.

comment *4134* comment by: *DGAC*

This paragraph shall be adapted to reflect the fact that the sole application of this subpart does not guaranty that "air operations are conducted in compliance with Article 8 in conjunction with Annex IV" of the BR.

Some provisions of article 8 or of Annex IV are not implemented in subpart GEN but in subpart CAT, COM or SPA. Moreover, some of those provisions are even implemented in Part AR or OR (for instance article 8.2/8.3 related to certification/declaration).

comment *4135* comment by: *DGAC*

Some paragraphs of Subpart GEN are definitely not applicable to certification flights (e.g. : OPS.GEN.105 Simulated abnormal situations in flight)

comment *5006* comment by: *AS Miller*

OPS.GEN.005 Scope

Sport flying in gliders already has a well established body of requirements, developed through bodies such as the IGC & FAI.

Why on earth replace them with this body of rules designed for complex and commercial aircraft?

There is no safety or economic case for doing this.

The exceptions made within the text for sailplanes are inadequate.

Proposal *Sailplanes (including Self Sustaining Sailplanes (SSS) and Self Launching Sailplanes (SLS)) must be excluded from NPA 2009-2.*

comment *5976* comment by: *Irish Aviation Authority*

Comment:

The basic regulation and scope make no mention of SAR & fire-fighting operations being excluded from this regulation. The enclosed text below needs to be added at the end of the existing text.

Proposed text:

This regulation shall not apply to the operation of aircraft for the purpose of search and rescue (SAR) and fire-fighting operations.

comment *6025* comment by: *Aero-Club of Switzerland*

We think the scope as written under this paragraph is correct for CAT, it is partly correct for operator of CMPA, but it is not correct for most of the General Aviation (GA) flight operations.

Justifications: Many times, the proportionality of the proposals of the Agency are not given for GA operations.

We do not find safety benefits, however we find more bureaucracy and, especially looking at the regulation ideas in the helicopter segment, proposals of standards which will bring private operations of helicopters to a standstill because of increased cost due to the obligation to equip the machines to reach standards not necessary for the kind of operations.

Many of the new requirements will have a negative effect on recreational flying activities. This is not in line with a statement of the European Parliament saying that new requirements should not inhibit these activities.

comment *6551* comment by: *Sloane Helicopters Ltd*

It appears that private operations are expected to adopt the same safety regulations as Commercial Air Transport (CAT) Operators. This is totally disproportionate as CAT operators have a responsibility to their fare paying passenger to ensure all safety regulations are in place. However, the CAT operator is able to off-set these safety measure costs against the operation. ie: the customer ultimately pays for the privilege. Private operators do not have that privilege therefore should not be expected to operate to the same level of safety standards.

Should EASA insist on pressing ahead with the proposed amendments, Helicopters which hold certification for current operations should be allowed to continue to operate under Grandfather rights with a run out date. Beyond that date any future designed helicopter would have to be capable of meeting the EASA requirements.

There appears to be a failure to recognise that there are many European Islands including the UK with it's own Off-Shore Islands that will be severely restricted should these proposals be implemented. It would also have a severe effect on manufacturers of single engine helicopters that do not have the physical space, weight and C of G to carryout modifications let alone the incredible costs involved. Distributors will have products no longer saleable. It will be a total disaster for the private aviation industry.

Summary

Sloane Helicopters Ltd agrees with the comments made by The Helicopter Club of Great Britain and is strongly opposed to the proposed regulations.

It is simply not in the interests of private aviation to impose such a heavy burden of compliance with no safety review carried out. We thus urge EASA to either withdraw these proposals entirely, amend them as suggested, define a MTOM weight limit below which they would not apply (e.g. 3175Kg or 2000Kg), or simply apply the fixed wing proposals to helicopters. Other practical mitigation measures could be exemptions for helicopters under 2000kg MTOM, for non-complex helicopters, or for helicopters in private flight..

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.010 Definitions p. 22-27

comment *4* comment by: *KLM*

Definitions (1) 3% en route alternate (ERA) aerodrome has to be changed to become:

Fuel enroute alternate aerodrome (Fuel ERA) means an ERA selected with the purpose of reducing contingency fuel.

Fuel policies based on statistical data are using this same enroute alternate but that does not imply a reduction to 3% but will reduce the amount of contingency fuel.

Therefore the explicite figure of 3% has to be deleted from this definition and be generalised to make clear that the purpose is to decrease fuel.

comment *17* comment by: *George Knight*

-59 Does SAILPLANE include POWERED SAILPLANE (self-launching and self-sustaining sailplanes)?

comment *49* comment by: *KLM*

Definitions

There should be added the defintion of:

non-complex motor-powered aircraft and

complex motor-powered aircraft.

It is not stated anywhere what is exactly meant with these statements and where to draw a line between the two.

In general the list of defintions is not complete; all used terms and names have to be defined and included in this list.

comment *50* comment by: *Robert R McGregor*

(12) 'Congested area'

Although the definition is the same as in Annex 6 Part III, it is difficult to understand.

1. If the words 'congested' and 'area' are taken literally, then their 'meaning' according to the Oxford English Dictionary is that of an area which is completely 'full-up' or 'choked'; in this case with persons and property i.e. there are no open spaces available in which a helicopter could perform a forced landing. This is not the meaning of the term 'congested area' as it is used in aviation regulations.

   The definition should avoid use of the phrase "Congested area means…". We know what the words mean, but this is a specialist

term concerned with safety and the environment of urban areas, which can contradict the normal meaning of the word 'congested'. Consequently, the definition should be re-written as follows:

"Congested Area is a specialist term for the area enclosed by the bounds of a city town or settlement, which is substantially used for residential, recreational or commercial purposes, and which may, or may not, depending upon circumstance, contain unobstructed spaces."

comment *51* comment by: *Robert R McGregor*

The formatting should be revised to align with definition (41) 'Hostile environment', as shown below:

(52) 'Non-hostile environment':

(i) An environment in which:

(A) A safe forced landing can be accomplished;

(B) The helicopter occupants can be protected from the elements; and

(C) Search and rescue response/capability is provided consistent with the anticipated exposure.

(ii) Those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

comment *52* comment by: *Robert R McGregor*

(56) 'Performance Class 1'

The definition is inferior to the corresponding definition in Annex 6 Part III where it is entitled "Operations in Performance Class 1". The EASA definition in the NPA:

(i) does not make it clear that it is the 'operation' that is performance class 1 rather than the helicopter itself;

(ii) does not deal adequately with engine failure after LDP;

(iii) does not relate the performance level to the essential points TDP and LDP.

The definition should be replaced by the definition contained in Annex 6 Part III:

comment *53* comment by: *Robert R McGregor*

(57) Performance Class 2 should be re-titled, "Operations in Performance

Class 2" so as to make the definition the same as that in Annex 6 Part III.

comment

54 comment by: *Robert R McGregor*

(58) Performance Class 3 - the definition is inferior to that in Annex 6 Part III.

It should be re-titled "Operations in Perfomance Class 3" as per Annex 6 Part III.

The EASA definition is also wrong, because if the helicopter is truely operating in PC3, a power unit failure will result in a forced landing even if it is a multi-engine helicopter i.e. there is no 'may' about it.

comment

55 comment by: *Robert R McGregor*

(5) Aerodrome:- There is no need to restrict the meaning of 'Aerodrome' to an area which has been, "especially adapted". The definition in ICAO Annex 6 is superior.

comment

56 comment by: *Robert R McGregor*

(3) 'Adequate Aerodrome':- There is no merit in defining an 'adequate' aerodrome. An aerodrome will either be 'adequate', or 'not adequate' and that is the responsibility of the operator of the aircraft on the day.

comment

58 comment by: *Air Southwest*

Is it intended to issue a complete set of definitions?

comment

59 comment by: *Air Southwest*

JAR OPS and EU OPS placed the responsibility and authority in Commercial Air Transport on the 'COMMANDER' rather than the 'Pilot-in-Command. Over the recent past the distinction between the two has been emphasised with the introduction of cruise relief crew and the introduction of complex international law regarding the authority of the Commander. The status of the Pilot-in-Command is a function of the Rules of the Air (the pilot who is responsible for the time being for the compliance with the rules of the air) rather than the 'Captain' of a crew and authority (representative of the State of Registry) on board an aircraft carrying passengers and/or cargo. I suggest that throughout OPS.CAT etc... 'Commander' replaces Pilot-in-Command in all cases except where the intent is compliance with the Rules of the Air.

I also suggest that a definition is included for both Pilot-in-Command and Commander.

comment *61* comment by: *Air Southwest*

Definition 68 defines SVFR. This is inaccurate as it implies that SVFR is only applicable in conditions less than VMC. SVFR is permitted in a CTR. A CTR can be Class A where IFR is mandatory. So even in conditions of unlimited VMC a SVFR clearance would be required to fly in a Class A CTR without compliance with IFR. This needs to be amended.

comment *113* comment by: *Ingmar Hedblom*

This definition of "night" is not appropriate and detrimential to VFR operation in northern Sweden with long morning and evening twilights during the summertime.

Furthermore, it is not the same definition as used in the FCL NPA 2008-17.

There must be the same definiton for OPS and FCL use. The definition for FCL is supported. Introduce the definition from NPA 2008-17: Night' means the period between the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State.

comment *124* comment by: *Loganair Limited*

Attachment #1

Item (a)(24) Definition of Dry Runway. What is meant by the phrase "effectively dry" braking action is not clear. Until recently the majority of European Operators have used this to allow the use of Dry Runway Performance in Wet conditions where the runway is published as grooved. The UK CAA issued FODCOM 03/2009 stating that this is not the case, but it appears to be a UK only view.

To further complicate the situation CS-25.109(d) (And FAR-25) allow for specific Wet Grooved runway performance to be published in Aircraft Flight Manuals. The requirement in CS-25 is a straight transfer from JAR-25 and was first published in JAR-25 in 2003, a significant time after the JAR-OPS "effectively dry" criteria was published.

CS-25.109(d) is based on a Wet Grooved runway giving 7 times better braking action than a smooth wet runway, whereas a dry runway has braking action 10 times better than a smooth wet runway.

Clarification is required as to whether dry performance can be used for a grooved or porous runway where Wet grooved runway performance is not specifically available.

comment *125* comment by: *Rega / Swiss Air-Ambulance*

OPS.GEN.010 Definitions

Scope:

Add the definition of "Aeroplane Emergency Medical Service (AEMS)"

Text to be added:

"Aeroplane Emergency Medical Service (AEMS) flight" shall mean a flight by a dedicated ambulance aeroplane operating under an EMS approval, the purpose which is to facilitate emergency medical assistance, where immediate and rapid transportation is essential, by carrying:

(i) medical personnel; or

(ii) medical supplies (equipment, blood, organs, drugs); or

(iii) ill or injured persons and other persons directly involved.

Proof:

Swiss Air Ambulance Type(s) of Operation according the Operation Specification defined by the NAA are **"A3 Emergency Medical Service"**. To be in line with the Operations Specifications issued by the NAA in accordance with the Council Regulation (EEC) No 3922/1991 Annex III (EU-OPS) the term Emergency Medical Service for aeroplanes shall be defined under "Subpart A, General operating and flight rules, Section I - General Requirements" to emphasize the special type of operation.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *314* comment by: *Aero-Club of Switzerland*

(30) (ii) Please define "drugs" more precisely!

(30) (ii) Transport of all kinds of medical supply should not be considered as "HEMS"

(41) Is "hostile" really the best word to describe what die Agency wants us to understand?

(41) (i) (B): Only helicopter occupants?

Please add (41) (ii) (C) Mountain areas

comment *322* comment by: *AgustaWestland*

In the List of definition should be added the definition of:

1. Pilot-in-Command (PIC)
2. Pilot Flying (PF)
3. Pilot non Flying (PNF)
4. Flight Crew
5. Crew Member

comment *368* comment by: *EHOC*

General

It is not clear why some definitions are contained in OPS.GEN.010 and others in GM OPS.GEN.010; is it because some definition contained in the GM are only used in the Guidance material? If so is that a good reason?

Specific

(xx) There is no definition of Child except by inference (used in subsequent text in Subpart C).

CP is used in GM1 OPS.SPA.005.SFL(b) but not defined.

(xx) Committal Point (CP). The committal point is defined as the point in the approach at which the pilot flying (PF) decides that, in the event of a power unit failure being recognised, the safest option is to continue to the deck.

(47) Low visibility procedures:

It is not clear the the new definition provides the same information as the original definition. The old definition might be preferred:

Low Visibility Procedures (LVP). Procedures applied at a aerodrome for the purpose of ensuring safe operations during Category II and III approaches and Low Visibility Takeoffs.

(48) Maximum passenger seating configuration:

The definition would be improved if 'excluding crew seats' was placed before

'operational purposes'.

The last sentence is information and might be better contained in AMC material; also required in guidance is how this configuration is achieved now that 'approved' has been removed from the definition.

For GA and without specific guidance it might be regarded as being as simple as the count of the passengers at the time (complex aircraft also have an OM). It is not even clear if GA have (or can be compelled) to consider or apply an AMC!

(56) Performance Class 1:

The definition would benefit from the insertion of the same text contained in the definition of PC2.

"... failure of the critical power unit, **performance is available to enable** the helicopter ~~is able~~ to land..."

This definition only works if, when used, it is prepended with "Operated in PCx".

(xx) Rotor Radius:

Rotor Radius used OPS.CAT.H.365 (obstacle clearance) but not defined.

R. Rotor radius.

(xx) Rotation Point:

Rotation Point is used in GM4 OPS.CAT.355.H and GM1 OPS.SPA.005.SFL(b) but not defined.

Rotation Point (RP). The rotation point is defined as the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognised, a forced landing on the deck can be achieved.

(73) Take-off distance required:

Because this definition has been abbreviated from the original, the associated GM will also have to be amended:

See additional note in GM OPS.GEN.010(a)(73).

(xx) TLOF:

TLOF is used in AMC3 OPS.CAT.215.H but not defined.

Touchdown and lift-off area (TLOF). A load bearing area on which a helicopter may touch down or lift off

(xx) Vy:

Vy is used in GM3 OPS.CAT.355.H and GM2 OPS.SPA.005.SFL(d) but not defined.

Vy. Best rate of climb speed.

comment *429* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(a)(13): change as follows:

(13) 'Contaminated runway' means a runway of which more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:

(i) Surface water more than 3 mm (0.125 in) deep, or by slush, or loose snow, equivalent to more than 3 mm (0.125 in) of water;

(ii) Snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or

(iii) Ice, including wet ice~~.~~ **or those runaways which exhibit an equivalent aircraft braking action less than those assumed for a wet runway.**

Justification: Contaminants on runways may influence both aircraft acceleration (displacement/impingement drag) and aircraft deceleration (aircraft braking action). Non-dry runways which do not fulfil the requirements for a contaminated runway can be considered wet according to the proposed text. However there may be runways with contaminant depths below the values suggested in (i) or not qualifying as (ii) or (iii) which do not exhibit the same braking action as a wet runway. Clearly treating such runways as wet is unsafe. Such runways can be considered slippery runways and there is manufacturer guidance available for this situation.

comment *433* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010 (a)(24): proposed new text: change as follows:

(24) 'Dry runway' means ~~**a runway which is neither wet nor contaminated, and includes those paved runways which have been specially prepared with grooves or porous pavement and maintained to retain 'effectively dry' braking action even when moisture is present.**~~ **a runway which is clear of contaminants and visible moisture within the required length and width being used.**

Justification:

With the development and harmonization of JAR/FAR/CS 25 it was recognized that grooved/PFC runways while improving aircraft braking action as compared to a regular wet runway do not provide an effectively dry braking action. To the knowledge of ECA there is no flight test data which indeed shows an effectively dry braking action on such runways.

The text is the same as the original JAR-OPS text which was interpreted by several operators not as a requirement to verify effectively dry braking action but was instead interpreted as a statement saying that such runways indeed produce an effectively dry braking action. ECA considers this an unsafe practice and feels supported by the requirements in JAR/FAR/CS-25, DNPA-OPS 47 as produced by the JAA Performance Subcommittee and the recent CAA-UK 2009/03 FODCOM.

As certification standards were already brought in line with scientific

knowledge more than 10 years ago and considering the fact that several draft JAA NPAs have been included in NPA 2009-02 ECA strongly urges adoption of the proposals contained in JAA DNPA-OPS 47.

comment *435* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010 (a)(75):delete as follows:

~~**(75) 'Take-off flight path' means the vertical and horizontal path, with the critical power-unit inoperative, from a specified point in the take-off to 1000 ft above the surface.**~~

Justification:

The proposed definition for take-off flight path is not in agreement with either CS-25 or the original requirements in JAR-OPS. Limiting the take-off flight path definition to 1000 ft above the surface could result in certain obstacles not being part of the take-off analysis, thereby producing an unsafe situation.

Furthermore, the below definitions originally contained in JAR-OPS 1.480(b) are not included in OPS.GEN.010 and as such it is proposed to include a suitable reference to the Certification Specifications for the following definitions:
1. Accelerate-stop distance
2. Take-off distance
3. Take-off run
4. Net take-off flight path
5. One engine inoperative en-route net flight path
6. Two engines inoperative en-route flight path)

comment *436* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010 (a)(79): change as follows REF.: JAA DNPA-OPS 47:

(79) 'Wet runway'**: a runway that is neither dry nor contamined is considered wet.** ~~**means a runway of which the surface is covered with water, or equivalent, less than specified by the 'contaminated runway' definition or when there is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water.**~~

Justification: Certain types of runways, such as e.g. grooved or PFC runways do not exhibit a tendency to become reflective when however the aircraft braking action is already reduced below that of a dry runway. The ambiguity in current or proposed runway state definitions result in erroneous or unsafe application of dry runway performance where application of wet runway performance would be appropriate. This situation was acknowledged more than 10 years ago and is reflected and harmonized in JAA/FAA/CS-25 certification standards. ECA strongly urges adoption of the proposals

contained in JAA DNPA-OPS 47.

comment *438* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010: add the following definition:

(tbd) Accelerate-stop distance available (ASDA). The length of the take-off run available plus the length of stop way, if such stop way is declared available by the appropriate Authority and is capable of bearing the mass of the aeroplane under the prevailing operating conditions.

Justification:

The definition of Accelerate-stop distance available (ASDA) is missing. The reference is EU-OPS 1.480(a)(1).

comment *529* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(a)(13): change as follows:

(13) 'Contaminated runway' means a runway of which more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:

(i) Surface water ~~**more than**~~ 3 mm (0.125 in) deep, or by slush, or loose snow, equivalent to ~~**more than**~~ 3 mm (0.125 in) of water;

(ii) Snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or

(iii) Ice, including wet ice.

Justification:

ECA recommends to include the 3 mm in the definition. It is clearer for the pilots on when they should use "contaminated runway" data. To avoid pilots using "just" wet runway data on a runway covered with 3mm standing water. Also consistent with available data from manufacturer (eg. Boeing) regarding contamination depths which includes the 3 mm.

comment *581* comment by: *ECA - European Cockpit Association*

Request clarification why definitions of 'circling' and 'visual approach', 'CDFA', 'Lower than Standard Category I Operation', 'Other than Standard Category II Operation', "accepted/acceptable", "Approved (by the authority)", "MEL and MMEL" are not included in IR.

comment *582* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(46): changes as follows:

(46) 'Low Visibility Procedures (LVP)' ~~**shall mean**~~ **are** procedures applied at an aerodrome for the purpose of ensuring safe operations during ~~**low visibility conditions, for which a specific approval is required;**~~ **lower than Standard Category I, other than Standard Category II, Category II and III approaches and Low Visibility Take-offs.**

Justification:

The text needs to be more specific.

comment *676* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010: Include definitions for "accepted/acceptable", "Approved(by the authority)", "MEL and MMEL"

Reference text from EUOPS 1.003 (a) and (b) not transferred.

comment *724* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(xx): missing definition for :

maximum ZF Mass, Landing Mass and Take off Mass definitions as per EU OPS 1.607 (b), (c) and (d) :

Add text as follows:

Maximum zero fuel mass. The maximum permissible mass of an aeroplane with no usable fuel. The mass of the fuel contained in particular tanks must be included in the zero fuel mass when it is explicitly mentioned in the Aeroplane Flight Manual limitations.

Maximum structural landing mass. The maximum permissible total aeroplane mass upon landing under normal circumstances.

Maximum structural take off mass. The maximum permissible total aeroplane mass at the start of the take-off run.

Justification:

Text not transferred from EU OPS 1

comment *725* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(tbd): add the following definition for passenger classification as per EU OPS 1.607 (e):

(tbd) Passenger classification.

1. Adults, male and female, are defined as persons of an age of 12

years and above.

2. Children are defined as persons who are of an age of two years and above but who are less than 12 years of age.

3. Infants are defined as persons who are les than two years of age.

Justification:

Text not transferred from EU OPS 1.

comment *726* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.010(65): change as follows: remove (ii):

(65) 'Series of flights' means consecutive flights, which begin and end:

(i) within a 24 hours period;

~~**(ii) at the same aerodrome/operating site;**~~ and

(iii) with the same pilot-in-command of the aircraft.

Justification:

This requirement is useless, and even renders provisions in OPS.COM.115, OPS.SPA.001.HEMS uselessly burdensome without safety benefit. Moreover, it conflicts with the FDP definition of OR.OPS.010.FTL (f).

comment *733* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(6), definition of 'aeroplane', change text as follows:

'Aeroplane' means **a power driven heavier than air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight;**

~~**an engine-driven fixed-wing aircraft heavier than air capable of flight whose lift is generated not by wing motion relative to the aircraft, but by forward motion through the air that is supported in flight by the dynamic reaction of the air against its wings;**~~

Justification:

This is the Original text from ICAO Annex I, Annex 6.

comment *734* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(11), definition of 'cloud base':

clarify:

"Vicinity" in terms of ICAO regs means 8km ref. ICAO Annex 3 4.8.6 - is that the agencies intention ?

comment *736* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(15), definition of 'critical phases of flight':

Clarify :

Is the "final approach" per definition of PANS OPS sufficient measure for commercial and IFR flights ? (i.e. starting max 3-4000ft AAL?)

comment *737* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(21):

(21) 'Disruptive passenger' means a passenger who fails to respect the **rules of conduct** on board an aircraft or to comply with the instructions of crew members.

ECA requests clarification about the term 'Rules of conduct'. What is the legal effect of it? Where are those rules laid down?

comment *738* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(23), definition of 'dry operating mass':

Add text:

(iv) technical liquids (e.g. oil and hydraulic fluids)

~~**OK according JAR OPS subpart J 1.607 (a), but Missing supplies as well as the amounts of technical liquids eg. Oil and hydraulic fluids (commonly used in our operations manuals). Is this laid down somewhere else???**~~

comment *739* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(26), definition of 'enhanced vision system (EVS)', change text as follows:

'Enhanced Vision System (EVS)' ~~**shall**~~ mean**s** an electronic means of displaying a real-time image of the external scene through the use of imaging sensors;

comment *741* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(29), definition of 'ground emergency personnel', change text as follows:

'Ground emergency service personnel' **~~shall mean~~** **is** any ground emergency service personnel (such as policemen, firemen, etc.) involved with Helicopter Emergency Medical Service (HEMS) and whose tasks are to any extent pertinent to helicopter operations;

comment *742* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(30), definition of 'Helicopter emergency medical service (HEMS)', change text as follows:

'Helicopter Emergency Medical Service (HEMS) flight' **~~shall mean~~** **is** a flight by a helicopter operating under a HEMS approval, the purpose of which is to facilitate emergency medical assistance, where immediate and rapid transportation is essential, by carrying:

comment *743* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(31), definition of 'helicopter hoist operations (HHO)', change text as follows:

'Helicopter Hoist Operations (HHO) Flight' **~~shall mean~~** **is** a flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist;

comment *744* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(33), definition of HEMS dispatch centre', change text as follows:

'HEMS dispatch centre' **~~shall mean~~** **is** a place where, if established, the coordination or control of the HEMS flight takes place. It may be located in a HEMS operating base;

comment *745* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(34), definition of 'HEMS operating base', change text as follows:

'HEMS operating base' **~~shall mean~~** **is** an aerodrome at which the HEMS crew members and the HEMS helicopter may be on stand-by for HEMS operations;

comment *746* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(35), definition of HEMS operating site', change text as follows:

'HEMS operating site' ~~**shall mean**~~ **is** a site selected by the pilot-in-command during a HEMS flight for Helicopter Hoist Operations, landing and take off;

comment *747* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(36), definition of 'HHO offshore', change text as follows:

'HHO Offshore' ~~**shall mean**~~ **is** a flight by a helicopter operating under a HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist from or to a vessel or structure in a sea area or to the sea itself;

comment *748* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(37), definition of 'HHO passenger', change text as follows:

'HHO Passenger' ~~**shall mean**~~ **is** a person who is to be transferred by means of a helicopter hoist;

comment *749* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(38), definition of HHO site, change text as follows:

'HHO Site' ~~**shall mean**~~ **is** a specified area at which a helicopter performs a hoist transfer;

comment *750* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(39), definition of 'hold-over time (HoT):

We see the need to specify more types of precipitation (e.g. - FZRA and FZRA)?

comment *754* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(47), definition of 'low visibility take-off (LVTO)', change text as follows:

'Low Visibility Take-Off (LVTO)' ~~**shall mean**~~ **is** a take-off where the Runway Visual Range (RVR)**, measured for the respective runway, is less than 400m**

Jusitification:

RVR not applicable if not measured at the runway used for takeoff! Safety relevant

comment *755* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(50), definition of 'night vision goggles (NVG)', change text as follows:

'Night Vision Goggles (NVG)' ~~**shall mean**~~ **is** a head-mounted, binocular, light intensification appliance that enhances the ability to maintain visual surface references at night;

comment *756* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(51), definition of 'night vision imaging system (NVIS)', change text as follows:

'Night Vision Imaging System (NVIS)' ~~**shall mean**~~ **is** the integration of all elements required to successfully and safely use NVGs while operating a helicopter. The system includes as a minimum: NVGs, NVIS lighting, helicopter components (such as radio altimeter, visual warning system and audio warning system), training and continuing airworthiness;

comment *757* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(53), definition of 'NVIS flight', change text as follows:

'NVIS Flight' ~~**shall mean**~~ **is** a flight under night VMC with the flight crew using NVGs in a helicopter operating under an NVIS approval;

comment *758* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(59), definition of 'powered sailplane':

Clarify: given text applies to an Airbus 330 as well – so what are the *"characteristics of a sailplane"*? We suspect the definition is aiming at TMG licence holders only.

ECA recommends to use the term "touring motorglider " as in JAR FCL 3.001 (see below):

Touring Motor Glider (TMG)

A motor glider having a certificate of airworthiness issued or accepted by a JAA Member State having an integrally mounted, non-retractable engine and a non-retractable propeller plus those listed in Appendix 1 to JAR-FCL 1.215. It shall be capable of taking off and climbing under its own power according to its flight manual.

comment *759* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(62), definition of 'Runway visual range (RVR)':

ECA requests clarification: RVR is a meteorological measurement procedure and does not describe the range over which the pilot of an aircraft on the centreline of a runway can see the runway surface markings or the lights delineating the runway or identifying the centreline. This is a so-called 'pilot's assessment' of the actual visibility.

comment *760* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(66), definition of 'Sailplane', change text as follows:

'Sailplane' means a heavier-than-air **unpowered** aircraft **capable of flight whose lift is generated not by wing motion relative to the aircraft, but by forward motion through the air** ~~**that is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does**~~ not depend**ent** on an engine;

Justification:

This wording is more understandable.

comment *761* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(67), definition of 'screen height':

ECA requests clarification:

Screen height is not variable for the operator - it is just dependent on dry/wet runway conditions in case of engine out. It needs to comply with performance requirements in first place, which is:

- Screen height for takeoff: 35 ft dry runway/ 15 ft wet runway

- Screen height for landing: 50 ft

comment *762* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(70), definition of 'take-off alternate':

ECA requests clarification:

The term "shortly" is ambiguous and needs to be specified in terms of flight time. On what rule is the requirement for an TO ALTN based upon? [1 hour of SAD?]. The reference text is EU OPS 1.295 (b) (1)-(3).

comment *763* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(75), definition of 'take-off flight path':

ECA requests clarification:

Where are "1000 ft" originating from? JAR OPS 1.480 does not offer a similar definition.

comment *765* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a)(69), definition of 'standard category I':

ECA requests clarification:

The definitions for higher approach categories are also needed, e.g. CAT II and CAT III.

comment *766* comment by: *ECA - European Cockpit Association*

Comment: add the following definition:

(tbd) 'Electronic Flight Bag (EFB)' <![endif]--> **is an electronic device intended for flight crew functions traditionally accomplished using paper references (e.g., operating manuals, aeronautical charts, performance calculations). In addition, the EFB may host other applications that have no paper equivalent e.g., a video surveillance system".**

comment *796* comment by: *French SAMU using helicopters for medical transport*

Whenever terms are used in the regulation with a specific meaning they should be defined: I.E TLOF, VY, Rotating Point, Approved Operating Site....

It is mine understanding that "Aerodrome" as defined in the NPA does only include heliports meeting the Annex XIV Volume 2 requirements and all the other sites are in the NPA under the generic term "Operating sites" which in Annex XIV and JAR-OPS 3 where covered by the generic word "heliport",

HEMS,HHO,EXTERNAL LOAD are specialized operating sites which may

request an Authority approval if performed in a congested hostile environment ,

I would like to have confirmation that such an interpretation is the proper one.

(38) add « **operating site** » after HHO

Consistency with the other specialized sites

(55) add "**External load operations"** at the end of the sentence

Questions:

External load operation : Term might be used in replacement of HHO operating site as being more generic ?

(56) use the same wording as for (57) insert in the sentence " **the performance is available to enable the helicopter to"**

consistency

The term "approved operating site" should appear in the definition chapter

In OPERATING PROCEDURES

OPS GEN 150, OPS GEN 155,OPS GEN 160 OPS GEN 200,

Insert "**operating sites"** after aerodrome

Helicopters may depart IFR or use operating sites as alternate

comment *815* comment by: *CAA-NL*

Attachments #2 #3

JAA NPA-OPS 41 was introduced in EU-OPS 1 amdt 2. Unfortunatley some explanatory material has not been added to this NPA.

As former chairman of the JAA AWOSG having produced this NPA-OPS 41 I would like you to consider it for EASA-OPS.

comment *907* comment by: *CAA-NL*

Suggestion CAA-NL:

Location of list of defintion is not used consistent in EASA OPS.

Suggestion, make a CS that contains all definitions.

Reason:

Consistency

comment *930* comment by: *REGA*

(12) "congested" has be defined more precisely. Otherwise every recreational area, e.g. a 100km2 park with 2 people on it will counts towards a congested area.

Proposal (12)

'Congested area' means in relation to a city, town or settlement, any area which is **actually** *and substantially used for residential, commercial or recreational purposes if* **persons or property is exposed to an unacceptable risk of injury or damage in respect to operation.**

(15)

For helicopter: air-taxiing instead of taxiing.

(30)

Def. 30 (HEMS-Operation). The definition excludes too much things.

Proposal

Delete the sub article i, ii, iii.

(41)

"Hostile" - This definition has an interpretative character as already seen in the JAA member states:

Only open see areas?

Mountainous area counts as hostile due to inadequate surfaces for safe forced landing?

Depending on the pilot's skill, areas could or could not count towards hostile?

It would be necessary to be more precise.

Proposal 1 (41)

(i) An environment in which:

(A) A safe forced landing cannot be accomplished <u>in any case</u> because the surface is inadequate; or

(…)

Proposal 2 (41)

(i) An environment in which:

(A) A safe forced landing cannot be accomplished ~~because the surface is inadequate; or~~

(…)

(45) What about HEMS missions beginning at 23:45h and ending after midnight?

Proposal (45)

(i) within a 24 hours period

(ii) 'Local operations' are conducted by day and night under VFR; and..

(50) *'Night Vision Goggles (NVG)' shall mean a ~~head~~-helmet mounted, (…)*

(53) Definition of "flight crew" is missing.

(60) In the case of multinational (within EU) operating company: What if the principal financial functions are in one country while the CAMO (CAM) is placed in another country? Different places for different activities: an usual European Business model.

Proposal (60)

'Principal place of business' means the head office or registered office of a Community operator in the Member State. ~~within which the principal financial functions operational control, including continued airworthiness management, of the Community operator are exercised.~~

comment *935* comment by: *EHOC*

General

This whole section contains examples of arcane use of language constructs. ICAO, in the definitions chapter, specifies the term to be defined, adds a 'period' and then provides the definition; this convention was followed by JAR-OPS.

Some States (and other Parts) specify the term to be defined and then, without adding a period, add "means" and provide the definition.

The ICAO method should be used because it has been used for JAR-OPS in the recent past and it therefore represents the *status quo ante*. Alternatively, 'means' can be added and the period removed. The use of 'shall' introduces a construct which should be used only for requirements and not statements.

Esoterically, the ICAO method does permit the complete definition to be picked up (in its entirety) and used in subsequent guidance material.

comment *965* comment by: *HCE Education*

The definition of Night (30 minutes after sunset until 30 minutes before sunrise) must be heavily objected. In the northern part of the Nordic countries, the civil twilight can be as long as several weeks in the autumn and in the spring. This is due to the fact that every autumn and spring, there is a period for approximately two weeks when the sun is constantly below the horizon but still above 6 degrees below the horizon (the definition of civil twilight). If the proposal for the definition would be implemented, it would e.g. make it illegal to fly VFR without a Night rating for about one month every year, although it is technically not night. Furthermore, one consequence with safety implications is that it would be possible during this time to train for a Night rating, although it is technically not night.

Furthermore, the definition of Night in the proposal for Part-FCL.010 is *'Night' means the period between the end of evening civil twilight and the*

beginning of morning civil twilight or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State. There should obviously not be different definitions in Part-FCL and Part-OPS.

The definition in Part-OPS should be changed to the proposed definition in Part-FCL but without *"or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State",* as has been proposed and explained in NPA 2008-17b comment #5630.

comment *1010* comment by: *Michael Kroell*

(31) "Helicopter Hoist Operations (HHO) Flight":

Integration of flights with human cargo on a fixed distance external load long line or a fixed distance external load long line which can be extended by the individual transported with the long line (variable long line).

(34) "HEMS operating base":

Not necessarily an aerodrome; ...mean an aerodrome or heliport ....

comment *1011* comment by: *Michael Kroell*

(45) "Local operations"

For Helicopters example:

HEMS - always from HEMS base to finally HEMS base;

External load ops: from working base to working base - exept ferry to change working base

Integration: (vi) Helicopters: Flights start and end at the same location

comment *1012* comment by: *Michael Kroell*

(45) (i) start and end on the same day

(ii) are conducted by day under vfr:

May be problematic for nordic coutries, where daylight is available on a 24h basis

comment *1013* comment by: *Michael Kroell*

(54) "Offshore operations":

partially right, but must not always be an offshore destination;

Definition should include: ".. more than 10 min. flighttime at normal cruise speed overwater from next shoreline."

comment *1019* comment by: *Michael Kroell*

(9) "Category A with respect to helicopters" ....specified in CS27/29 or equivalent and.....

equivalent is misleading;

should state: or equivalent certification standards

comment *1029* comment by: *arno liesch*

Def. 30 (HEMS-Operation) This article excludes too much things. Proposal: Delete the subarticle i, ii, iii.

comment *1033* comment by: *arno liesch*

(45) (ii) 'Local operations' are conducted by day **AND NIGHT** under VFR; and..

comment *1034* comment by: *AECA(SPAIN)*

To add

Paragraph 5:

... taking-off ans manoeuvering of aircraft **according his performances**

comment *1059* comment by: *AECA helicopteros.*

add a new definition because CP(Committal point) is used in GM1 OPS.SPA.005.SFL(b) but not defined.

Committal Point (CP). The committal point is defined as the point in the approach at which the pilot flying (PF) decides that, in the event of a power unit failure being recognised, the safest option is to continue to the deck.

comment *1060* comment by: *AECA helicopteros.*

add a new definition, because Rotation Point is used in GM4 OPS.CAT.355.H and GM1 OPS.SPA.005.SFL(b) but not defined.

Rotation Point (RP). The rotation point is defined as the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognised, a forced landing on the deck can be achieved.

comment *1061* comment by: *AECA helicopteros.*

We suggest to take the definition from JAR OPS.

Touchdown and lift-off area (TLOF). A load bearing area on which a helicopter may touch down or lift off.

comment *1062* comment by: *AECA helicopteros.*

We suggest to take the definition content in JAR OPS

Vy. Best rate of climb speed.

comment *1107* comment by: *CAA-NL*

The CAA-NL proposes to EASA to include in OPS.GEN.010 DEFINITIONS, a generic reference to ICAO Part 1, chapter 3.1 of the ICAO TI for all dangerous goods definitions.

comment *1118* comment by: *Heli Gotthard*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *1236* comment by: *Air Zermatt*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *1287* comment by: *Air-Glaciers (pf)*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *1377* comment by: *International Air Transport Association*

OPS.GEN.010 Defintion of "Acceptance Check List". The wording of the defintion refers to the operator checking the "external appearance" of packages. This text should be more specific and refer to the marking and labelling on packages. In addition, the text then states that the check list is used to "determine that all appropriate requirements have been met". This should be qualified to state "determine, to the extent possible, that all appropriate requirements have been met." The operator can only validate what the shipper has provided.

comment *1392* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

General comment:

Among aviation regulations often different definitions can be found for one single term. EASA should elaborate a separate volume on definitions applicable for all its aviation regulations.

- **Concern Detail:**
  Definition(12): "Congested Area" has to be defined more precisely and tailored towards the practical use.
  Comment / Proposal:
  Modify text:
  Definition (12): 'Congested area' means in relation to a city, town or settlement, any area which
  is substantially used for residential, commercial or recreational purposes if persons or property is exposed to an unacceptable risk in respect to the operation.
- **Concern Detail:**
  Definition (30): Helicopter Emergency Medical Service
  Comment / Proposal:
  Modify text:
  Delete i, ii, iii
- **Concern Detail:**
  Definition (41): The definition of hostile environment is not applicable as proposed. A safe forced landing depends on the skill of the pilot and many more factors. It is not clear if the mountain area of Switzerland following the proposed definition would be considered as hostile environment.
  Comment / Proposal:
  Modify text:
  Definition (41:) A safe forced landing cannot be accomplished in any case because the surface is inadequate.

- **Concern Detail:**
  Definition (45): "Local Operations"
  Comment / Proposal:
  Modify text:
  Definition (45): "Local Operations" means flights operations conducted within a local and defined
  geographical area which:
  (i) start and end within a period of 24 hours (delete: on the same day);
  (ii) are conducted by day and night under VFR; and
  (iii) are navigated over routes by reference to visual landmarks.
  Remarks:
  Definition (45): The 24 hour period makes sense regarding HEMS operations which often take place at night.
- **Concern Detail:**

Definition (60)

Comment / Proposal:

Definition is not compliant with OR.GEN.001b, the definitions are not sufficient coordinated.

- **Concern Detail:**

Definition (77)

Comment / Proposal:

This definition is wrong, as V1 is already defined in CS.

comment *1421* comment by: *EUROCOPTER*

There is no definition of 'helicopter' while there is a definition of 'aeroplane' ((a)(6)).

Proposal: the ICAO definition of 'helicopter' should be added.

comment *1423* comment by: *EUROCOPTER*

The definition "heliport" used in JAR-OPS 3 is consistent with ICAO annex 6, and addresses a site used for take-off or landing by a helicopter, which is not necessarily an aerodrome, and which is not totally covered by the term 'operating site".

Proposal: to add the following definition in OPS.GEN.010:

"Heliport. An aerodrome or a defined area of land, water or a structure used or intended to be used wholly or in part for the arrival, departure and surface movement of helicopters."

comment *1483* comment by: *Airbus*

Add the following definition:

'Accelerate-stop distance available (ASDA)' means the length of the take-off run available plus the length of stop way, if such stop way is declared available by the appropriate Authority and is capable of bearing the mass of the aeroplane under the prevailing operating conditions.

Reason: This definition, which exists in OPS 1, is needed for understanding of the accelerate-stop performance requirements.

comment *1608* comment by: *Luftfahrt-Bundesamt*

Additional definitions are included in GM OPS.GEN.010. In our view, this is misleading. The material shuould be moved into OPS.GEN 010 in order to provide a single place where the reader can find all definitions used.

comment *1784* comment by: *Heli Gotthard AG Erstfeld*

Ops Gen 010 Definitions

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *1870* comment by: *Manchester Airport (EGCC)*

Comment re: OPS.GEN.010 (a) (24):-

The definition of "Dry Runway" is in appropriate. There are five main problems as follows.

1. If moisture is present on a runway pavement surface, it cannot exhibit the same friction coefficient as a truly dry runway. This therefore means that a runway with moisture is in fact "Damp", or if the surface is soaked, it is "Wet". A moist runway cannot be described as dry under any circumstances as it cannot exhibit the same friction qualities as a truly dry runway.
2. There is an underlying assumption that the surface friction characteristics are derived solely by the original material of the pavement surface. This assumption is severely flawed as a runway surface will wear over time, or may become contaminated with rubber build up, such that the maximum friction coefficient will reduce. Approaching the end of the life of a runway pavement surface, the friction level will be much lower than a new surface. Regardless of whether it is grooved or otherwise, the braking effect capability will be reduced and may not be sufficient to meet the

characteristics made in the assumption that a good runway surface may permit use of dry braking criteria. The only measure that can be relevant is the actual friction on the runway surface, however there is no specification for how this is "maintained" as suggested by the definition. Can EASA derive a means of comparing runway measured friction levels to an equivalent braking action capability that relates to aircraft braking performance?

3. The term "moisture" is not defined in ICAO as a means of describing the state of a runway surface. The only terms permitted are Dry, Damp, Wet, Water patches, or Flooded. This can lead operators of aircraft into making dangerously incorrect assumptions that a wet runway is moist and therefore "effectively dry". If moist means "Damp", then use the term Damp.
4. The definition has a vague reference to the method of preparation of a runway surface. It states that the dry runway criteria "includes" those specially prepared, leading to the assumption that other runway surface preparations are also "included" though not specifically mentioned.
5. The reference to some specific methods of runway surface preparation does not make the correct technical correlation between surface characteristics and friction (braking action). There are many ways of producing a pavement surface with high friction values in addition to grooving and porous materials. The significant factor is the Mean Texture Depth of the surface preparation. This is a scientifically measured and specified pavement characteristic. As an example, it is quite possible to groove a runway surface, but such that it will still have a lower friction level than a non-grooved runway that is made of a different material specification. A more correct technical requirement for the pavement surface should be specified that includes a value of mean texture depth. However, comments above must primarily be taken into account that propose that a "moist", or damp, runway cannot be described as dry.

Futher reference to this debate can be found in the UK CAA FODCOM No. 03/2009, titled "The importance of using performance data appropriate to the existng runway conditions".

comment *1907* comment by: *Ingmar Hedblom*

OPS.GEN.010(45)

Start and end on the same day means that a midnight local flight during summer in northern Sweden is not possible. Furthermore, the term “local operation” is not used in NPA 2009-02. This restriction is not acceptable and unreasonable.

Delete the whole definition of Local operation since it is not used.

The expression “Local area operations” is used in AMC OPS.CAT.235 with the definition “encompass usually an area within a distance of 20 - 25 nm”.

comment *1908* comment by: *Ingmar Hedblom*

OPS.GEN.010(59)

Powered sailplanes is defined here but which operating rules applies for TMG, Touring Motor Gliders?

comment *1928* comment by: *Berner Oberländer Helikopter AG BOHAG*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *1985* comment by: *Jill Pelan*

Draft Opinion Part - Air Operations

OPS GEN 010. Definitions

(60) Page 26 - Principal place of BUsiness "means the head office of registered office of a community operator in the Member State ....."

COMMENT : This means that any operator may have its crew / aircraft based in Europe and the "Principal place of business" outside the EU. Crew Personnel will , in this case, not be suject to European legislation contained in the NPA 2009.

This may encourage AIrline operators to set up their principal place of business outside of the EU where regulations are less restrictive. In the past this has occured with American airlines based in the US and crew bases within the EU and elsewhere (ex:United AIrlines) and airline crew having little protection as to working conditions and hours.

OPS GEN 020 Crew Responsibilities

(b) Page 28 "Crew members shall be seated at their assigned stations and shall not perform any activities other than those required for the safe operation of the aircraft during critical phases of flight"

Comment: This is vague and does not enumerate "critical phases of flight". This should be detailed so as not to cause any confusion.

(g) Page 29 "Crew members should not undertake duties on an aircraft if they know that they are sufering from or are likely to suffer from fatigue or they feel unfit to the extent that the flight may be endangered. "

PROPOSED TEXT : "Crew members have a right to refuse to undertake duties or continue flight schedules if they do not feel that they are apt physically or mentally to ensure the safe

undertaking of their duties. As only the crew member in question is able to evaluate his/her capacity to safely undertake her/his duties the decision to refrain from flight duty may not be contested by the operator or the medical examiner unless this action becomes repetitive. In such a case the consultation of a medical practitioner is advised."

JUSTIFICATION : ICAO Annexe 6 2.2.3 " An important safeguard may be established if States and Operators recognise the right of a crew member to refuse further flight duty when suffering from fatique of such a nature as to affect adversely the safety of the flight."

See also French Decree 11 July 1991 referring to crew fatigue and the right to abstain from flight duties.

In order that crew may not be unduly punished for refusing it is imperative that it is left up to the crew member to evaluate his / her capacity to work in a safe manner.

comment *2080* comment by: *Dirk Hatebur*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2107* comment by: *Heliswiss*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2112* comment by: *Heliswiss NV*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2284* comment by: *Austro Control GmbH*

OPS.GEN.010 Definitions

(22) 'DR'

DR means in aviation normally "Dead Reckoning" and is used in navigation.

Therefore it is suggested to clarify this definition by using another term or by

explanation of the distinction between " different DR".

comment *2285* comment by: *Austro Control GmbH*

(45) 'Local operations'

(i) start and end on the same day;

It is suggested to clarify "day" with the wording "*start and end within a period of consecutive 24 hours".*

Justification:

if "day" it is connected with sunrise, it might not be practicable for nordic countries where the day has 24 h.

comment *2309* comment by: *Austro Control GmbH*

(9)

"equivalent" is misleading and should be clarificated as "...*or equivalent certification standards*.."

comment *2310* comment by: *Austro Control GmbH*

(31)

Helicopter Hoist Operations:

There is a practical need to include human cargo with ropes or longe line, especially for HEMS, evacution or rescue work.

Therefore it is suggested to extend this definition or to add an seperate definiton for human external cargo operation.

"Human Exerternal Cargo operation" shall mean the transport of persons with a HHO approval or a longe line approval.

comment *2311* comment by: *Austro Control GmbH*

(35)

the listing is misleading, as the rule could be interpreted that only HHO is ment (see Definition 55, where this aspect is correct); also see Comment to Point 31 for human cargo.

Correction suggested:

".... a HEMS flight for landing, take off and Hoist or human long line operation".

comment *2315* comment by: *heliswiss ag, belp*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2347* comment by: *Dassault Aviation*

Technical comment:

Page 22 OPS.GEN.010 Definitions: With regards to MMEL and MEL, we propose to add a definition of "Inoperative Equipment" which is common to MMEL and MEL. The proposed definition could be introduced in the dedicated Definitions paragraph, as follows: "Inoperative Equipment: in connection with MMEL/MEL, an inoperative equipment is an equipment which can no longer function as intended, this include both loss of function and malfunction".

comment *2350* comment by: *Dassault Aviation*

Technical comment:

Page 22 OPS.GEN. Definitions:

proposed definition (new) of "separate runways": The concept "separate runways" is defined in EU-OPS1.192(f) but not in this NPA2009-02, although being mentioned in the paragraph OPS.CAT.155.A "Selection of alternate aerodromes" and GM1 OPS.CAT.205 "Fuel and oil supply". We suggest copying the EU-OPS1 definition here, in order to remind when overlapping or secant runways are considered as separate runways.

comment *2367* comment by: *Dassault Aviation*

Pages 27, 69 and 311 (resp. OPS.GEN.010 §67, OPS.CAT.345.A §(b) and AMC OPS.CAT.345.A(b)) (same comment as #1704) - Steep Approach and Screen Heights: these operational paragraphs consider that the landing distances data are based on a screen height of less than 50 feet but not less than 35 feet. It is to be noted that this 35-50 feet interval may be inadequate versus some airworthiness certification requirements. For example, NPA 25B-267 dealing with Steep Approach, allows screen heights from 35 feet up to 60 feet for the determination of landing distances data. Although it is a NPA, it is taken as it is through a Certification Review Item (CRI) therefore becoming an airworthiness certification bases on certain programs. The proposal is - if a maximum screen height needs to be mentioned - to increase the 50 feet proposed in the NPA 2009-02 to the value of 60 feet.

comment *2408* comment by: *Jan Brühlmann*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2443* comment by: *Catherine Nussbaumer*

There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2444* comment by: *Catherine Nussbaumer*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2503* comment by: *Royal Aeronautical Society*

Page 22

Although the term 'ETOPS' is used in several places in this and other NPAs relating to operations, its meaning is not defined within Part-OPS. It is suggested that an appropriate meaning taken from EU-OPS 1.192 (amended only to reflect the NPA 2009-02b reference to OPS.CAT.156A in place of EU-OPS 1.245(a)) should be included in OPS.GEN.010 Definitions subparagraph (a) thus: '**(*sequence number*) ETOPS (Extended range operations for two engine aeroplanes). ETOPS operations are those with two engine aeroplanes approved by the Authority (ETOPS approval) to operate beyond the threshold distance determined in accordance with OPS.CAT.156A from an Adequate Aerodrome.'**

Pages 22, 23, 26, and 27

Both 'engine and 'power-unit' are used within the definitions, the former being associated mainly with aeroplanes and the latter with helicopters, however this is not consistent. **Unless some distinction is required either within texts covered by the Basic Regulation or for generic aircraft types, only one term – 'engine' or 'power-unit' - should be used (for all aircraft or for generic types) consistently.**

'Critical' with regard to engines/power-units is not defined. **It is suggested that a definition of 'critical' should be included in the list of Definitions in OPS.GEN.010.**

Page 26

Paragraph 65 (i): '24 hours' should be '24-hour' in this context.

comment *2542* comment by: *Walter Mayer, Heliswiss*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2611* comment by: *Heliswiss*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2632* comment by: *AOPA-Sweden*

(22): The acronym DR normally means "Dead Reckoning" in terms of aviation. Therefore a change of acronym should be considered.

comment *2633* comment by: *AOPA-Sweden*

(23): The definition Dry operating mass' does not make any sense for small aircraft if it has to be used.

comment *2634* comment by: *AOPA-Sweden*

(45): The definition has no validity; it is not used in 02b or 22c. In the north of Europe there is no night-time in the middle of summer, so why the restriction of a local operation in the same day?

comment *2635* comment by: *AOPA-Sweden*

(25): In the northern Europe the twilight is much longer than 30 minutes during the summer.

The definition of "night" should be the same as NPA-2008-17: *'Night' means the period between the end of civil evening twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by Member State.*

comment *2636* comment by: *AOPA-Sweden*

(59): Is a Touring Motor Glider (TMG), mentioned in the NPA 2008-17 to be considered a sailplane or an aeroplane?

comment *2637* comment by: *AOPA-Sweden*

(75): Is this a correct definition of a take-off flight path? AOPA-S sees that as a normal take-off, not a take-off with a non-operating engine. It is very difficult to decide that path, depending on where the failure occurs.

comment *2694* comment by: *Pietro Barbagallo ENAC*

Definition (48)

Comment: The definition should be rebuilt as in JAR-OPS 3. MAPSC, (maximum approved passenger seating configuration).

Justification: See JAR-OPS 3.005 (f)(g) and App.1 to JAR-OPS 3.005 (e). The helicopter configuration (MAPSC) must be "approved" by the Authority.

comment *2805* comment by: *Austro Control GmbH*

general comment:

for a uniforme understanding a definition of "Commercial Air transport" (see Subpart B, CAT) is necessary and should be added.

comment *2829* comment by: *Philipp Peterhans*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2888* comment by: *UK CAA*

Page No: 22

Paragraph No: OPS.GEN.010 (a)

Comment:

This paragraph details that "*For the purpose of this subpart, the following definitions shall apply*:"

It is not clear whether these definitions are to be used throughout Part-OPS or just Subpart A. If this is the case, then some may need to be repeated in other Subparts.

It is suggested that a consolidated 'Definition' section for the whole of the Implementing Rules would simplify the process and standardise terminology.

Justification:

To improve harmonisation and standardisation of definitions throughout the Implementing Rules with the aim of reducing the possibility of misinterpretation.

comment *2889* comment by: *UK CAA*

Page No: 22

Paragraph No: OPS.GEN.010(a)(5)

Comment: The definition of aerodrome differs from that now agreed by Council and Parliament with respect to the amendment of 216/2008 to extend its scope to the safety of aerodromes and ATM. Final text should await the formal adoption of the amendment.

Justification: Consistency is necessary for the efficient application of the total system approach for aviation safety.

Proposed Text (if applicable): (See Article 3 (m) as in formal adoption of amendment to 216/2008.)

comment *2890* comment by: *UK CAA*

Page No: 24

Paragraph No: OPS.GEN.010 (a)(32) Definitions

Comment: Some essential definitions are omitted, and some are in conflict with definitions elsewhere.

The term "Helideck" is at variance with the definition of an aerodrome;

Justification: Definitions must be consistent, and accurate.

Proposed Text (if applicable):

Define "**Cloud Ceiling"** as the height above the surface of the base of the

lowest layer of clouds that obscures more than half the sky; reported for only broken and overcast sky cover.

Define **"R"** as rotor radius.

comment *2891* comment by: *UK CAA*

Page No: 23

Paragraph No: OPS.GEN.010(a)(14)

Comment:

OPS.GEN 010 (14) gives a definition of "Controlled flight" as a flight subject to an ATC clearance. However, the words "controlled flight" are also used to describe an aircraft's motion as being under the positive control of the crew as in "controlled flight into terrain".

Justification: Clarification.

Proposed Text (if applicable):

(14) 'Controlled flight' means any flight which is subject to an air traffic control clearance. ***(The term may also be used to indicate a flight under the full control of its crew as in the expression "controlled flight into terrain").***

comment *2892* comment by: *UK CAA*

Page: 23

Paragraph No:

OPS.GEN.010 (a) (24) (79) and (13)

Comment: The definition of dry runway should not refer to 'specially prepared or grooved surface or 'effectively dry' braking action even when moisture is present'.

The definitions of dry, wet and contaminated runways should closer reflect the ICAO definitions.

Justification:

Dry runway:

There are many paved surfaces designed to improve braking characteristics in the presence of moisture. If it is not maintained the surface will not perform as the manufacturer intends and the performance of the surface will degrade with time. Also, it is now known that 'effectively dry' braking action can NEVER be achieved in the presence of moisture so it's not correct to offer it as a possibility in a definition. As a result of the current definition, many States/Operators assume that such prepared surfaces always allow the use of dry runway performance on wet runways; this is not the case.

Referrals to specially prepared runway surfaces should be included as AMC or GM material and the rule should be closer to the ICAO definition.

Contaminated Runway:

The depth for loose snow in the definition of a contaminated runway is no longer considered appropriate. This depth was derived assuming it meant loose dry snow and was based on an equivalency, in terms of its effect on airplane acceleration with 3 mm (0.125 in) of water. At the time this definition was formulated, the Joint Aviation Authorities (JAA) requirements did not have a separate definition for wet snow. Wet snow was considered to be indistinguishable from slush, and hence, not considered to be "loose snow." In addition, any depth of snow (either wet or dry) greater than 3 mm should be considered contaminated just like slush or water. While dry snow at this depth may not have a significant effect on acceleration, it will result in lower friction levels than a normal wet runway, which is what it would be considered under the Amendment 33 (at depths up to 20 mm). This is a significant safety concern.

Proposed Text (if applicable):

OPS.GEN.010 Definitions

(a)

(13) 'Contaminated runway' means, ***for the purpose of determining airplane performance*** a runway ~~of~~ which ~~more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:~~

~~(i) Surface water more than 3 mm (0.125 in) deep, or by slush, or loose snow, equivalent to more than 3 mm (0.125 in) of water;~~

~~(ii) Snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or~~

~~(iii) Ice, including wet ice.~~

is considered to be contaminated when more than 25 percent of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by:

(i) water, slush or snow more than 3 mm (0.125 in) deep; or

(ii) any depth of compacted snow or ice, including wet ice.

(24) 'Dry runway' means, ***for the purpose of determining***

aeroplane performance a runway which is neither wet nor contaminated, and includes those paved runways which have been specially prepared with grooves or porous pavement and maintained to retain 'effectively dry' braking action even when moisture is present.***clear of contaminants and visible moisture within the required length and width being used.***

(79) 'Wet runway' means, ***for the purpose of determining aircraft performance*** a runway of which ~~the surface is covered with water, or equivalent, less than specified by the 'contaminated runway' definition or when there is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water.~~

is neither dry nor contaminated.

comment *2893* comment by: *UK CAA*

Page No: 26

Paragraph No: OPS.GEN.010 (54)

Comment:

It is considered that 'Offshore Operations' should be associated with commercial operations only and covered by a Specific Approval (SPA) and therefore the definition should be amended to reflect this.

Justification:

Alignment of definition with intended requirement. Operations over water by 'private' operators could be affected disproportionately by requirements intended for commercial or commercial air transport type operations.

Proposed Text (if applicable):

(54) Offshore operations' means ***commercial helicopter*** operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer ***and require a specific approval***.

comment *2894* comment by: *UK CAA*

Page No: 26

Paragraph No: OPS.GEN.010 Definitions – Sub-para 56

Comment:

Definition of Performance Class 1 does not align with ICAO Annex 6 Pt III or JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text (if applicable):

'Performance Class 1' means ***operations with performance such*** that, in the event of failure of the critical power unit, the helicopter is able to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs.

comment *2895* comment by: *UK CAA*

Page No: 26

Paragraph No:

OPS.GEN.010 Definitions – Sub-para 57

Comment:

Definition of Performance Class 2 does not align with ICAO Annex 6 Pt III or JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text (if applicable):

'Performance Class 2' means *operations with performance such* that, in the event of failure of the critical power unit, performance is available to enable the helicopter to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required.

comment *2896* comment by: *UK CAA*

Page No: 26

Paragraph No:

OPS.GEN.010 Definitions – Sub-para 58

Comment:

Definition of Performance Class 3 does not align with ICAO Annex 6 Pt III or JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text (if applicable):

'Performance Class 3' means ***operations with performance such*** that, in the event of a power unit failure at any time during the flight, a forced landing may be required in a multi-engined helicopter and will be required in a single-engined helicopter.

comment *2920* comment by: *Pascal DREER*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *2959* comment by: *Valair AG Switzerland*

Regarding helikopter performance

Art 77: From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement provided the operator obtain the National Authority AOC required.

comment *2990* comment by: *AEA*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *2991* comment by: *AEA*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *2992* comment by: *AEA*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *2998* comment by: *AEA*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *2999* comment by: *AEA*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *3001* comment by: *AEA*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *3004* comment by: *AEA*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *3005* comment by: *AEA*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *3006* comment by: *AEA*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *3007* comment by: *AEA*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *3098* comment by: *M Wilson-NetJets*

Original text:

(15) 'Critical phases of flight' means the take-off run, the take-off flight path, the final approach, the landing including the landing roll, the go-around and any other phases of flight as determined by the pilot-in-command. For helicopters, 'critical phases of flight' includes in addition taxiing.

Suggested new text:

'Critical phases of flight' means the take-off run, **the path after the take-off run to such a point where landing gear and lift devices are retracted,** the final approach, the landing including the landing roll, the go-around and any other phases of flight as determined by the pilot-in-command. For helicopters, 'critical phases of flight' includes in addition taxiing.

Comment/suggestion:

The "critical phases of flight" definition contains the terminology of "take-off flight path" which, in itself, is defined with "one engine inoperative". This would mean that critical phases of flight are not applicable to an "all engines operating" take-off.

comment *3103* comment by: *M Wilson-NetJets*

Original text:

(65) 'Series of flights' means consecutive flights, which begin and end: (i) within a 24 hours period; (ii) at the same aerodrome/operating site; and (iii) with the same pilot-in-command of the aircraft.

Suggested new text:

No suggested text

Comment/suggestion:

The definition of "series of flights" in OPS.GEN does not appear to be compatible with its usage in OR.OPS.030.MLR and OR.OPS.010.FTL where it might be with a different pilot-in-command and may start and end at

different aerodromes.

comment *3105* comment by: *M Wilson-NetJets*

Original text:

(68) 'Special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

Suggested new text:

'Special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC **as required for the airspace class**.

Comment/suggestion:

VMC is dependant for the class of airspace the flight is conducted in. It might be that a flight in G airspace class operates in lower VMC conditions than a VFR flight that is operated in class B airspace. The flight operating in class G airspace is still flying under regular VFR and not special VFR although it flies in conditions "below VMC" for class B airspace.

comment *3107* comment by: *M Wilson-NetJets*

Original text:

(75) 'Take-off flight path' means the vertical and horizontal path, with the critical power-unit inoperative, from a specified point in the take-off to 1000 ft above the surface.

Suggested new text:

'Take-off flight path' means the vertical and horizontal path, with the critical power-unit inoperative, from a specified point in the take-off to **1500** ft above the surface.

Comment/suggestion:

The definition of "net take-off flight path" in CS 25 is defined up to 1500'. For ease of use and compatibility the two definitions should be aligned to the same altitude.

comment *3172* comment by: *Southern Cross International*

In numerous places reference is made to passenger, however there is no definition in this Part for a passenger. A definition is required for some commercial operations with technical crew members. Although OR-OPS.().TC describes the requirements for some technical crew members in HEMS, HHO and NVIS operations, in other types of operations other technical crew members may be present. Some examples are flight test engineers (see Part

21), flight test instrumentation engineers, loadmasters, radar operators, system and payload specialists, observers, et cetera. In addition, during acceptance and demonstration flights, customer technical representatives and authorities may be present during a flight.

These personnel shall not be considered as passengers but as crew members, assigned for a specific task by the operator.

The following definition is proposed for 'passenger':

A passenger shall mean any person who is present under a contract of carriage or any other person other than a crew member, an owner or operator's employee in an official capacity, an authorized representative of an appropriate national authority or person accompanying a consignment or other cargo.

comment *3206* comment by: *Eurocontrol CND*

A number of definitions differ from ICAO without any apparent reason. See e.g "aerodrome" where some details have been added (mand made structure or vessel) while the ICAO expression "surface movement" has been paraphrased into "manoeuvering" which has a completely different connotation. A cursory review of the definitions from page 22 onwards shows that at least the following definitions differ from ICAO: 5, 6, 19, 20, 26, 27, 32, 39, 43, 49, 56, 57, 58, 64, 65, 69, 71 and 73.

The potentially severe impact of such variations on ICAO definitions (and other ICAO provisions) must be taken into account and notably the conflicts that States may face concerning their obligations towards ICAO Standards versus the contents of EC regulatory material that may vary, rather than complement, those Standards. It should be noted that the approach that has been followed in relation to Single European Sky (SES) Implementing Rules (IR) has regognised that ICAO SARPs provide the baseline which SES IRs should complement and strengthen. To further enhance the process, tha Commission has recently required that Differences by States related to all SES IRs shall be identified and assessed during the development process of each of those IRs.

comment *3207* comment by: *Eurocontrol CND*

Stabilised approach. This definition misses the point. A stabilised approach according to most definitions includes wordings such as "a continuous descent with a rate of descent adjusted to achieve a constant descent gradient" (or words to that effect).

comment *3208* comment by: *Eurocontrol CND*

GLS missing in list (ILS, MLS, PAR) (Def 69, page 26)

comment *3422* comment by: *SNEH Organisation representing all french commercial helicopters operators*

HELICOPTER definition is missing

comment *3452* comment by: *IAOPA Europe*

The list of defitions is a typical example of reduced usability caused by combining all aircraft types into the same document.

For the pilot of a fixed wing aircraft many of the definitions are irrelevant since they refer to helicopters. However, this can only be realised after reading the whole definition plus others.

For instance definition 25 says: 'Elevated FATO' means a FATO which is at least 3 metres above the surrounding surface.

The fixed wing pilot most likely will not know the meaning of FATO and must therefore look up this term only then to realise that it is a term used for helicopter operations.

As a minimum the definitions should be grouped into sections according to aircraft type.

comment *3454* comment by: *IAOPA Europe*

Why should a 'local operation' be limited to start and end on the same day. In northern regions of Europe there is 24H daylight during the summer period. Therefore a local flight may well take place around midnight and still be 'a local operation'.

comment *3490* comment by: *Heliswiss International*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *3555* comment by: *Walter Gessky*

3. OPS.GEN.010 Definitions

It is recommended that commonly used definitions are located in the Implementing Rule and not in the parts (Annexes) of the IR. I like to draw your intension to CS-Definition, which exists since 2003. In the interest of safety and legal certainty definitions shall, as far as possible, part of the

rules.

comment *3556* comment by: *Walter Gessky*

OPS.GEN.010 Definitions

(31) Helicopter Hoist Operation:

Add the following:

“human External Cargo operation: shall mean the transport of persons with a HHO approval or a long line approval.”

Justification:

It is suggested to add this definition for external human cargo operation, since there is a human transport with ropes or long line, especially for HEMS, evacuation or rescue work.

comment *3557* comment by: *Walter Gessky*

General comment, add a definition for

“Commercial operation”:

Justification:

For a uniform understanding a clear definition for commercial operation is required and should be added. This is especially essential for training organisations from when flight training is a commercial operation, and the training organisation is owned by a flying club.

comment *3601* comment by: *Austro Control GmbH*

(45) "local operations"

it is necessary to define local operations also for the use of helicoperts, especially HEMS:

Proposal:

delete "*on the same day*" in (i) and use the wording *"...start and end within a period" of 24 consecutive hours"*

Justification:

The 24 hours period is especially requested for HEMS operations which often are conducted during night.

comment *3612* comment by: *AUSTRIAN Airlines*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *3710* comment by: *IAOPA Europe*

The definition of 'night' as the period between 30 minutes after sunset until 30 minutes before sunrise is unacceptable in the northern regions of Europe. Here - during summer time - the sun will set very slowly and there will remain sufficient light for maybe several hours after sunset.

The definition of night should follow the definition of civil twilight being the period where the sun is more than 6 degress below the horizon or it should be defined by the Member State.

comment *3717* comment by: *Civil Aviation Authority of Norway*

A. If this is the case, then some may need to be repeated in other Subparts.

It is suggested that a consolidated 'Definition' section for the whole of the Implementing Rules would simplify the process and standardise terminology.

Justification:

To improve harmonisation and standardisation of definitions throughout the Implementing Rules with the aim of reducing the possibility of misinterpretation

Proposed Text

(if applicable):

N/A

comment *3723* comment by: *Civil Aviation Authority of Norway*

Paragraph No:OPS.GEN.010 Definitions – Sub-para 58

Comment:

Definition of Performance Class 3 does not align with ICAO Annex 6 Pt III or superseded JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text

(if applicable):

'Performance Class 3' means ***operations with performance such*** that, in the event of a power unit failure at any time during the flight, a forced landing may be required in a multi-engined helicopter and will be required in a single-engined helicopter.

comment *3788* comment by: *Civil Aviation Authority of Norway*

Comment:

Definition of Performance Class 2 does not align with ICAO Annex 6 Pt III or superseded JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text

(if applicable):

'Performance Class 2' means ***operations with performance such*** that, in the event of failure of the critical power unit, performance is available to enable the helicopter to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required.

comment *3790* comment by: *Civil Aviation Authority of Norway*

Comment:

Definition of Performance Class 1 does not align with ICAO Annex 6 Pt III or superseded JAR-OPS 3 definitions.

Justification:

To improve harmonisation and standardisation of text in order to provide the correct definition.

Proposed Text

(if applicable):

'Performance Class 1' means ***operations with performance such*** that, in the event of failure of the critical power unit, the helicopter is able to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs.

comment *3813* comment by: *FOM ANWB MAA*

(15) 'critical phases of flight' .

Add:...and air taxiing

helicopters can be taxied both on the ground (wheeltype landinggear) or within ground effect (skidtype landinggear).

comment *3824* comment by: *AUSTRIAN Airlines*

Relevant Text:

(11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *3825* comment by: *AUSTRIAN Airlines*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

Relevant Text:

(13) contaminated runway

comment *3827* comment by: *AUSTRIAN Airlines*

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *3828* comment by: *AUSTRIAN Airlines*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *3829* comment by: *AUSTRIAN Airlines*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *3830* comment by: *AUSTRIAN Airlines*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

Relevant Text:

(52) 'Non-hostile environment' means an environment in which:
(i) A safe forced landing can be accomplished;
(ii) The helicopter occupants can be protected from the elements;
(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and
(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

comment *3831* comment by: *AUSTRIAN Airlines*

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *3832* comment by: *AUSTRIAN Airlines*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *3833* comment by: *AUSTRIAN Airlines*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *3839* comment by: *FOM ANWB MAA*

(26) Enhanced Vision System (EVS)

EVS is not the same as NVIS, nor is NVIS commonly reffered to as EVS.

The definition would fit NVIS as well though. EVS is based on Infrared technology and this should be mentioned to impove the definition:

26) 'Enhanced Vision System (EVS)' shall mean an electronic means of displaying a real-time image of the external scene through the use of infrared imaging sensors;

comment *3858* comment by: *FOM ANWB MAA*

(29) 'Ground Emergency Services Personel'

There is no justification to define all police and firemen and other persons alike that may only once in their life be involved in helicopter operations as "Ground emergency services personel".

Suggested:

(29) 'Ground emergency service personnel' shall mean any ground emergency service personnel (such as policemen, firemen, etc.) involved with Helicopter Emergency Medical Service (HEMS) who have a dedicated task in helicopter operation as described in the operations manual;

comment *3871* comment by: *FOM ANWB MAA*

(50) 'Night Vision Goggles (NVG)' shall mean a ~~head~~-helmet-mounted, binocular, light intensification appliance that enhances the ability to maintain visual ~~surface~~ references at night;

NVGs are usually helmet mounted as most aviators heads have no provisions to attach NVGs.

NVGs do not only enhance the ability to maintain visual surface references at night but enhance all visual references at night.

comment *3873* comment by: *FOM ANWB MAA*

(51) 'Night Vision Imaging System (NVIS)' shall mean the integration of all

elements required to successfully and safely use NVGs while operating a helicopter. ~~The system includes as a minimum: NVGs, NVIS lighting, helicopter components (such as radio altimeter, visual warning system and audio warning system), training and continuing airworthiness~~;

The system requirements are described in:

Section VII – Helicopter operations with night vision imaging systems

comment *3876* comment by: *FOM ANWB MAA*

(60) 'Principal place of business' means the ~~head office or~~ registered office of a Community operator in the Member State ~~within which the principal financial functions and operational control, including continued airworthiness management, of the Community operator are exercised.~~

Operations, finance and CAMO functions should be possible in different member states, as they are today.

comment *3907* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

add: air taxiing.

comment *3923* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(26) EVS is not NVIS, both fit the definition though. Definition needs improvement for clarity

comment *3924* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(29) change to read: "… and who have a dedicated task in Helicopter Operations". There is no justification to define all police and firemen and other persons that may only once in their life be involved in helicopter operations as " Ground emergency services personel".

comment *3929* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(50) Change to read: " helmet mounted....visual references. " NVGs are usually mounted to helmets, most aviators heads have no special provisions to attach NVGs. NVGs also enhance other references than ground references.

comment *3930* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(51) Delete all after:..while operating a helicopter. These are described in Section VII OPS.SPA.NVIS

comment *3931* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(60) change to read: …the registred office in the Member state. Operations, finance and CAMO functions may be in different member states, as they are today..

comment *3996* comment by: *Virgin Atlantic Airways*

Relevant Text:

(*3) Adequate Aerodrome means an aerodrome on which the aircraft can be operated, taking account of the applicable performance requirements and runway characteristics.*

Comment:

This definition is not in-line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS), the need for an aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodrome should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodrome could potentially reduce flight safety.

Proposal:

Realign the definition of adequate aerodrome with the definition used in EU-OPS.

comment *3997* comment by: *Virgin Atlantic Airways*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous goods incident

comment *4000* comment by: *Virgin Atlantic Airways*

Comment:

Some definitions seem to be written in hard-law (OPS.GEN.010 Definitions) whereas others are contained within the guidance material (GM.OPS.GEN.010, page 103). This division in definitions does not seem to be based on clear criteria.

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *4002* comment by: *Virgin Atlantic Airways*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this needs to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *4004* comment by: *Virgin Atlantic Airways*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *4006* comment by: *Virgin Atlantic Airways*

Relevant Text:

(52) 'Non-hostile environment' means an environment in which:

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *4009* comment by: *Virgin Atlantic Airways*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *4102* comment by: *Benedikt SCHLEGEL*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *4136* comment by: *DGAC*

General comment

It is not very convenient to have definitions spread in so many places throughout the text of the NPA (OPS.GEN.010, GM OPS.GEN.010 Definitions, AMC 1 OPS.GEN.320A(a), …). Moreover, some terms are used early in an AMC and defined later on in another AMC (ex.: Class A&C used in AMC 1 OPS.GEN.320A(a) and only defined in AMC.OPS.CAT.316A(a)(1)).

Besides, is an AMC or a GM really the proper place for a definition, especially when the term is used in the IR ? The fact that a definition could be subject to interpretation and alternative means of compliance (as AMC or GM) is questionable actually. How can a standard be applied if there is no assurance on the meaning of the terms it is built upon ?

comment *4137* comment by: *DGAC*

(a): Amend the text of the first sentence as follows :

"~~(a) For the purpose of this subpart, t~~**T**he following definitions shall apply: "

Justification : OPS.GEN.010 does not contain any (b) and these definitions seem also applicable to the other subparts.

comment *4138* comment by: *DGAC*

(a)(1): '3% En-Route Alternate (ERA) aerodrome' :

Proposal: Amend the definition as follows:

"'3% En-Route Alternate (ERA) aerodrome' means an ERA aerodrome selected for the purpose of reducing contingency fuel to 3% **and/or replacing one destination alternate aerodrome when two are required**."

Justification: OPS.CAT.155.A(b) allows for operators to select one destination alternate and one 3% en-route alternate (ERA) aerodrome. This choice doesn't mean that the reduced contingency fuel (RCF) procedure will be applied. Therefore, it is necessary to amend the definition of "3% ERA" to reflect the use of these terms in the present OPS.CAT.155.A(b).

comment *4139* comment by: *DGAC*

(a)(3) 'Adequate aerodrome': This definition is incomplete compared to the definition of EU-OPS 1.192(a). The following is missing :

"at the expected time of use, the aerodrome will be available and equipped with necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services."

There seems to be some equivalent material in GM 1 OPS.GEN.145 but this is not the proper place: an old version of JAR-OPS 1 was drafted this way (IEM JAR-OPS 1.220) but it was considered recently that this provision should be added in the definition for safety imperatives (NPA-OPS 58). This is the reason why it had been introduced in the definition of 'adequate aerodrome' in change 2 of EU-OPS.

comment *4140* comment by: *DGAC*

(a)(8) 'Anti-icing'

Proposal: Amend the definition as follows :

'Anti-icing' means the procedure **applied to an aeroplane on the ground** that provides protection against the formation of frost or ice and accumulation of snow on treated surfaces of the **aeroplane** ~~aircraft~~ for a limited period of time (hold-over time).

Justification :

Up to now and for coming years anti-icing fluids and procedure are designed and used only on the ground and are restricted to aeroplanes (e.g. Hold Over Time makes sense for aeroplanes only)

comment *4141* comment by: *DGAC*

(a)(15) 'critical phase of flight"

The term "taxiing" is not adapted for helicopter operations

Proposed Text:

Add the term "translation" for helicopters.

comment *4142* comment by: *DGAC*

(a)(20) 'De-icing'

Proposal: Amend the definition as follows :

'De-icing' **with respect to ground procedures** means the procedure by which frost, ice, snow or slush is removed from an aircraft in order to provide uncontaminated surfaces.

Justification : This definition has been designed in JAR-OPS to be applied only as a ground procedure. Using this definition for in-flight de-icing could be misleading if not dangerous.

comment *4143* comment by: *DGAC*

(a)(38)'HHO site'

Terminology should be "HHO operating site" (used in OPS.SPA.XXX.HHO) and not "HHO site".

Proposed Text:

Amend text as follows "(38) HHO Operating Site" shall means a site…""

comment *4144* comment by: *DGAC*

(a)(39) 'Hold-over Time (HoT)'

Proposal: Amend the definition as follows :

'Hold-over Time (HoT)' means the estimated period of time for which an anti-icing fluid is expected to prevent the formation of frost or ice and the accumulation of snow on the treated surfaces of an **aeroplane** ~~aircraft~~ on the ground in the prevailing ambient conditions.

Justification :

Up to now and for coming years anti-icing fluids and procedures are designed and used only for aeroplanes. Hold Over Time makes sence for aeroplanes only.

comment *4145* comment by: *DGAC*

(a)(48) Maximum passenger seating configuration:

The last sentence ("this may be lower than the maximum certificated passenger seating configuration of the aircraft") is not a definition. It should be in an AMC.

comment *4146* comment by: *DGAC*

(a)(49) 'Night' :

Proposal :

Amend definition (49) as follows :

"(49) 'Night' means the period ~~between 30 minutes after sunset until 30 minutes before sunrise, determined at surface level~~ **the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State.**"

and add a new AMC and a new GM as follows :

"**GM OPS.GEN.010(a)(49) Definitions**

NIGHT

Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

AMC OPS.GEN.010(a)(49) Definitions

NIGHT

Under moderate latitudes, night may be considered as the period between 30 minutes after sunset until 30 minutes before sunrise, determined at

surface level"

Justification :

The definition of night as proposed in NPA 2009-02b is a simplified definition which will not be accurate under all latitudes. A more generic definition is needed, which would have the double advantage of being usable everywhere, and being consistent both with the definition of « night » as per NPA 2008-17b Part FCL :

'Night' means the period between the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State.

and with the definition of night as per ICAO annex 6 :

Night. The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

Note.— Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

The '30minutes' value is only applicable under moderate latitudes.

comment *4147* comment by: *DGAC*

(a)(56) Performance class 1

Proposal: Amend the text as follows

"(56) 'Performance Class 1' means that, in the event of failure of the critical power unit, ~~the helicopter is able~~ **performance is available to enable the helicopter** to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs."

Justification:

The proposed amendment improves consistency of the wording of (a)(56) performance class 1 with the wording both of (a)(57) performance class 2 and of the definitions of ICAO annex 6-3.

comment *4148* comment by: *DGAC*

(a)(65) 'Series of flight' :

Proposal: Amend the definition as follows:

"(65) 'Series of flights' means consecutive flights, which begin and end:

(i) within a 24 hours period; **and**

(ii) ~~at the same aerodrome/operating site; and~~

~~(iii)~~ with the same pilot-in-command of the aircraft.

Justification: Except in one GM, **'**Series of flights' in NPA 2009-02 is only used in the expression "flight or series of flight" as it was used in EU/JAR OPS 1/3. It is an extension of the term 'flight' to which it is attached, used in various cases such as document filling, briefings, definition of Flight Duty Period. It has therefore to be consistent with the term 'flight' to which it is attached: if there is no notion of circular flight ('A to A' flight), then there is no reason to add that notion to the series of flights. If (ii) is not deleted, then the definition of Flight Duty Period will not make any sense (how is the FDP counted for two consecutive flights from A to B, when do the rests occur, etc?) and the use of series of flights in other paragraphs of Part OPS and Part OR will not make any sense either :

PART OPS :

OPS.GEN.610 Journey log book

Particulars of the aircraft, its crew and each journey shall be retained for each flight or series of flights in the form of a journey log book.

OPS.COM.115 Briefing of operational personnel

Operational personnel involved in specialised tasks shall be briefed on operational procedures associated with the specific task before each flight or series of flights.

OPS.SPA.001.HEMS Helicopter emergency medical service operations (HEMS)

(b)(4)(x) briefing of medical staff prior to any HEMS flight, or series of flights.

AMC1 OPS.GEN.020(a) Crew responsibilities

FATIGUE RISK MANAGEMENT

1.d. Number or series of flights (sectors) planned or accomplished;

GM OPS.GEN.610 Journey log book

SERIES OF FLIGHTS

The term 'series of flights' is used to facilitate a single set of documentation.

AMC OPS.SPA.001.HHO(b)(4) Helicopter hoist operations (HHO)

OPERATING PROCEDURES

4. Passenger briefing. Prior to any HHO flight, or series of flights, HHO passengers should be briefed and made aware of the dangers of static electricity discharge and other HHO considerations.

AMC OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS)

OPERATING PROCEDURES

2. Medical passenger

Prior to any HEMS flight, or series of flights, the medical passenger should

be briefed on the following:

PART OR :

OR.OPS.030.MLR Information retained on the ground commercial air transport

Information relevant to the flight and appropriate for the type of operation shall be preserved on the ground for the duration of each flight or series of flights, except for operations with:

OR.OPS.010.FTL Definitions

(f) 'Flight Duty Period (FDP)' means a period which commences when a crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aircraft finally comes to rest and the engines are shut down or the rotor blades are stopped, at the end of the last flight on which they are a crew member;

CS FTL.1.135 Maximum daily Flight Duty Period (FDP)

(c) FDP with different reporting time for flight crew and cabin crew

In cases where cabin crew require more time than the flight crew for their preflight briefing for the same flight or series of flights, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew, as long as the difference does not exceed 60 minutes.

GM OR.OPS.250.CC Operations on more than one type or variant

SAFETY BRIEFING FOR CABIN CREW

When changing aeroplane type or variant during a series of flights, the cabin crew safety briefing should include a representative sample of type specific normal and emergency procedures and safety equipment applicable to the actual aircraft type to be operated.

GM OR.OPS.025.FTL Fatigue Risk Management System (FRMS) and GM OR.OPS.325.FTL Fatigue Risk Management System (FRMS)

1.4.b. the necessity to manage the duty period in which additional tasks are performed immediately prior to a flight or at intermediate points during a series of flights in such a way as to prevent transient fatigue;

comment *4149* comment by: *DGAC*

(a)(67) 'Screen height' :

Clarify the definition as follows to avoid misunderstanding:

"(67) 'Screen height' means**, in the context of steep approaches,** a height selected by the (Supplemental) Type certificate holder at 50 ft, or another value from 35 to 50 ft."

comment *4150* comment by: *DGAC*

(a)(71) 'Take-off distance available (TODA)'

The definition of TODA is incorrect for helicopter operations.

Proposed Text:

Amend text as follows :

"(71) 'Take-off distance available (TODA)' means the length of the take-off run available**/FATO** plus the length of the clearway available."

comment *4151* comment by: *DGAC*

THERE ARE SEVERAL MISSING DEFINITIONS:

There is no definition of "**helicopter**", "**balloon**", "**airship**". Add the relevant ICAO definitions

Adequate ETOPS en-route alternate aerodrome's definition is missing

Child/Children : Adults and infants are defined OPS.GEN.010(a)(4) and (a)(42), but not children.

Proposed Text:

Add the following definition in OPS.GEN.010:

" **'Child/Children' mean(s) person(s) of an age of two years and above but who are less than 12 years of age.**"

Heliport: The term "heliport" has been deleted and replaced by FATO or aerodrome (e.g. "elevated FATO"); this terminology should be reintroduced

Justification:

The definition "heliport" used in JAR-OPS 3 is consistent with ICAO annex 6, and addresses a site used for take-off or landing by a helicopter, which is not necessarily an aerodrome, and which is not totally covered by the term 'operating site'.

ICAO Annex 6 : "Heliport. An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Note 1.— Throughout this Part, when the term "heliport" is used, it is intended that the term also applies to aerodromes primarily meant for the use of aeroplanes."

Proposed Text:

Add the following definition in OPS.GEN.010:

"Heliport. An aerodrome or a defined area of land, water or a structure used or intended to be used wholly or in part for the arrival, departure and surface movement of helicopters. »

HHO (technical) crew member (OPS.SPA.030)

Medical passenger (GM OPS.SPA.001.HEMS)

DPBL (GM3/GM4 OPS.CAT.355.H) is defined page 319 while DPATO is

defined page 23. These two definitions are linked and having them separated by 300 pages makes it difficult to read.

R : rotor radius

Rotation Point (RP) :

Proposed text:

"The rotation point is defined as the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognised, a forced landing on the deck can be achieved."

Touchdown and lift-off area (TLOF).

Proposed text :

A load bearing area on which a helicopter may touch down or lift off.

Vy: (used in GM OPS.CAT.355.H): best rate of climb

comment *4232* comment by: *KLM*

elevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *4234* comment by: *KLM*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *4235* comment by: *KLM*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *4236* comment by: *KLM*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *4237* comment by: *KLM*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *4238* comment by: *KLM*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *4239* comment by: *KLM*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *4240* comment by: *KLM*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *4241* comment by: *KLM*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *4242* comment by: *KLM*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *4385* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (9) 'Category A with respect to helicopters' means multi-engine helicopters designed with engine and system isolation features specified in CS-27/29 or equivalent **certification requirement** and Helicopter Flight Manual performance information based on a critical engine failure concept, which assures adequate designated surface area and adequate performance capability for continued safe flight in the event of an engine failure.

comment *4386* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (15) For helicopters, 'critical phases of flight' includes in addition taxiing **and air - taxiing**

comment *4387* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

(22) Definition of the abrivation DR is missing

comment *4388* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Attachment #4

HEC Human External cargo isn´t defined. There should be also an OPS.SPA.xxx.HEC implemented in this rule

comment *4389* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (29) 'Ground emergency service personnel' shall mean any ground emergency service personnel (such as policemen, firemen, etc.) involved with Helicopter Emergency Medical Service (HEMS) **and who have a dedicated task in Helicopter Operations**.;

comment *4390* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

(50) Change to read: " helmet mounted....visual references. " NVGs are usually mounted to helmets, most aviators heads have no special provisions to attach NVGs. NVGs also enhance other references than ground references.

comment *4391* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

(45) Should state: (ii) are cunducted by day under VFR or **under VFR, day and night for HEMS operation, and**

comment *4392* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

(60) A definition of what is understood as 'public interest' is missing, especially if landing sites at hospitals are "public interest"

comment *4393* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

(67) Correct definition of which kind of height is mentioned

comment *4439* comment by: *TAP Portugal*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *4440* comment by: *TAP Portugal*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *4441* comment by: *TAP Portugal*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *4442* comment by: *TAP Portugal*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *4443* comment by: *TAP Portugal*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *4445* comment by: *TAP Portugal*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *4446* comment by: *TAP Portugal*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *4447* comment by: *TAP Portugal*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *4448* comment by: *TAP Portugal*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe

this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *4449* comment by: *TAP Portugal*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *4454* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *4455* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome*

elevation or in the case of offshore operations above mean sea level.

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *4456* comment by: *Deutsche Lufthansa AG*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *4457* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *4461* comment by: *Deutsche Lufthansa AG*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This division in definitions does not seem to be based on clear criteria. Problems arise especially, when the term defined in GM has been used before in IR or AMC. This means a) that the term used in hard law is not defined legally and b) by changing it in the soft law would affect the common understanding of the hard law. Both provides legal uncertainty, which according to EASA should be removed with the new rules. **This claim clearly failed, the rules do not reflect legal best practice.**

Proposal:

A definition must be on the same or higher rule level than the texts in which the defined term is used.

comment *4464* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *4467* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *4469* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *4504* comment by: *ADAC Luftrettung GmbH*

010 (a) (15) And air taxiing?

010 (a) (26) EVS is not NVG, both fit the definition though. Definition needs improvement to clarity

010 (a) (29) Pertinent" is not restrictive, this requirement cannot be fulfilled

change to read: "… and who have a dedicated task in Helicopter Operations". There is no justification to define all police and firemen and other persons that may only once in their life be involved in helicopter operations as " Ground emergency services personel".

010 (a) (50) Head mounted? Ouch - better: helmet mounted - more than visual surface references (skip surface)

Change to read: " helmet mounted....visual references. " NVGs are usually mounted to helmets, most aviators heads have no special provisions to attach NVGs. NVGs also enhance other references than ground references.

010 (a) (51) See definition is TGL 34, this is too much

Delete all after:..while operating a helicopter. These are described in Section VII OPS.SPA.NVIS

010 (a) (60) This is and….and….and…. Why is the requirement for CAMO arranged in OPS?

change to read: …the registred office in the Member state. Operations, finance and CAMO functions may be in different member states, as they are today..

comment *4506* comment by: *Christophe Baumann*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *4522* comment by: *British Airways Flight Operations*

Comment:

Some definitions seem to be written into the Implementing Rules (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This division in definitions does not seem to be based on clear criteria and serves only to confuse.

Proposal:

Definitions should be in hard-law unless there is a clear justification

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4532* comment by: *British Airways Flight Operations*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. We therefore believe this need to be clearly spelled out in this definition. Text applicable to operations with aeroplanes and helicopters should not be mixed in the same document.

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4542* comment by: *British Airways Flight Operations*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' only

applies to helicopter operations. We therefore believe this need to be clearly spelled out in this definition. Text applicable to operations with aeroplanes and helicopters should not be mixed in the same document.

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4553* comment by: *British Airways Flight Operations*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' only applies to helicopter operations**.** Text applicable to operations with aeroplanes and helicopters should not be mixed in the same document.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4850* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *4851* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *5085* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: Definition of 'Commercial Air Transport" should be included.

Proposal: Define 'Commercial Air Transport'

comment *5088* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Aerobatic is not defined, which is confusing. Will aerobatic be regulated by NAA?

Proposal:

Develop a definition of aerobatic flight and implementing rules for aerobatic flights.

comment *5090* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(45) Local operations means flight operations within a local and defined geographical area which:

(i) start and end on the same day;

(ii) are conducted by day and VFR; and

(iii) are navigated over routes by reference to visual landmarks.

Comment:

1. This is not applicable in the northern part of Europe, due to the midnight sun with long dawns and twilights.

2. The definition should include an area around the airport of origin

Proposal (including ***new text***):

(45) Local operations means flight operations within a local and defined geographical area which:

~~(i) start and end on the same day;~~

(i) are conducted by day and VFR; and

(ii) are navigated over routes by reference to visual landmarks;

(iii) ***encompass an area within a distance 25 nm.***

comment *5091* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(49) Night means a period between 30 minutes after sunset until 30 minutes before sunrise, determined at surface level.

Comment:

This definition is not appropriate and applicable to VFR operations in northern Europe with long dawns and twilights during summertime.

Furthermore, it is not the same definition as used in the FCL NPA 2008-17.

There must be the same definition for OPS and FCL use

Proposal (including ***new text***):

Introduce the definition from NPA 2008-17:

"Night" means the period between the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State.

comment *5093* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(59) 'Powered sailplane' means an aircraft, equipped with one or more engines having, with engine(s) inoperative, the characteristics of a sailplane.

Comment:

The definition is confusing. Which operating rules applies for TMG, Touring Motor Gliders?

Proposal:

Touring Motor Glider should be defined and be included in the operating

rules.

comment *5117* comment by: *Ryanair*

(21) - Disruptive Passenger

The term "potentially disruptive passenger" in the context of Regulation (EC) 300/2008 means a "passenger who is either a deportee, a person deemed to be inadmissible for immigration purposes, or a person in lawful custody".

It is clear that the term "disruptive passenger" is used in a much wider context. This anomaly must be addressed and any potential for confusion removed.

(65) - Series of flights

There is no reason why a series of flights must begin and end at the same aerodrome/operating site

Proposal

Remove para (ii)

comment *5280* comment by: *Department for Transport UK*

OPS.GEN.010 Definition of commercial air transport

The Basic Regulation defines 'commercial operation'. That definition covers all commercial activities including commercial air transport (CAT). While the implementing rules place additional requirements on CAT operations they do not define what constitutes CAT. Under the SES common requirements CAT is defined "any aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire." For the avoidance of doubt this definition should be repeated in the OPs IRs.

comment *5298* comment by: *Light Aircraft Association UK*

Item 68.

The LAA supports the proposed wording with the following amendment:

"'Special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC *or in circumstances where VFR flight is not normally permitted*."

comment *5311* comment by: *CAA CZ*

The definition No (69) "Standard Category I" should be supplemented by GLS (to be final wording as ILS, MLS, GLS or PAR).

comment *5338* comment by: *Peter Moeller*

010(a)(11) How many octas define a cloud base'

010(a)(12) Should the definition not refer to the availibility of emergency landing sites

010(a)(15) include air-taxi for helicopters without wheel type landing gears

010(a)(18) are medication and medical O2 defined as dangerous goods which have to be included in the Dangerous Good transport Doc

010(a) (45) ii are conducted by day and night under VFR

010(a)(50) .....shall mean a helmet mounted

comment *5344* comment by: *Danish Balloon Organisation*

Airships and Balloons should be included in OPS.GEN.010 Definitions as follows:

Airship means a power driven lighterthanair aircraft, with the exception of hot air airships, which, for the purposes of this Part, are included in the definition of balloon.

Balloon means a lighter than air aircraft that is not engine driven and sustains flight through the use of either gas or an airborne heater. For the purposes of this part, a hot air airship, although engine driven, is also considered a balloon.

comment *5393* comment by: *ALFA-HELICOPTER*

(26) EVS is not NVIS, both fit the definition though. Definition needs improvement for clarity

comment *5397* comment by: *ALFA-HELICOPTER*

(29) change to read: "… and who have a dedicated task in Helicopter Operations". There is no justification to define all police and firemen and other persons that may only once in their life be involved in helicopter operations as " Ground emergency services personel".

comment *5401* comment by: *ALFA-HELICOPTER*

(50) Change to read: " helmet mounted....visual references. " NVGs are usually mounted to helmets, most aviators heads have no special provisions to attach NVGs. NVGs also enhance other references than ground references.

comment *5402* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *5403* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *5404* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *5405* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *5406* comment by: *ALFA-HELICOPTER*

(51) Delete all after:..while operating a helicopter. These are described in Section VII OPS.SPA.NVIS

comment *5407* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *5408* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe

this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *5409* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *5410* comment by: *ALFA-HELICOPTER*

(60) change to read: …the registred office in the Member state. Operations, finance and CAMO functions may be in different member states, as they are today..

comment *5411* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter

operations

comment *5412* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *5413* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *5443* comment by: *Esko RUOHTULA*

Definition (49) Night may be resonable at Central European latitudes, but it is unacceptably restrictive for operations at higher latitudes.

For example aiports Kittilä in Finland, Kiruna in Sweden and Bodö in Norway have approximately same latitude about 67,5 degrees N. At these airports in December sun never rises for about two weeks but there is more than 5 hours civil twilight even on the shortest day. According to ICAO definition of night VFR-day operations are possible every day, but the proposed definition of night would prevent such operations for over two weeks.

Higher north the proposed definition of night is even more absurd. At e.g. Kirkenes, Alta and Tromsö airports when sun sets in late November it rises next in mid January, but even at these latitudes there is civil twilight more than four hours even on the shortest day.

The proposed definition is not valid even at much lower latitudes. During

summer as far south as e.g. Tampere and Pori airports (latitude approximately 61 deg 25 min N) sun is below horizon more than four hours even on the shortest day, but still there is no gap between dusk and dawn (continuous civil twilight) for over one month.

Length of daylight at different locations around the globe can be easily checked at www.gaisma.com.

I propose that ICAO definition of night is used.

comment *5582* comment by: *HSD Hubschrauber Sonder Dienst*

(15) Last sentence should read:"For helicopters, `critical phases of flight` include hovering manoeuvers and air taxiing."

comment *5601* comment by: *HSD Hubschrauber Sonder Dienst*

(29) last part of sentence should read:"....and who have a dedicated task in Helicopter Operation."

It is impossible for any operator to train all persons, police or firemen, who might be some day involved in a HEMS-mission.

comment *5605* comment by: *HSD Hubschrauber Sonder Dienst*

(60) change to read:"...the registered office in the member state. Operations, finance and CAMO-functions may be in different member states.

comment *5629* comment by: *ADAC Luftrettung GmbH*

What is equivalent here: BO105 and AS355? Recommandation:time limit, what is the relation to PC2Enhanced?

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H(d)(1). The AMC is not in line with the implementing rule and should therefore be revised.

comment *5640* comment by: *ERA*

European Regions Airline Association Comment

- It has been noted that there is an apparent inconsistency in where definitions are placed, and whether material of the same nature and status enters at Implementation Rule [Hard Law] level or at AMC/GM

level.

- OPS.GEN.010 is overloaded with definitions related to helicopter operations, while definitions of the same nature for aeroplane operations are contained at AMC level, or not given at all. It is evident in other areas that helicopter material is treated at IR level, whereas similar material for aeroplanes is at AMC level.

Examples:

1. Performance classes for helicopters are given in OPS.GEN.010. Performance classes for aeroplanes are not stated in a definitions section at all, but are to be found in AMC OPS.CAT.316.A(A)(1). Likewise, definitions in GM OPS.GEN.010 are given at GM level, whereas in AMC1 OPS.CAT.010 definitions are given at AMC level. Such inconsistencies seem ill-founded and confusing.
2. Material on obstacle clearance during climb-out, stemming from Annex 6, for helicopters is presented in OPS.CAT.365.H, while for aeroplanes it is, much more appropriately, presented in AMC2 OPS.CAT.327.A. These inconsistencies seem to be ill-founded, as all similar material should in principle be in the AMC/GM level.

ERA members would urge EASA to re-edit the IR to achieve consistency of material at AMC level.

comment *5698* comment by: *Irish Aviation Authority*

Comment:

Numerous JAR-OPS 3 & ICAO Annex 6 definitions are missing.

Justification:

Definitions are required where they are referenced in the Rule.

Suggested text:

'Commercial air transport operation' means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

Approach and landing phase — helicopters. That part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

Area navigation (RNAV). A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

Note.— Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

Cabin crew member. A crew member who performs, in the interest of

safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

Cargo Aircraft. Any aircraft which is carrying goods or property but not passengers. In this context the following are not considered to be passengers:

(i) A crew member;

(ii) An operator's employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual;

(iii) An authorised representative of an Authority; or

(iv) A person with duties in respect of a particular shipment on board.

Children are defined as persons of an age of two years and above but who are less than 12 years of age.

Committal Point (CP). The committal point is defined as the point in the approach at which the pilot flying (PF) decides that, in the event of a power unit failure being recognised, the safest option is to continue to the deck.

Dangerous Goods Accident. An occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage.

Dangerous Goods Incident. An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation

or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises the aircraft or its occupants is also deemed to constitute a dangerous goods incident.

Decision altitude (DA) *or* ***decision height (DH).*** A specified altitude or height in the precision approach or approach with vertical guidance at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3.— For convenience where both expressions are used they may be written in the form "decision altitude/height" and abbreviated "DA/H".

Emergency locator transmitter (ELT). A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or

be manually activated. An ELT may be any of the following:

Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.

Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

Elevated heliport. A heliport which is at least 3 m above the surrounding surface.

Exposure time. The actual period during which the performance of the helicopter with the critical power unit inoperative in still air does not guarantee a safe forced landing or the safe continuation of the flight. (See also definition of maximum permitted exposure time).

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Freight Container. A freight container is an article of transport equipment for radioactive materials, designed to facilitate the transport of such materials, either packaged or unpackaged, by one or more modes of transport.

Handling Agent. An agency which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.

Heliport operating minima. The limits of usability of a heliport for:

a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;

b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;

c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and

d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

HEMS crew member. A person who is assigned to a HEMS flight for the purpose of attending to any person in need of medical assistance carried in the helicopter and assisting the pilot during the mission. This person is subject to specific training.

HHO Crew Member. A crew member who performs assigned duties relating to the operation of a hoist.

Human Factors principles. Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

***Human performance*.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

ID number. A temporary identification number for an item of dangerous goods which has not been assigned a UN number.**]**

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling*, less than the minima specified for visual meteorological conditions.

Integrated survival suit. A survival suit which meets the combined requirements of the survival suit and life jacket.

Maximum approved passenger seating configuration [(MAPSC)]. The maximum passenger seating capacity of an individual helicopter, excluding crew seats, used by the operator, approved by the Authority and included in the Operations Manual.

Maximum permitted exposure time. A period, determined on the basis of the power unit failure rate recorded for the helicopter's engine type, during which the probability of a power unit failure can be discounted. (See also definition of exposure time).

Medical passenger. A medical person carried in a helicopter during a HEMS flight, including but not limited to doctors, nurses and paramedics.

Minimum descent altitude (MDA) or ***minimum descent height (MDH).*** A specified altitude or height in a non-precision approach or circling approach below which descent must not be made without the required visual reference.

Note 1.— Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3.— For convenience when both expressions are used they may be written in the form "minimum descent altitude/height" and abbreviated "MDA/H".

Obstacle. Obstacles include the surface of the earth, whether land or sea.

Obstacle clearance altitude (OCA) or ***obstacle clearance height (OCH).*** The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1.— Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2.— For convenience when both expressions are used they may be written in the form "obstacle clearance altitude/height" and abbreviated "OCA/H".

Operations specifications. The authorizations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

Performance-based navigation (PBN). Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note.— Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Proper Shipping Name. The name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packagings.

Psychoactive substances. Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Reported headwind component. Reported headwind component is interpreted as being that reported at the time of flight planning and may be used provided there is no significant change of unfactored wind prior to take-off.

Required communication performance (RCP). A statement of the performance requirements for operational communication in support of specific ATM functions.

Required communication performance type (RCP type). A label (e.g. RCP 240) that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

Rotation Point (RP). The rotation point is defined as the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognised, a forced landing on the deck can be achieved.

Safety management system. A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Safety programme. An integrated set of regulations and activities aimed at improving safety.

Serious Injury. An injury which is sustained by a person in an accident and

which:

(i) Requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received; or

(ii) Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or

(iii) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or

(iv) Involves injury to any internal organ; or

(v) Involves second or third degree burns, or any burns affecting more than 5% of the body surface; or

(vi) Involves verified exposure to infectious substances or injurious radiation.

State of Origin. The Authority in whose territory the dangerous goods were first loaded on an aircraft.

Take-off and initial climb phase. That part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

Technical Instructions. The latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284AN/905), including the Supplement and any Addendum, approved and published by decision of the Council of the International Civil Aviation Organisation.

Touchdown and lift-off area (TLOF). A load bearing area on which a helicopter may touch down or lift off.

UN Number. The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

comment *5723* comment by: *Norsk Luftambulanse*

(15) add: and air taxiing.

(26) EVS is not NVIS, both fit the definition though. Definition needs improvement for clarity.

(29) change to read: "… and who have a dedicated task in Helicopter Operations". There is no justification to define all police and firemen and other persons that may only once in their life be involved in helicopter operations as " Ground emergency services personel".

(50) Change to read: " helmet mounted....visual references. " NVGs are usually mounted to helmets, most aviators heads have no special provisions

to attach NVGs. NVGs also enhance other references than ground references.

(51) Delete all after:..while operating a helicopter. These are described in Section VII OPS.SPA.NVIS

(60) change to read: …the registred office in the Member state. Operations, finance and CAMO functions may be in different member states, as they are today.

comment *5792* comment by: *Ph.Walker*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *5835* comment by: *Mikael Markow*

(45)

(i) In the north of europe, where there during summer is sufficent light, a fligt starting before midnight and ending after midnight next day should also be concidered a 'local operation'.

Such a flight might be very local and have a short duration. This could, for example, be a local flying in the pattern during midnight.

The present writing should be changed to include such flights as 'local operation'.

(49)

This definition is not suitable for countries in the north where there, in the summer, may be light for several hours after sunset / before sunrise.

Under some periods of the year there will in fact be no dark period, night, at all between sunset and sunrise.

This writing would restrict VFR flying more than necessary and should be changed.

comment *5870* comment by: *Maths Holmberg*

Definition 49.

The suggested time of 30 min after and before the sunset can be suitable for aviation in the south of Europe.

In the northern part we have more time before it will be night so the suggested time is grounded our airplane before it should.

The definition must be change so we can use so much of the daylight as

possible.

Best Regards

Maths Holmberg

comment *5960* comment by: *Irish Aviation Authority*

Comment:

The definition of Series of flights is more restrictive than the ICAO definition. Replace existing with ICAO definition below.

Proposed text:

Series of flights. Series of flights are consecutive flights that:

a) begin and end within a period of 24 hours; and

b) are all conducted by the same pilot-in-command.

comment *6010* comment by: *ECA - European Cockpit Association*

Comment:

A definition of 'Approach ban point' needs to be added.

comment *6120* comment by: *Hans MESSERLI*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *6277* comment by: *Royal Danish Aeroclub*

In the nordic countries, the twilight period is longer than in the southern part of Europe.

There is no reason to fix the twilight period to 30 minutes and avoid pilots to fly in flyable conditions.

We suggest the text to read:

'Night' mean the period from the sun is 6 degrees below the horizon until the sun is less than 6 degress under the horizon.

comment *6312* comment by: *SHA (AS)*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *6350* comment by: *Trans Héli (pf)*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *6445* comment by: *cfdt france*

Draft Opinion Part - Air Operations

OPS GEN 010. Definitions

(60) Page 26 - Principal place of BUsiness "means the head office of registered office of a community operator in the Member State ....."

COMMENT : This means that any operator may have its crew / aircraft based in Europe and the "Principal place of business" outside the EU. Crew Personnel will , in this case, not be suject to European legislation contained in the NPA 2009.

This may encourage AIrline operators to set up their principal place of business outside of the EU where regulations are less restrictive. In the past this has occured with American airlines based in the US and crew bases within the EU and elsewhere (ex:United AIrlines) and airline crew having little protection as to working conditions and hours.

comment *6541* comment by: *SFR Sweden*

Section: NPA 2009-02, Draft Opinion Part – Air Operations, Subpart A, Section 1, General.

'Night' means the period between 30 minutes after sunset until 30 minutes before sunrise, determined at surface level.

Comment: In the northern countries this definition does not constitute a relevant way of defining visibility, due to solar effects around and above the arctic circle, where in fact during summer, even though the sun sets for a period of time, daylight visibility are present at all times. On the other hand, during winter the sun does not rise at all above the horizon but daylight visibility is still present for a certain period. For the use of nav lights this is not crucial, but if applied as a definition for night operations and qualifications it will impose a greater limitation than what might be reasonable for flight safety.

Proposal: The definition Sweden use today is: time between sunset and

sunrise when, due to reduced lighting conditions, a prominent unlit object cannot be clearly distinguished at a range of more than 8000 meters

comment *6564* comment by: *Danish Powerflying Union*

(45) (i):

In some parts of the Nordic countries there are daylight 24 hours during Summer, eg. for 1-3 month. We see no reason to define a local flight to start and end on the same day.

comment *6579* comment by: *Danish Powerflying Union*

(49):

"Night" to be defined as 30 minutes after sunset and 30 minutes before sunrise is not acceptable in the Nordic countries. Today the degree of latitude is taken into consideration. In the Nordic countries the sun sets slower, which means our twilight period is longer compared to southern part of Europe. Forexample July 2 2009 (West of 11 degree East) "night" starts 1 hour and 2 minutes after sunset and ends 1 hour and 2 minutes before sunrise. This gives a considerably longer VFR day period compared to the definition in this NPA.

We strongly recommend EASA to take the degree of latitude into consideration.

comment *6583* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(15) 'critical phases of flight'

Add:...and air taxiing

helicopters can be taxied both on the ground (wheeltype landinggear) or within ground effect (skidtype landinggear).

comment *6586* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(26) Enhanced Vision System (EVS)

EVS is not the same as NVIS, nor is NVIS commonly reffered to as EVS.

The definition would fit NVIS as well though. EVS is based on Infrared technology and this should be mentioned to impove the definition:

26) 'Enhanced Vision System (EVS)' shall mean an electronic means of displaying a real-time image of the external scene through the use of

infrared imaging sensors;

comment *6589* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(29) 'Ground Emergency Services Personel'

There is no justification to define all police and firemen and other persons alike that may only once in their life be involved in helicopter operations as "Ground emergency services personel".

Suggested:

(29) 'Ground emergency service personnel' shall mean any ground emergency service personnel (such as policemen, firemen, etc.) involved with Helicopter Emergency Medical Service (HEMS) who have a dedicated task in helicopter operation as described in the operations manual;

comment *6591* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(50) 'Night Vision Goggles (NVG)' shall mean a ~~head~~-helmet-mounted, binocular, light intensification appliance that enhances the ability to maintain visual ~~surface~~ references at night;

NVGs are usually helmet mounted as most aviators heads have no provisions to attach NVGs.

NVGs do not only enhance the ability to maintain visual surface references at night but enhance all visual references at night.

comment *6592* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(51) 'Night Vision Imaging System (NVIS)' shall mean the integration of all elements required to successfully and safely use NVGs while operating a helicopter. ~~The system includes as a minimum: NVGs, NVIS lighting, helicopter components (such as radio altimeter, visual warning system and audio warning system), training and continuing airworthiness~~;

The system requirements are described in:

Section VII Helicopter operations with night vision imaging systems

comment *6593* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

(60) 'Principal place of business' means the ~~head office or~~ registered office of a Community operator in the Member State ~~within which the principal financial functions and operational control, including continued airworthiness~~

~~management, of the Community operator are exercised.~~

Operations, finance and CAMO functions should be possible in different member states, as they are today.

comment *6646* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions. Moreover, the "principle place of business" definition was already a term of matters in NPA 2008-22, as a result we are still sceptical with the practical application of this concept.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to provide consistent definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6667* comment by: *HeliFlite Oy*

Regulation or GM (**GM OPS.GEN.010(a)(41) Definitions**) should open this little bit more. Regulation should provide examples of situation where conditions mentioned in OPS.GEN.010 (a) Definitions point (41)(i), A to D are fulfilled.

For example point (C); after -25°C degrees at night time when SAR response is more than…..hours.

For example point (B); examples of minimum i.e. protective gear in certain weather conditions.

For example point (A); examples of what kinds of surfaces are inadequate for safe forced landing.

Definition of whole hostile environment concept has to be more clarified. It is small part of whole regulation but so many things are depending on it. Example: Operator defines some area as non-hostile in its operations manual. Competent Authority won't accept the operations manual and insist that whole country has to be handled as Hostile environment at least in the mission planning phase. Now company has more restricted and expensive operation due the wrong interpretation of regulation.

Regulation should state more clearly that who has final responsibility of defining hostile/non-hostile areas.

comment *6701* comment by: *Greger Ahlbeck*

Paragraph text: Night means the period between 30 minutes after sunset until 30 minutes before sunrise, determined at surface level.

Comment: This definition is not appropriate and detrimental to VFR operation in northern Sweden with long morning and evening twilights during the summertime.

Furthermore, it is not the same definition as used in the FCL NPA 2008-17.

To avoid misunderstanding definitions must be same for OPS and FCL use.

Proposal (including ***new text***):

Introduce the definition from NPA 2008-17:

Night' means the period between the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State.

comment *6705* comment by: *Icelandair*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *6706* comment by: *Greger Ahlbeck*

Paragraph text: "Local operations" means flights operations conducted within a local and defined geographical area which:

(i) start and end on the same day;

(ii) (ii) are conducted by day under VFR; and

(iii) (iii) are navigated over routes by reference to visual landmarks

Comment: Start and end on the same day means that a local flight during summer in northern Sweden is not possible when the flight start one day and continues next day under the bright midnight sun. Furthermore, the term "local operation" is not used in NPA 2009-02.

The expression "Local area operations" is used in AMC OPS.CAT.235 with the definition "encompass usually an area within a distance of 20 - 25 nm".

Proposal (including ***new text***): Delete the whole definition of Local operation since it is not used.

comment *6708* comment by: *Icelandair*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *6711* comment by: *Icelandair*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *6714* comment by: *Icelandair*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *6717* comment by: *Icelandair*

Comment:

Some definitions seem to be written the hard-law (OPS.GEN.010 Definitions) whereas others are in guidance material (GM.OPS.GEN.010, page 103). This dvision in definitions does not seem to be based on clear criteria

Proposal:

Definitions should be in hard-law unless there is a clear justification

comment *6719* comment by: *Icelandair*

Relevant Text:

(41) Hostile Environment

Comment:

It is our understanding that the definition ''hostile environment' only applies to helicopter operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'hostile environment' only applies to helicopter operations

comment *6721* comment by: *Icelandair*

Relevant Text:

(44) Landplane means a fixed wing aircraft that is designed for taking off and landing on land and includes amphibians operated as landplanes.

Comment:

The intent of this definition and its applicability to commercial operators is unclear.

Proposal:

Clarification needed.

comment *6722* comment by: *Icelandair*

Relevant Text:

(*52) 'Non-hostile environment' means an environment in which:*

(i) A safe forced landing can be accomplished;

(ii) The helicopter occupants can be protected from the elements;

(iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and

(iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Comment:

It is our understanding that the definition 'non-hostile environment' **only applies to helicopter** operations. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition

Proposal:

Add statement that 'non-hostile environment' only applies to helicopter operations

comment *6724* comment by: *Icelandair*

Relevant Text:

(65) Series of flights means consecutive flights which begin and end: (i) within a 24 hour period (ii) at the same aerodrome/operating site and (iii) with the same pilot-in-command of the aircraft.

Comment:

It is our understanding that the definition 'series of flights' **only applies to helicopter operations**. For legal certainty reasons, we therefore believe this need to be clearly spelled out in this definition.

Proposal:

Add statement that 'series of flights' only applies to helicopter operations

comment *6726* comment by: *Icelandair*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed

comment *6729* comment by: *Icelandair*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *6797* comment by: *EFLEVA*

Comment on OPS.GEN 010

Item 45

Page 25

The EFLEVA notes that this definition excludes over midnight local operations in northern latitudes where midnight twilight would allow day/VFR local flights to start and end on subsequent days.

comment *6798* comment by: *EFLEVA*

Comment on OPS.GEN 010

Item 49

Page 25

The EFLEVA notes that the definition of Night in this paragraph is not appropriate for northern latitudes where there are long periods of twilight. The definition of night must consider regions where there are long twilight periods.

comment *6799* comment by: *EFLEVA*

Comment on OPS.GEN 010

Item 68

Page27

'Special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.'

The EFLEVA supports this definition for Special VFR Flight.

comment *6892* comment by: *Swiss Helicopter Group*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *6916* comment by: *IACA International Air Carrier Association*

Definitions alternately use "means" and "shall mean".

comment *6917* comment by: *Christian Hölzle*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *6938* comment by: *Eliticino SA*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *7105* comment by: *AIR FRANCE*

Relevant Text:

(*3) Adequate Aerodrome means any area on land, water or ma made structure or vessel, especially adapted for the landing, taking-off and manoeuvring of aircraft.*

Comment:

This definition is not line with EU-OPS. It does not take into account rescue

and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. Those essential elements of the definition of adequate aerodromes should not be in guidance material as suggested by EASA (see GM1 OPS.GEN.145 Use of Aerodromes/ Operating Sites, page 139). This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign the definition of **adequate aerodromes** with the definition used in EU-OPS.

comment *7109* comment by: *AIR FRANCE*

Relevant Text:

(*11) Cloud Base means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or in the case of offshore operations above mean sea level.*

Comment:

Ceiling has to be added as equal to an obstruction to the sky corresponding to the status broken as defined in ICAO Annex 3

Proposal:

Add definition of **ceiling**

comment *7114* comment by: *AIR FRANCE*

Comment:

The following definitions are missing and should be added for clarity:

Child;

Dangerous goods incident;

Proposal:

Add definition of child and dangerous good incident

comment *7120* comment by: *AIR FRANCE*

Relevant Text:

(13) contaminated runway

Comment:

In the definition of "contaminated runway", a category about **dry snow** is missing. This should be added.

Proposal:

Add a category of **dry snow** to the definition of contaminated runway

comment *7132* comment by: *AIR FRANCE*

General comment about the Definitions in the IRs: all definitions should be gathered in one only place and this place should be an IR. Definitions scattered through AMCs are not easy to trace and may be interpreted.

comment *7143* comment by: *AIR FRANCE*

Relevant Text:

(67) Screen Height means a hight selected by the (supplemental) type certificate holder at 50 ft, or another value from 25ft to 50ft.

Comment:

Screen height is not covered through the STC or TC

Proposal: .

Clarification needed, 99% of the readers don't know this concept.

comment *7156* comment by: *Virgin Atlantic Airways*

Relevant Text:

OPS.GEN.010 Definitions

Comment:

No definition of "Ceiling" has been included.

Proposed Text:

Add definition of "Ceiling" as per ICAO Annex III

comment *7159* comment by: *Virgin Atlantic Airways*

Relevant Text:

(13) 'Contaminated runway' means a runway of which more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:

(i) Surface water more than 3 mm (0.125 in) deep, or by slush, or loose

snow, equivalent to more than 3 mm (0.125 in) of water;

(ii) Snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or

(iii) Ice, including wet ice.

Comment:

Change term from loose snow to dry snow. Loose snow is not a commonly used term.

Proposed Text:

(13) 'Contaminated runway' means a runway of which more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:

(i) Surface water more than 3 mm (0.125 in) deep, or by slush, or ~~loose~~ **dry** snow, equivalent to more than 3 mm (0.125 in) of water;

(ii) Snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or

(iii) Ice, including wet ice

comment *7164* comment by: *Virgin Atlantic Airways*

Relevant Text:

(67) 'Screen height' means a height selected by the (Supplemental) Type certificate holder at 50 ft, or another value from 35 to 50 ft.

Comment:

Definition of 'Screen Height' as stated is neither clear nor commonly used.

Proposal:

Please check ICAO definition for Screen Height

comment *7183* comment by: *Uppvinden AB*

Local operations:

The restriction that it starts and ends on the same day is irrelevant. As "day" is not defined I think you mean "date" but operations can start on one date and end the next date without any "night" in between.

Night:

Night is when it is dark. It is NOT dark outside the proposed times. Sometimes it is dark 2-3 hours after sunset. Either use the definition that

you cannot see an unlighted figure or - if you need a numerical defintion - between the times the sun is 6 degrees under the horizon. These times are easy to obtain for each location.

Brgds

Anders

comment *7230* comment by: *ANE (Air Nostrum) OPS QM*

- It has been noted that there is an apparent inconsistency in where definitions are placed, and whether material of the same nature and status enters at Implementation Rule [Hard Law] level or at AMC/GM level.
- OPS.GEN.010 is overloaded with definitions related to helicopter operations, while definitions of the same nature for aeroplane operations are contained at AMC level, or not given at all. It is evident in other areas that helicopter material is treated at IR level, whereas similar material for aeroplanes is at AMC level
- Examples:

  1. Performance classes for helicopters are given in OPS.GEN.010. Performance classes for aeroplanes are not stated in a definitions section at all, but are to be found in AMC OPS.CAT.316.A(A)(1). Likewise, definitions in GM OPS.GEN.010 are given at GM level, whereas in AMC1 OPS.CAT.010 definitions are given at AMC level. Such inconsistencies seem ill-founded and confusing.

  2. Material on obstacle clearance during climb-out, stemming from Annex 6, for helicopters is presented in OPS.CAT.365.H, while for aeroplanes it is, much more appropriately, presented in AMC2 OPS.CAT.327.A. These inconsistencies seem to be illfounded, as all similar material should in principle be in the AMC/GM level.

We would urge EASA to re-edit the IR to achieve consistency of material at AMC level.

comment *7290* comment by: *FAA*

OPS.GEN.10 Definition 13. 'Contaminated runway'

Comment:

The proposed definition indicates that a 'Contaminated runway' means a runway of which more than 25% of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by the following:

(i) Surface water more than 3 mm (0.125 in) deep, or by slush, or loose snow, equivalent to more than 3 mm (0.125 in) of water;

(ii) Snow which has been compressed into a solid mass which resists

further compression and will hold together or break into lumps if picked up (compacted snow); or

(iii) Ice, including wet ice.

Although 25% coverage may be the threshold for the use of contaminated runway performance information when computing takeoff and landing distance performance, a runway with any amount of standing water or other form of contamination should be termed contaminated

Recommendation:

Review FAA Takeoff and Landing Performance Assessment Aviation Rulemaking Committee (TALPA ARC) recommendations. Consider harmonization with the rulemaking activity and associated guidance material development underway by the FAA to address contaminated runway takeoff and landing performance. International harmonization of runway surface condition information and terminology would enhance safety by providing more usable information for flight operations.

comment *7291* comment by: *FAA*

OPS.GEN.10 Definition 79 'Wet runway'

Comment:

The proposed regulation indicates that a 'Wet runway' means a runway of which the surface is covered with water, or equivalent, less than specified by the 'contaminated runway' definition ***or when there is sufficient moisture on the runway surface to cause it to appear reflective***, but without significant areas of standing water.

Industry has recommended, through the FAA's Takeoff and Landing Performance Assessment Aviation Rulemaking Committee (TALPA ARC), to delete the phrase "or when there is sufficient moisture on the runway surface to cause it to appear reflective," from the definition because there could be degraded braking performance at water levels less than that which would cause reflectivity. As worded, operators could use dry runway takeoff and landing performance data under degraded runway friction levels if the wet surfaces do not meeting the reflective criteria.

Recommendation:

Delete the phrase "or when there is sufficient moisture on the runway surface to cause it to appear reflective," from the definition.

comment *7328* comment by: *FAA*

OPS.GEN.010 Definition Number (51) "Night Vision Imaging System (NVIS)

Comment:

The definition of 'NVIS' is applied only to helicopters.

The definition is limiting. 'NVIS' technology may provide a safety benefit at night in certain fixed-wing operations as well as helicopters, so the definition should be broadened to address all potential applications.

Recommendation:

Revise the definition to address 'NVIS' for all aircraft, not just helicopters.

comment *7331* comment by: *FAA*

OPS.GEN.010 Definition Number (69)

Comment:

Definition does not address GPS/GNSS operations.

The definition is limiting. Newer GPS/GNSS approaches utilizing WAAS technology may provide the capability to meet 'Standard Category I' minimums. As written, the definition may limit safe operation using a GPS approach.

Recommendation:

Revise the definition to include GPS/GNSS approaches that have the same height and visibility minimums as defined.

comment *7332* comment by: *FAA*

OPS.GEN.010 Definition Number (77)

Comment:

The term 'critical engine' is not defined. Without defining all the technical terms within a definition, it remains open to interpretation.

Recommendation:

Revise the Definitions section to include 'critical engine' definition.

comment *7333* comment by: *FAA*

OPS.GEN.010 Definition Number (77)

Comment:

The term 'accelerate-stop distance' is not defined. Without defining all the technical terms within a definition, it remains open to interpretation.

Recommendation:

Revise the Definitions section to include 'accelerate-stop distance' definition.

comment *7339* comment by: *K Franzen*

This definition for Night is not suitable for us in the EU nordic countries. Please, use the Swedish definition (8 km visibility).

comment *7341* comment by: *Europe Air Sports, VP*

4

The definition of "adult" in aviation law is not appropriate because there are much more implications and consequences if this definition is becoming law. This definition should be withdrawn and rephrased to include the reason for it.

42

The same arguments are true for the definition of "infant."

68

VFR flight conditions depend on ICAO airspace classification, visibility and cloud base differ depending on airspace classification. "VMC conditions" needs clarification.

comment *7342* comment by: *K Franzen*

(45) This definition for "Local operations" is not suitable for us in EU nordic countries as we have enough light to fly VFR day all the day around in the summer.

comment *7372* comment by: *new European Helicopter Association*

<![endif]-->

comment *7376* comment by: *Comercial Operators in Sweden*

(49)

In Sweden it can be light several hours or all night in the north during the summer. We often fly 1 or several hours after the sunset. This roule will make ballon flight impossible in most parts of Sweden during the summer and that is of course not good.

SUGGESTION

Today the rules regarding flight between sunset and night is defined as this. It is night when a big object example as a house can't be seen in a distence of 8 km. The building shall not be lighted up.

comment *7381* comment by: *Axel Schwarz*

Definition (49) "night": Often night is defined as the period between ECET and BCMT, i.e. the time when the sun is more than 6° below the horizon.

The proposed definition does not take account of the different duration of dusk and dawn with varying latitude (e.g. in the summer in northerly regions there is still sufficient daylight long after sunset, while in southerly regions the dawn may be as short as 24 minutes).

The definition should therefore be changed to include the time between ECET and BCMT.

comment *7457* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.010(a)(11)

Wording in the NPA

(11) 'Cloud base' means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or, in the case of offshore operations, above mean sea level.

Our proposal

(11) Cloud base means the height of base of the lowest observed or forecasted clouds (except of cb-clouds) with more than 2/8 coverage in vicinity of an aerodrome or operating site or within a specified area of operations, measured or estimated above aerodrome elevation (ft gnd) or, in case of offshore operations, above mean sea level (ft msl)

Issue with current wording

The definition is too restrictive.

Rationale

A few scattered clouds should not define the cloud base since they can easily be avoided.

comment *7548* comment by: *AOPA UK*

The acronym DR normally means "Dead Reckoning" in terms of aviation. Therefore a change of acronym should be considered.

comment *7549* comment by: *AOPA UK*

The definition Dry operating mass' does not make any sense for small

aircraft if it has to be used.

comment *7550* comment by: *AOPA UK*

The definition has no validity; it is not used in 02b or 22c.

In the north of Europe there is no night-time in the middle of summer, so why the restriction of a local operation in the same day?

comment *7551* comment by: *AOPA UK*

In the northern Europe the twilight is much longer than 30 minutes during the summer.

The definition of "night" should be the same as NPA-2008-17: *'Night' means the period between the end of civil evening twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by Member State.*

comment *7552* comment by: *AOPA UK*

Is a Touring Motor Glider (TMG), mentioned in the NPA 2008-17 to be considered a sailplane or an aeroplane?

comment *7553* comment by: *AOPA UK*

Is this a correct definition of a take-off flight path? AOPA UK sees that as a normal take-off, not a take-off with a non-operating engine. It is very difficult to decide that path, depending on where the failure occurs.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.015 Pilot-in-command responsibilities and authority p. 28

comment *60* comment by: *Air Southwest*

See comment 59

comment *369* comment by: *EHOC*

General Comment:

1. There is a problem with the text as it is written because, whilst it correctly addresses a single-pilot, single crew environment, it does not reflect the original rule for multi-person crews. The text needs to be rewritten to reflect both the single-pilot case (as in GA) and the multi-crew environment (as in Corporate and CAT).

2. Text in the original rule required the commander to "ensure that the pre-flight inspection has been carried out". Although this is covered in ERs, it should still be addressed in an IR because it is not clear that there is an obligation on the PIC to ensure it has been done (as well as the case where it will be the responsibility of the PIC to do it).

comment *699* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.015: add the following text:

The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary under the circumstances. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.

Justification:

Missing requirements from EU OPS 1.085 (g).

comment *700* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.015: add the following text:

Authority of the pilot-in-command:

An operator shall take all reasonable measures to ensure that all persons carried in the aeroplane obey all lawful commands given by the pilot-in-command for the purpose of securing the safety of the aeroplane and of persons or property carried therein.

Justification:

This text has to appear explicitly, not implicitly.

comment *899* comment by: *AECA(SPAIN)*

Include in this paragraph the content of EU-OPS 1 085, (f) paragraph 10

comment *1042* comment by: *AECA helicopteros.*

New redaction

"ensuring that all operational procedures and check lists are complied with."

comment *2639* comment by: *AOPA-Sweden*

(a) (1)

What about the PiC's responsibility in all other aircraft, are they not the same?

comment *2640* comment by: *AOPA-Sweden*

(a) (4):

The text should be elucidated to '*to perform emergency functions*'. To be able not to serve a drink to the passenger does not always restrict a person to react in a urgent situation.

comment *2641* comment by: *AOPA-Sweden*

(d):

If OPS-GEN-015 (a) (4) is changed as proposed above, this paragraph Is not needed as extra procedures.

comment *2756* comment by: *Pietro Barbagallo ENAC*

Comment: The requirement concerning the mandatory occurrences reporting (MOR) scheme for the pilot in command and the others crew members, is missing.

Justiifcation: This requirement already exists in EU-OPS1. Its purpose is to extend to the pilot in command and to the crew members as individuals, the obligation to report to the competent Authority any accident or incident occurrences.

comment *3010* comment by: *AEA*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *3613* comment by: *AUSTRIAN Airlines*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *4015* comment by: *Virgin Atlantic Airways*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment *4016* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *4017* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

(d) Notwithstanding the provision of OPS.GEN.015(a)(4), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest ***suitable aerodrome*** *when adequate mitigating procedures are in place.*

Comment:

(a)(4) & (d) Definition of a "*suitable aerodrome*" required.

Whereas *adequate aerodrome* has been defined suitable aerodrome has not.

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather

conditions are at or above required minima at the expected time of use; and

- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *4020* comment by: *Virgin Atlantic Airways*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

Ensure that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *4157* comment by: *DGAC*

(a)(1) :

Who shall be responsible for "the initiation, continuation, termination or diversion of a flight" in the case of CAT, COM or non-commercial operation of CMPA ?

comment *4158* comment by: *DGAC*

(a)(3) :

This paragraph refers to ER (216/2008). It is not clear why in this case there is a reference to it. EASA has clearly declared that there is no will to refer to ER or to repeat the requirements of the regulation 216/2008.

We would prefer to have it repeated in the IR.

comment *4243* comment by: *KLM*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could

be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *4450* comment by: *TAP Portugal*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *4852* comment by: *Deutsche Lufthansa AG*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a)

5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment

5221 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

The concept of pilot-in-command is not clearly and exhaustively described in this paragraph as some of the p-i-c responsibility and authority is regulated in Basic Regulation Annex IV.

Proposal:

Introduce a reference to BR Annex IV.

comment

5415 comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment

5642 comment by: *ERA*

European Regions Airline Association Comment

Paragraph (a)

In the interest of achieving consistency with the wording of OPS.GEN.020

(f)) there is a need to amend Para (a) as follows:

(a) The pilot-in-command shall be responsible for:.... (4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew members' capacity to perform functions is significantly reduced **to the extent that the flight may be endangered** from causes such as fatigue, sickness or lack of oxygen;

Paragraph (d)

Both JAR OPS and EU OPS use(d) the title Commander rather than Pilot-in-Command. Within the Commercial Air Transport scenario Commander is a more relevant title for the person (pilot) on board the aeroplane with regulatory responsibility, rather than the title Pilot-in-Command which is a Rules of the Air title. Granted in the overall scenario (balloons, gliders, single pilot ops etc...) PIC is applicable because he is probably the only pilot on board. However, in multi-pilot CAT operations the Pilot-in-Command (the pilot who for the time being is responsible for complying with the rules of the air) may not be the 'commander'. This is not only an example of the drawback of having one large all encompassing rule for different scenario but also of not taking into consideration the use of simplified English that cannot cause confusion when translated into other languages.

comment *6269* comment by: *DAeC LV NRW e.V.*

OPS.GEN.015

Wording in the NPA

Pilot-in-command responsibilities and authority

Our proposal

Add:

(f) In case of flights with instructor where pilot and instructor could be pilot in command the holder of the aircraft can appoint the pilot in command or pilot and instructor can agree who fly's as pilot in command. In case the instructor is pilot in command but the pilot is at the controls most of the time both can count the time as flight time.

Issue with current wording

A definition is missing who the pilot in command is.

Rationale

By default the pilot in command is the pilot occupying the seat specified as the seat of the pilot in command in the flight manual. But there are many exceptions to this rule but not in all cases the situation is apparent. This is especially in the case of flights with instructors where the instructed pilot has the license and rating to conduct the flight. In these cases there must be a provision in the regulation that the pilot in command can be appointed by the aircraft holder or agreed upon between pilot and instructor. Situations are check flights required by the aircraft holder, training flights requested by a pilot e.g. if he does not feel safe, familiarization with aircraft for which

instruction is not required. For these flights it must also be stated that the pilot in command and the instructed or checked pilot can count the time as flight time.

comment

6412 comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

comment

6506 comment by: *IATA*

(4) not commencing nor continuing a flight beyond the nearest suitab aerodrome or landing site when flight crew members'

capacity to perform functions is significantly reduced from causes su as fatigue, sickness or lack of oxygen;

Proposal:

Suitable aerodrome in (a)(4) and (d) should be defined

It should be clarified that no diversion is necessary with three crew members on board.

(c) Flight crew members shall keep their safety belt fastened while their stations.

Proposal:

It should be clarified if it includes shoulder harness.

comment

6548 comment by: *European Gliding Union (EGU)*

OPS.GEN.015 Pilot in Command

The present NPA gives detailed information on the duties of the pilot in

command but does not verify the crew composition in multi seat aircraft in regards to who the PIC is. This issue is rather important to the GA as in many cases instructors and Type rating instructors are asked to perform duties not relating their instructor task but assist and supervise fully qualified pilots due to their actual and/or subjective lack of skill. These training flights, mainly performed for enhancement of flying skills and safety, are common use in airsport clubs. Fully certified pilots are flying accompanied by an instructor for supervision. In these flights, it has to be clarified, that the instructor can act as pilot in command.

For those flights it must also be stated that the pilot in command and the instructed or checked pilot can log the time as flight time and the instructor may log it as instruction time.

comment *6733* comment by: *Icelandair*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *7354* comment by: *Europe Air Sports, VP*

The duties of the pilot in command for all aircraft categories and the crossrefence in item a, 3 to the Annex IV of the Basic Regulation 216-2008 with a further crossreference to Continuing Airworthiness (6) are much to demanding and exceed the capabilities. The pilot can check and will check certain conditions but we strongly recommend to review the responsibilities listed.

comment *7554* comment by: *AOPA UK*

What about the PiC's responsibility in all other aircraft, are they not the same?

comment *7555* comment by: *AOPA UK*

The text should be made clear *'to perform emergency functions'.*

comment *7556* comment by: *AOPA UK*

If OPS-GEN-015 (a) (4) is changed as proposed above, this paragraph Is not needed.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.015 Pilot-in-command responsibilities and authority - All Aircraft p. 28

comment *18* comment by: *George Knight*

-(a) (6) Sailplanes and light aircraft do not have MELs and CDLs.

comment *19* comment by: *George Knight*

-(a) (7) this is an attempt to impose inappropriate commercial standards onto sailplanes and light aircraft. Glider training flights in particular are frequently less than ten minutes, and often only one minute when conducting training in launch failures using cable launches. Having to update the aircraft logbook at the termination of each flight is just not sensible.

It is not normal practice to keep a glider's aircraft log book at the potentially wet and windy launch point and most gliders do not have anywhere in the cockpit to stow such documents. Typically the launch-site launch log maintains a list of launch times, landing times and crew for each glider flight. Aircraft logbooks are made-up from those data on a regular basis – I believe that other regulations allow up to 30 days after a flight for such logbooks to be made up. Furthermore aircraft logbooks for gliders are usually completed not for each flight but to show e.g. a monthly total of hours, launches and (for powered sailplanes) engine hours.

Regarding technical issues most gliders (in the UK) have a Daily Inspection (DI) book that is completed after the daily inspection and lists any known defects. If a pilot detects a new defect it is written in the DI book at the end of then flight. DI books are much smaller than aircraft log books and are kept in gliders.

The imposition of Journey Logs onto gliders and light aircraft is the imposition of commercial standards where they are not appropriate. There is nothing of value to be gained. There is nowhere to keep such paperwork in most gliders and leaving them lying around at the launch point of an airfield is silly.

Powered aircraft used as glider tugs may conduct up to 7/8 flights per hour over a period of up to two hours without stopping the engine. The aircraft type may be a Pawnee where the only stowage for logbooks is under the seat and virtually impossible to access whilst seated. It is a totally unacceptable requirement that an aircraft log book be made after every launch. Current practice is for a kneepad to be used to record the take-off time, the details of the glider being towed and the release altitude. These data are transcribed to formal documents by administrative staff at a later time – not by the pilot. The proposed regulations make what is normal, efficient operation today cumbersome and difficult for no perceivable benefit.

Propose:

1. For sailplanes, powered sailplanes, microlights, SLMGs, TMGs and other light aircraft that the need for Journey Log be waived.
2. That the aircraft log book can be made up at a later date, not necessarily by the pilot, from other data such as the sites launch/landing time log or pilot's kneepad.

comment *370* comment by: *EHOC*

Paragraph (a)(2)

There is a responsibility on the PIC for the whole of the crew; text might better be:

"ensuring that all operational procedures and check lists are complied with."

Paragraph (a)(3)

This is less than transparent and requires, not just the access to the paragraph concerned but also to several others in the Essential Requirement.

All Parts of Annex 6 have a section dealing with flight preparation that are very similar:

Part 1: 4.3.1 A flight shall not be commenced until flight preparation has been completed certifying that the pilot-in-command is satisfied that:

Part II: Section 2.2.3.1 A flight shall not be commenced until the pilot in command is satisfied that:

Part II: Section 3.4.3.1 The operator shall develop procedures to ensure that a flight is not commenced unless:

Part III: Section 2.3.1 A flight or series of flights shall not be commenced until flight preparation forms have been completed certifying that the pilot-in-command is satisfied that:

Clearly, the rule covering 'flight preparation' needs to be included which specifies the elements without having to refer to the Essential Requirements.

Paragraph (a)(6)

This is one of the elements contained in point (4) above (article 2.a.3 iii and article 5) - why is this listed as a requirement when the others (in (a)(3)) are just referred to?

comment *632* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.015(a): add the proposed following text and renumber the following paragraphs accordingly:

(a) The pilot-in-command shall be responsible for:

(1) the safety of all crew members, passengers and cargo on board. The commander, or if not present, the crew member or person assuming responsibility for the aircraft and its contents until the commander is present shall be responsible for the aircraft and contents as defined in their areas of responsibility by the operator. They shall assume responsibility from the time of boarding the aircraft. When all crew members are on-board the responsibility shall be in accordance with the chain of command. On leaving the aircraft in normal situations the responsibility of that person or crew member shall cease.

Justification:

It is needed to define in a uniform way (not as a GM) when the responsibility of pilot-in-command starts and ends. This is also required to comply with ICAO Annex 6 provisions.

comment *633* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.015(a)(1): change text as follows:

(a) The pilot-in-command shall be responsible for:

(1) the initiation, continuation, termination or diversion of a flight, when involved in non-commercial operations ~~**with other than complex motor-powered aircraft**~~;

Justification:

The provision as written suggests that there's any difference between the pilot-in-command involved in a commercial operation and the PIC involved in a non-commercial operation with a complex motor-powered aircraft. The last part of the paragraph should be deleted.

comment *698* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.015: add the following paragraphs 8 - 13 under a):

ALL AIRCRAFT

(a) The pilot-in-command shall be responsible for:

[...]

(8) not permitting any crew member to perform any activity during take-off, initial climb, final approach and landing except those duties required for the safe operation of the aeroplane;

(9) not permitting:

(i) a flight data recorder to be disabled, switched off or erased during flight nor permit recorded data to be erased after flight in the event of an accident or an incident subject to mandatory reporting;

(ii) a cockpit voice recorder to be disabled or switched off during flight unless he/she believes that the recorded data, which otherwise would be erased automatically, should be preserved for incident or accident investigation nor permit recorded data to be manually erased during or after flight in the event of an accident or an incident subject to mandatory reporting;

(10) deciding whether or not to accept an aeroplane with unserviceabilities allowed by the CDL or MEL; and

(11) ensuring that the pre-flight inspection has been carried out.

(12) the operation and safety of the aeroplane from the moment the aeroplane is first ready to move for the purpose of taxiing prior to take-off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down;

(13) giving all commands he/she deems necessary for the purpose of securing the safety of the aeroplane and of persons or property carried therein;

Justification:

Requirements from EU OPS 1.085 (f) 2-3 and 9-12 are missing.

comment *785* comment by: *Association of Dutch Aviation Technicians NVLT*

Please clarify the definition of the 'pilot-in-command' in case of flying the A/C, this could be the captain or the copilot . In case of responsibilities and authority this should be the captain.

Please clearify and improve the following item.

and (7) recording utilisation data, and all known or suspected defects in the aircraft at the termination of the flight, in the aircraft log book or journey log book for the aircraft.

It must be strictly clear for the sake of continuing airworthiness that all known defects found during flight or on the ground or during any inspection (Pre-flight or maintenance inspection) should be reported mandatory at its least after the flight in the aircraft log book or journey log book for the aircraft

comment *801* comment by: *Ingmar Hedblom*

OPS.GEN.015(a)(1) does not apply for commercial operation or for non-commercial operation with complex motor-powered aircraft. Why not for all operation?

A definition of Pilot-in-command responsibility is difficult to find in other parts of the NPA.

OR-OPS.020.FC (02c page 13) requires that a PiC is designated

OR.OPS.120.FC requires PiC training

AMC5 OR.OPS.015MLR point 1.4 (page 52 in 02c) asks for a statement defining the authority, duties and responsibilities of the pilot-in-command in the operations manual but is an AMC, not binding.

Proposal:

Delete "when involved in non-commercial operations with other than complex motor powered aircraft" in OPS.GEN.015(a)(1)

comment *897* comment by: *Ryanair*

comment *1030* comment by: *arno liesch*

Paragraph c: As we operate often in bad weather conditions, this article should be formulatet in a commendation manner, so a possible juridical trap can be avoidet.

comment *1035* comment by: *AECA helicopteros.*

Question.

Paragraph (a)(1) is not necessary or convenient to refer in this paragraph to commercial operations

comment *1393* comment by: *British Parachute Association*

At the end of (a) (2) we suggest that the following words be added..

.."except in the case of parachute operations those operational procedures which are the responsibility of the jumpmaster (or similarly designated person).

This is in order to ensure that the pilot is not deemed responsible for operational procedures over which he may have no control. (An example would be a procedure which requires the jumpmaster to ensure that the airspace beneath the aircraft is clear of other airborne hazards prior to parachutists exiting - this is a task which the pilot cannot be responsible for as he is unable to perform it.)

comment *1396* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

(d) formulation far too open.

Comment / Proposal:

Such global descriptions do not add any value. Shall be deleted without replacement.

comment *1682* comment by: *Dassault Aviation*

Technical comment.

Page 28 OPS.GEN.015(a)(1): this subparagraph says that the PIC shall be responsible for "the initiation, continuation, termination or diversion of a flight, when involved in non-commercial operations with other than complex motor-powered aircraft". We do not know the reason why it is limited to non-commercial operations with other than complex motor-powered aircraft. We thought these responsibilities were mentioned in the Basic Regulation (EC) 216/2008 Annex IV §1.c, 2.a.3, 7.c, 7.d for the others type of operations / aircraft (i.e. non-commercial operations with complex motor-powered aircraft, and commercial operations with other than complex motor-powered aircraft), but they don't. Therefore, it will be logical to extend as well these PIC's responsibilities to non-commercial operations with complex motor-powered aircraft, and commercial operations with other than complex motor-powered aircraft.

comment *2898* comment by: *UK CAA*

Page No: 28

Paragraph No:

OPS.GEN.015 (a) (4) and (d)

Comment:

OPS.GEN 015 (a) (4) requires that a flight should not be continued beyond a suitable aerodrome when crew members' operating capacity has been reduced from causes such as "fatigue, sickness or lack of oxygen", with (d) then permitting the flight to be continued with "adequate mitigating measures" in place. The only mitigating measures described later in AMC / GM are "additional crew members" and "controlled rest". The use of additional crew members (provided they are qualified to the same standard as the replaced crew members) and "controlled rest" can be accepted to mitigate the effects of fatigue but it is most unlikely that such measures will combat the effects of lack of oxygen or sickness. It is suggested that "mitigating measures" should only apply to fatigue and then only in exceptional circumstances which themselves should be reported to the competent authority.

Justification:

Clarification.

Proposed Text (if applicable):

(d) Notwithstanding the provision of OPS.GEN.015(a)(4), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest suitable aerodrome ***when the reduction in capacity is as a consequence of fatigue only and*** when adequate mitigating procedures are in place. ***All such instances of continuation shall be fully reported to the competent authority*.**

comment *2899* comment by: *UK CAA*

Page No: 28

Paragraph No: OPS.GEN.015 (a) (2)

Comment:

Text of Pilot in Command duty in this subparagraph confers the task to the pilot and not to the crew as a whole.

Justification:

Amending the text will make it clear where the PiC's responsibility lies in ensuring that the tasks are completed by himself or his crew as appropriate.

Proposed Text (if applicable):

~~compliance with all operational procedures and checklists;~~

(2) ***ensuring that all operational procedures and check lists are complied with;***

comment *3012* comment by: *AEA*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment *3013* comment by: *AEA*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *3014* comment by: *AEA*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *3209* comment by: *Eurocontrol CND*

OPS.GEN.015 Pilot-in-command responsibilities and authority

ALL AIRCRAFT

It is stated that: "(a) The pilot-in-command shall be responsible for: (1) the initiation, continuation, termination or diversion of a flight, when involved in non-commercial operations with other than complex motor-powered aircraft;"

Why not include commercial operations and ops with complex motor-powered aircraft? Also, in items 2 – 7 it is implied that all pilots-in-command are responsible for these items which basically involves also item (1).

comment *3318* comment by: *AEA*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *3353* comment by: *M Wilson-NetJets*

Original text:

(a)(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

Suggested new text:

not commencing nor continuing a flight beyond the nearest, **in flight time**, suitable aerodrome or landing site when a flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness, **injury** or lack of oxygen, **unless, based on all information available to the PIC and the condition of the flight crewmember does not pose any danger to the safety of the other passengers and crewmembers, proceeding to another suitable aerodrome improves either the survival chances or long term effects related to the condition of the flight crewmember ;**

Comment / suggestion:

The suitability of the aerodrome takes only aviation aspects into consideration, like weather, approach facilities and runway length. The overall survivability of the flight crew member may be increased if he/she would be subjected to the most appropriate medical attention. Some aerodromes do not have appropriate medical facilities/attention or no medical facilities/attention at all for certain medical conditions. It should be the allowed for the PIC to elect to proceed to another suitable aerodrome, not being the closest in flight time, if it is believed to increase the survival or recuperation chances of the flight crew member. For completeness purposes include injury.

comment *3614* comment by: *AUSTRIAN Airlines*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied*

with.

comment *3786* comment by: *Civil Aviation Authority of Norway*

Comment:

Text of the sub-paragraph is less than transparent and requires, not just the access to the paragraph concerned but also to several others in the Essential Requirements.

Justification:

All Parts of ICAO Annex 6 have sections dealing with flight preparation that are very similar:

Part 1: 4.3.1. A flight shall not be commenced until flight preparation has been completed certifying that the pilot-in-command is satisfied that:

Part II: Section 2.2.3.1. A flight shall not be commenced until the pilot in command is satisfied that:

Part II: Section 3.4.3.1 The operator shall develop procedures to ensure that a flight is not commenced unless:

Part III: Section 2.3.1. A flight or series of flights shall not be commenced until flight preparation forms have been completed certifying that the pilot-in-command is satisfied that:

Clearly, the rule covering 'flight preparation' needs to be included which specifies the elements without having to refer to the Essential Requirements.

comment *3834* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *3835* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

*(4) not commencing nor continuing a flight beyond the nearest **suitable aerodrome** or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *3836* comment by: *AUSTRIAN Airlines*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *4159* comment by: *DGAC*

OPS.GEN.015(a)(4), OPS.GEN.020(f), AMC1 to OPS.GEN.020(a)

It is accepted, as mentioned in OPS.GEN.020 (f), that the flight crew has a responsibility in managing his own fatigue.

However the elements highlighted in AMC1 OPS.GEN.020(a), if the crew member works for an operator is much too detailed. The interpretation of those items will lead to a simplified vision of fatigue without taking into account operational environment, support and resources, nor individual or

collective countermeasures.

It is unreasonable to assume that an individual can assess all those factors on the spot. The wording in the IR is considered sufficient to evaluate its own fatigue, notwithstanding tools and countermeasures (i.e. fatigue checklist) that an individual may use as an industry best practice. It should not be the role of a regulation body to provide an exhaustive list for a topic that also include personal life, operational issues, etc. that may impact on the non linear link between physiological fatigue and safety.

comment *4160* comment by: *DGAC*

(a)(6) :

Replace "unserviceable equipment" by "inoperative or missing item(s)".

Justification : Consistency with OR.OPS.010.GEN & future terminology in NPA CS MMEL (*missing item covers the case of the CDL*)

comment *4244* comment by: *KLM*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment *4245* comment by: *KLM*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform

functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS

comment *4246* comment by: *KLM*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *4247* comment by: *KLM*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied

with in accordance with the Operations Manual.

comment *4452* comment by: *TAP Portugal*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *4458* comment by: *TAP Portugal*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment *4459* comment by: *TAP Portugal*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

*(4) not commencing nor continuing a flight beyond the nearest **suitable aerodrome** or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *4460* comment by: *TAP Portugal*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *4560* comment by: *British Airways Flight Operations*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to comply with this limitation. We therefore suggest it should be deleted.

Proposal:

Delete sub-para (3).

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4566* comment by: *British Airways Flight Operations*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4853* comment by: *Deutsche Lufthansa AG*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ~~***he/she has confirmed that***~~ *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied*

with.

comment *4854* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *4855* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *4856* comment by: *Deutsche Lufthansa AG*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *5122* comment by: *Egon Schmaus*

General comment:

Pilot in Command (PIC) is generally viewed as the commercial pilot operating in a two.man cockpit. Here the private pilots situation is totally missing.

Often, in aeroclubs, pilots are to fly with an instructor more frequently than demanded by law. Most aeroclubs demand the "90-day rule" for passenger transport as mandatory flying with a club instructoe prior to hiring a club aircraft for solo.flight.

Pilots (PIC) responsibilities in this para are not questionable!

proposed text: Add:

(f) In case of flights with an instructor, when both pilot and IP could be PIC, the aircraft operator can appoint the PIC. If not regulated, pilot and instructor may agree who is PIC. For booking of flight time refer to corresponding paras. The purpose of the flight should be documented in the log books.

comment *5208* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

ALL AIRCRAFT

(a)(1) The pilot-in-command shall be responsible for:

(1) the initiation, continuation, termination or diversion of a flight, when involved in non-commercial operations with other than complex motor-powered aircraft;

Comment:

This paragraph does not apply for commercial operations. Why not for all operations?

Proposal (including ***new text***):

ALL AIRCRAFT

(a)(1) The pilot-in-command shall be responsible for:

(1) the initiation, continuation, termination or diversion of a flight, ~~when involved in non-commercial operations~~ with ***complex and*** ~~other than~~ ***non-***complex motor-powered aircraft;

comment

5416 comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment

5417 comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *5418* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

*(4) not commencing nor continuing a flight beyond the nearest **suitable aerodrome** or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *5419* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *5881* comment by: *Civil Aviation Authority Finland*

Proposal:

(a)(1) Delete the end of the sentance: ... a flight~~, when involved in non-commercial operations with other than complex motor-powered aircraft~~;

Justification:

The pilot-in-command has to have the responsibility for decisionmaking of

the initiation, continuation, termination or diversion of the flight on all flight operations.

comment

6012 comment by: *Konrad Polreich*

OPS.GEN.015 (a)(4)

….suitable aerodrome or landing site when …

In OPS.GEN.010 there is no "landing site" defined.

Either "landing site" should be defined in this paragraph or the expression amended to operating site, which is already defined in OPS.GEN.010.

comment

6205 comment by: *Lufthansa CityLine GmbH*

In the interest of achieving consistency with the wording of OPS.GEN.020 (f)) there is a need to amend Para (a) as follows:

The pilot-in-command shall be responsible for:....

(a)

.....

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew members' capacity to perform functions is significantly reduced to the extent that the flight may be endangered from causes such as fatigue, sickness or lack of oxygen;

(d)

Both JAR OPS and EU OPS use(d) the title Commander rather than Pilot-in-Command. Within the Commercial Air Transport scenario Commander is a more relevant title for the person (pilot) on board the aeroplane with regulatory responsibility, rather than the title Pilot-in-Command which is a Rules of the Air title. Granted in the overall scenario (balloons, gliders, single pilot ops etc...) PIC is applicable because he is probably the only pilot on board. However, in multi-pilot CAT operations the Pilot-in-Command (the pilot who for the time being is responsible for complying with the rules of the air) may not be the 'commander'. This is not only an example of the drawback of having one large all encompassing rule for different scenario but also of not taking into consideration the use of simplified English that cannot cause confusion when translated into other languages

comment

6562 comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.015

Wording in the NPA

Pilot-in-command responsibilities and authority

Our proposal

Add:

(f) In case of flights with instructor where pilot and instructor could both act as pilot in command the holder of the aircraft can appoint the pilot in command or pilot and instructor can agree who acts as pilot in command. In case the instructor is pilot in command but the pilot is at the controls most of the time both can count the time as flight time and the instructor can count the time as instruction time. The purpose of the flight should be documented in the log books.

Issue with current wording

A definition is missing who the pilot in command is for certain flight with instructors.

Rationale

By default the pilot in command is the pilot occupying the seat specified as the seat of the pilot in command in the flight manual. But there are many exceptions to this rule but not in all cases the situation is apparent. This is especially in the case of flights with instructors where the instructed pilot has the license and rating to conduct the flight. In these cases there must be a provision in the regulation that the pilot in command can be appointed by the aircraft holder or agreed upon between pilot and instructor. Such situations are check flights required by the aircraft holder, training flights requested by a pilot e.g. if he does not feel safe, familiarization with aircraft for which instruction is not required. For these flights it must also be stated that the instructor as pilot in command and the instructed or checked pilot can count the time as flight time and the instructor may count it as instruction time.

comment *6731* comment by: *Icelandair*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied*

with.

comment *6734* comment by: *Icelandair*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *6736* comment by: *Icelandair*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,

comment *6737* comment by: *Icelandair*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *7145* comment by: *AIR FRANCE*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when under supervision (LFUS) or when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *7146* comment by: *AIR FRANCE*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is unclear on which basis the pilot-in-command would be able to confirm this. We therefore suggest to delete 'he/she has confirmed'

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.*

comment *7150* comment by: *AIR FRANCE*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This responsibility is not part of the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Realign the definition with EU-OPS.

comment *7151* comment by: *AIR FRANCE*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) need for a definition of a "*suitable aerodrome*"

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be

accomplished at the expected time of use,

comment *7154* comment by: *AIR FRANCE*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be responsible for all operational procedures and checklists. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

comment *7166* comment by: *Virgin Atlantic Airways*

Comment:

There's no definition for commander and PIC is used in all NPA 2009-02. There's a **conflict** with NPA FCL 17 as there can be a nominated commander by a company but also an other Pilot in Command e.g when relieving the commander.

Commander is a role, responsibility. Pilot in command is a function, it could be a pilot other than the commander.

The term commander is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the function "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *7370* comment by: *A. Mertz*

Für den Fall, dass sich 2 Piloten mit gleicher Lizenz, oder ein Lizenzinhaber und ein Fluglehrer an Bord befinden, ist hier nicht klar, wer fest legt, wer der verantwortliche Flugzeugführer ist.

comment *7430* comment by: *David ROBERTS*

Sub paragraph (c) may lead to an unnecessary number of reports to ATC from glider pilots when they are flying in (mountain) wave and the associated rotor turbulance, which for them is 'heaven' but which other aircraft pilots might regard as hazardous.

Whilst accepting the principle embodied in this paragragh, it needs to be applied practically, if a suitable form of words can be put in the AMC.

comment *7434* comment by: *British Airways*

There is no definition for the 'Legal Commander and PIC is used in all NPA 2009-02. There is a **conflict** with NPA FCL 17 as in this document there can 'Commander' nominated by a company but also an other Pilot can act in capacity of a Commander e.g when under supervision (LFUS) or when relieving the commander.

There can only be one 'Legal Commander' of an aircracft but another pilot may act as a Pilot in command.

The term 'Commander' (legal Commander) is used in several conventions. (Tokyo, Chicago)

Proposal:

Reinstate the positon of "**Commander**" Use definition from EU-OPS 1.940 (a) 5;

"*One pilot amongst the flight crew, qualified as a pilot-in-command in accordance with the requirements governing Flight Crew Licenses, is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot*."

comment *7437* comment by: *British Airways*

Relevant text:

(a) The Pilot-in-Command shall be responsible for:

..

(3) not commencing a flight unless he/she has confirmed that all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC) No 216/2008 (Essential Requirements for air Operations) can be complied with.

Comment:

It is not practical for the pilot-in-command to be able to confirm this. I therefore suggest the text be re-written into more appropriate text.

Proposal:

Delete 'he/she has confirmed'

(3) not commencing a flight unless ***~~he/she has confirmed that~~*** *all operational limitations referred in para 2.a.3 of Annex IV to Regulation (EC)*

No 216/2008 (Essential Requirements for air Operations) can be complied with.

comment *7441* comment by: *British Airways*

Relevant Text:

(a) The pilot-in-command shall be responsible for :

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew member's capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen.

Comment:

This definition is different from the responsibilities of the Commander as defined in EU-OPS 1.085(f).

Proposal:

Reinstate the text from EU-OPS.

comment *7443* comment by: *British Airways*

Relevant Text:

(a) The pilot-in-command shall be responsible for:

(4) not commencing nor continuing a flight beyond the nearest ***suitable aerodrome*** *or landing site when flight crew members' capacity to perform functions is significantly reduced from causes such as fatigue, sickness or lack of oxygen;*

Comment:

(a) (4) there is no definition of what a "*suitable aerodrome*" is!

We know what an *adequate aerodrome* is. What is a suitable aerodrome? (same comment for d))

Proposal:

Definition of Suitable Aerodrome:

An adequate aerodrome with:

- Weather reports and/or forecasts indicating that the weather conditions are at or above required minima at the expected time of use; and
- Field condition reports, indicating that a safe landing can be accomplished at the expected time of use,
  - open at the expected time of use

comment *7444* comment by: *British Airways*

Relevant text:

a.2. Compliance with all operational procedures and checklists.

Comment:

The commander cannot be expected to be responsible for all operational procedures and checklists except those onboard. The requirement should be as mentioned in EU-OPS 1.080(f)(8) by mentioning the Operations Manual.

Proposed text:

ensuring that all operational procedures and checklists are complied with in accordance with the Operations Manual.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.015 Pilot-in-command responsibilities and authority - Balloons p. 28

comment *2900* comment by: *UK CAA*

Page No: 28

Paragraph No: OPS.GEN.015 (e) (2)

Comment:

Text of the sub-paragraph uses the phrase "within the direct vicinity" is vague and open to subjective interpretation. "Direct vicinity" should either be defined or replaced by a distance.

Justification:

Clarification is required.

comment *3113* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

The term "appropriate protective clothing" is a loose concept.

Really neccessary are only gloves which we supply to them.

Mostly passengers are involved in the inflation and deflation and there are wearing, what they like.

comment *3721* comment by: *Civil Aviation Authority of Norway*

Comment:

Text of Pilot in Command duty in this subparagraph confers the task to the

pilot and not to the crew as a whole.

Justification:

Amending the text will make it clear where the PiC's responsibility lies in ensuring that the tasks are completed by himself or his crew as appropriate.

Proposed Text

(if applicable):

~~compliance with all operational procedures and checklists;~~

ensuring that all operational procedures and check lists are complied with;

comment *7232* comment by: *ANE (Air Nostrum) OPS QM*

Paragraph (a)

In the interest of achieving consistency with the wording of OPS.GEN.020 (f)) there is a need to amend Para (a) as follows:

(a) The pilot-in-command shall be responsible for:....

(4) not commencing nor continuing a flight beyond the nearest suitable aerodrome or landing site when flight crew members' capacity to perform functions is significantly reduced to the extent that the flight may be endangered from causes such as fatigue, sickness or lack of oxygen;

Paragraph (d)

Both JAR OPS and EU OPS use(d) the title Commander rather than Pilot-in-Command. Within the Commercial Air Transport scenario Commander is a more relevant title for the person (pilot) on board the aeroplane with regulatory responsibility, rather than the title Pilot-in-Command which is a Rules of the Air title. In multi-pilot CAT operations the Pilot-in-Command (the pilot who for the time being is responsible for complying with the rules of the air) may not be the 'commander'. This is not only an example of the drawback of having one large all encompassing rule for different scenario but also of not taking into consideration the use of simplified English that cannot cause confusion when translated into other languages.

comment *7527* comment by: *Pascal JOUBERT*

It is preferable to say 'management' instead of 'pre-flight briefing'.

Justification: At the place of the landing, some people, which have not flew in the balloon, may help for the deflating of it. They didn't assist to the pre-flight briefing.

comment *7638* comment by: *European Balloon Corporation*

The paragraph (a) is referring to aerodrome which is non sense in case of ballooning

The prefilght briefing is many times given by the crew chief and not the pilot, it should be changed : given by the pilot or a crew member…

It is preferable to say 'management' instead of 'pre-flight briefing'.

Justification: At the place of the landing, some people, which have not flew in the balloon, may help for the deflating of it. They didn't assist to the pre-flight briefing.

(e) 3. wear appropriate protecting clothing, what does it means : nothing , remove. It is not describe in flight manual, only gloves are describe for people holding mouth of balloons.

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.020 Crew responsibilities p. 28-29

comment *371* comment by: *EHOC*

Paragraph (b)

Now crew member responsibility in GEN.020(b) when formerly the Commander's.

"Not permit any crew member to perform any activity during a critical phase of flight except those duties required for the safe operation of the aircraft."

Whilst this works in a GA context, it does not capture the intent of the original rule with respect to multi-crew environments. As has been pointed out in comments to OPS.GEN.015 above, perhaps PIC responsibilities need to be stated in both environments.

comment *635* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.020(b): change as follows:

(b) Crew members shall be seated at their assigned stations and shall not perform any activities other than those required for the safe operation of the aircraft during critical phases of flight **and when deemed necessary by the pilot-in-command in the interest of safety**.

Justification:

self-explanatory

comment *636* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.020(d): change as follows:

(d) At least one **suitably** qualified ~~**flight crew member**~~ **pilot** shall remain at the controls of the aircraft at all times.

Justification:

Compliance with EU OPS 1.310 (a) (2).

comment *690* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.020(a): NIL

The change from EU OPS has been noted, but it is accepted.

comment *691* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.020(g): change as follows:

(g) A crew member shall ~~**report to the pilot-in-command**~~:

(1) **report to the pilot-in-command** any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) **report to the pilot-in-command** any incident that was endangering, or could endanger, the safety of the operation.

(3) make use of the operator's occurrence reporting schemes. A copy of the report(s) shall be communicated to the pilot-in-command concerned.

Justification:

Reference to occurrence reporting system needs to be established in the rule.

Downgrading of existing rules from EU OPS 1.085 (b) (3) is not acceptable.

comment *786* comment by: *Association of Dutch Aviation Technicians NVLT*

Please clearify and improve the following item:

A crew member shall report to the pilot-in-command:

any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

Not all crew members f.i. cabin crew are able to determine if any fault, failure, malfunction or defect will affect the airworthiness or safe operation of the aircraft.

Proposed text:

A crew member shall report to the pilot-in-command: if any fault, failure, malfunction or defect is noticed on or in the A/C by themselves or by others.

comment *900* comment by: *AECA(SPAIN)*

Include in this paragraph the content of OPS 1 085 (e) 1, 2 and 3

comment *1398* comment by: *British Parachute Association*

At the end of (c) we suggest adding the words..

..."except in the case of parachute operations where jumpmasters are exempt provided that they are wearing a serviceable parachute."

This is to ensure that the rule does not prohibit jumpmasters from the correct performance of their duties.

comment *2332* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Missing is that there is no requirement for the PIC to report onwards.

Add: The PIC is required to report to the Operator

comment *2757* comment by: *Pietro Barbagallo ENAC*

Comment: The requirement concerning the mandatory occurrences reporting (MOR) scheme for the pilot in command and the others crew members, is missing.

Justiifcation: This requirement already exists in EU-OPS1. Its purpose is to avoid misunderstanding and inproper interpretations of the procedures contained in the operations manual by all the involved operator personnel, in order to assure a safe and consistent application of such procedures.

comment *2901* comment by: *UK CAA*

Page No: 28

Paragraph No: OPS.GEN.020 (b)

Comment:

Text of the sub-paragraph implies that 'Crew members' must be sat at their stations at all times. This is not what is intended.

Justification:

Clarification of the intent of the section subject.

Proposed Text (if applicable):

During critical phases of flight crew members shall be seated at their assigned stations and shall not perform any activities other than those required for the safe operation of the aircraft ~~during critical phases of flight~~.

comment *2902* comment by: *UK CAA*

Page No: 29

Paragraph No: OPS.GEN.020(c)

Comment: The rule does not adequately cover flight crew members who have a seat harness which incorporates upper torso restraint.

Justification: Some helicopter crew seats do not have just seat belts; therefore this rule cannot be complied with.

Proposed Text (if applicable):

(c) Flight crewmembers shall keep their safety belt ***or harness*** fastened while at their stations.

comment *3114* comment by: *AEA*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *3117* comment by: *AEA*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and

are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *3119* comment by: *AEA*

Relevant Text:

(g) ***A*** *crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

(g) ***Any*** *crew member shall report to the pilot-in-command:*

comment *3361* comment by: *M Wilson-NetJets*

Original text:

(g) A crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and
(2) any incident that was endangering, or could endanger, the safety of the operation.

Suggested new text:

A crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was, is endangering, or could endanger the safety of the operation.

Comment/suggestion:

Also incidents that are ongoing and at this moment endanger the safety of

the flight must be reported to the PIC:

comment *3616* comment by: *AUSTRIAN Airlines*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *3784* comment by: *Civil Aviation Authority of Norway*

Comment:

Text of the sub-paragraph implies that 'Crew members' must be sat at their stations at all times. This is not what is intended.

Justification:

Clarification of the intent of the section subject.

Proposed Text

(if applicable):

During critical phases of flight crew members shall be seated at their assigned stations and shall not perform any activities other than those required for the safe operation of the aircraft ~~during critical phases of flight~~.

comment *3837* comment by: *AUSTRIAN Airlines*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in

accordance with OR.OPS.FTL shall:

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command:*

comment *3878* comment by: *FOM ANWB MAA*

OPS.GEN.020 Crew responsibilities

(d) At least one qualified flight crew member shall remain at the controls of the aircraft at all times.

Impossible. …shall remain at the controls when the rotor is turned under power for the purpose of flight (ICAO Annex 6)

comment *3917* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

020(d) Impossible. …shall remain at the controls when the rotor is turned under power for the purpose of flight, check ICAO Annex 6

comment *4159* ☐ comment by: *DGAC*

OPS.GEN.015(a)(4), OPS.GEN.020(f), AMC1 to OPS.GEN.020(a)

It is accepted, as mentioned in OPS.GEN.020 (f), that the flight crew has a responsibility in managing his own fatigue.

However the elements highlighted in AMC1 OPS.GEN.020(a), if the crew member works for an operator is much too detailed. The interpretation of those items will lead to a simplified vision of fatigue without taking into account operational environment, support and resources, nor individual or collective countermeasures.

It is unreasonable to assume that an individual can assess all those factors on the spot. The wording in the IR is considered sufficient to evaluate its own fatigue, notwithstanding tools and countermeasures (i.e. fatigue checklist) that an individual may use as an industry best practice. It should not be the role of a regulation body to provide an exhaustive list for a topic that also include personal life, operational issues, etc. that may impact on the non linear link between physiological fatigue and safety.

comment *4161* comment by: *DGAC*

(b) & (c) :

Add "except for balloons".

Justification : "shall be seated (in (b)) and "safety belt" are not applicable to balloons

comment *4248* comment by: *KLM*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *4249* comment by: *KLM*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *4251* comment by: *KLM*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command:*

comment *4462* comment by: *TAP Portugal*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *4465* comment by: *TAP Portugal*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *4466* comment by: *TAP Portugal*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command:*

comment *4571* comment by: *British Airways Flight Operations*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "All crew members" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **All** crew members shall report to the pilot-in-command:*

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4858* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *4859* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *4860* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command:*

comment *5342* comment by: *Peter Moeller*

020(d) .....~~all times~~ wen the rotor is turned under power for the purpose of flight

comment *5414* comment by: *ALFA-HELICOPTER*

(d) Impossible. …shall remain at the controls when the rotor is turned under power for the purpose of flight, check ICAO Annex 6

comment *5428* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *5429* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *5431* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command*

comment *5613* comment by: *HSD Hubschrauber Sonder Dienst*

(d) should read:".....shall remain at the controls of the helicopter when the rotor is turned under power."

comment *5765* comment by: *Norsk Luftambulanse*

(d) Impossible. …shall remain at the controls when the rotor is turned under power for the purpose of flight, check ICAO Annex 6

comment *6451* comment by: *cfdt france*

OPS GEN 020 Crew Responsibilities

(b) Page 28 "Crew members shall be seated at their assigned stations and shall not perform any activities other than those required for the safe operation of the aircraft during critical phases of flight"

Comment: This is vague and does not enumerate "critical phases of flight". This should be detailed so as not to cause any confusion.

(g) Page 29 "Crew members should not undertake duties on an aircraft if they know that they are sufering from or are likely to suffer from fatigue or they feel unfit to the extent that the flight may be endangered. "

PROPOSED TEXT : "**Crew members have a right to refuse to undertake duties or continue flight schedules if they do not feel that they are apt physically or mentally to ensure the safe undertaking of their duties. As only the crew member in question is able to evaluate his / her capacity to safely undertake her / his duties the decision to refrain from flight duty may not be contested by the operator or the medical examiner unless this action becomes repetitive. In such a case the consultation of a medical practitioner is advised."**

JUSTIFICATION : ICAO Annexe 6 2.2.3 " An important safeguard may be established if States and Operators recognise the right of a crew member to refuse further flight duty when suffering from fatique of such a nature as to affect adversely the safety of the flight."

See also French Decree 11 July 1991 referring to crew fatigue and the right to abstain from flight duties.

In order that crew may not be unduly punished for refusing it is imperative that it is left up to the crew member to evaluate his / her capacity to work in a safe manner.

comment *6497* comment by: *FSC - CCOO*

(f) ~~Crew members shall not undertake duties on an aircraft if they know that they are suffering from or are likely to suffer from fatigue or they feel unfit, to the extent that the flight may be endangered.~~

Replace:

(f) Crew members shall have the right to refuse to undertake or continue duties on an aircraft if they know that they are suffering from or are likely to suffer from fatigue or they feel mentally or physically unfit, to safely perform their duties.

Reason: An individual crew member might not be able to assess whether his/her feeling unfit might endanger the flight, but an individual is able to evaluate if he/she is fit enough to perform his/her duties safely.

Moreover, ICAO Annexe 6- 2.3.2. reads: "an important safeguard may be established if states and operators recognise the right of a crew member to refuse further flight duty when suffering from fatigue of such a nature as to

adversely affect the safety of flight". This ICAO recommendation is reflected in Annex IV 7.f. of Regulation 216/2008 and should therefore be reflected in the thereof emanating IR. **The difference between adversely affecting the safety of flight and *endagering the flight* should be observed. The proposed text is far weaker than the ICAO recommendation.** Furthermore French and Spanish CAA have this principle enshrined in their FTL Rules:

French Decree of 11 July 1991 relative to fatigue of crew members:

"A crew member must abstain from duty if she/he feels any type of deficiency that leads Him/her to believe that she/he may not have the necessary aptitude to exercise his/her duties".

The Spanish CIRCULAR OPERATIVA 16 B SOBRE LIMITACIONES DE TIEMPO DE VUELO, MÁXIMOS DE ACTIVIDAD AÉREA Y PERIODOS MÍNIMOS DE DESCANSO PARA LAS TRIPULACIONES reads in its paragraph 2.: No obstante lo que se establece en estas normas, un Tripulante no volará, ni su Empresa le exigirá que lo haga, si aquel o ésta tienen razones bien fundadas para creer que el Tripulante está padeciendo fatiga excesiva o, teniendo en cuenta las circunstancias del vuelo particular que debe llevarse a cabo, es probable que llegue a acumular fatiga excesiva durante el mismo.

comment *6525* comment by: *IATA*

(c) Flight crew members shall keep their safety belt fastened while their stations.

Proposal:

(c) Flight crew members shall keep their safety belt fastened while their stations. Shoulder harness

has to be fastened only during take –off and

landing.

comment *6594* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.020 Crew responsibilities

(d) At least one qualified flight crew member shall remain at the controls of the aircraft at all times.

Impossible.

"...shall remain at the controls when the rotor is turned under power for the purpose of flight (ICAO Annex 6)"

comment *6738* comment by: *Icelandair*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *6739* comment by: *Icelandair*

Relevant Text:

(e) Crew members who undertake duties **from** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

Comment:

Typo Change "from" to "for" ->typo

Proposal:

(e) Crew members who undertake duties ~~from~~ **for** more than one operator and are subject to flight and duty time limitations and rest requirements in accordance with OR.OPS.FTL shall:

comment *6741* comment by: *Icelandair*

Relevant Text:

*(g) **A** crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "Any crew member" (to include CC)

Proposal:

Change "A crew member" to "Any crew member" to include CC.

*(g) **Any** crew member shall report to the pilot-in-command:*

comment *6963* comment by: *IACA International Air Carrier Association*

(g)

There is no requirement for PIC to report onwards.

Add the requirement for the PIC to report to the operator.

comment *7158* comment by: *AIR FRANCE*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

(b) does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *7167* comment by: *Virgin Atlantic Airways*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

Does it include shoulder harnesses?

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off, landing and all other critical phases of flight.

comment *7379* comment by: *ETF*

Add: (c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person **and crew member** on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her safety belt or harness properly secured.

Reason: The conflicting roles of cabin crew will often contain more service duties than safety, for example to hand out coats during taxiing or checking the seat-belts of passengers during turbulence. Cabin crew should know that they have an obligation to sit down when it is deemed necessary.

comment *7438* comment by: *David ROBERTS*

Sub para (e). The question arises here of, where for example, an ATPL is also a PPL holder: does the FTL relevant to that pilot's commercial (ATPL) activities combine with any PPL flying?

If that is what is intended it could lead to some difficult situations for the pilot, who may be flying for leisure one day (maybe up to 6 hours in a sailplane), then the following day be flying professionally. In my experience there are many private pilots who are professional airline pilots.

Further, sub para (e) (2) could be a bureacratic nightmare of information transfer.

This section requires some careful thinking if pilots who take part in multiple aviation activities are not to be unreasonably restricted.

Proposal: To be discussed in the review stage with selected experts (if in fact there is a 'problem' with the draft wording in this respec

comment *7445* comment by: *British Airways*

Relevant Text:

(c) Flight crew members shall keep their safety belt fastened while at their stations.

Comment:

Filght crew harnesses can be worn in two ways, including or excluding shoulder harnesses

Proposal:

(c) Flight crew members shall keep their safety belt fastened while at their stations. Shoulder harness must only be fastened during take-off and landing.

comment *7450* comment by: *British Airways*

Relevant Text:

(g) ***A*** *crew member shall report to the pilot-in-command:*

Comment:

(g) First line : Change "A crew member" to "All crew members must" (to include CC)

Proposal:

Change "A crew member" to "All crew members must" to include CC.

(g) ***All*** *crew members must report to the pilot-in-command:*

comment *7528* comment by: *Pascal JOUBERT*

These paragraphs are not applicable to balloons.

Justification: there isn't any seat in most of baskets and harnesses are requested only for large balloons or commercial operations.

comment *7639* comment by: *European Balloon Corporation*

These paragraphs are not applicable to balloons.

Justification: there isn't any seat in a basket !

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.025 Common language p. 29

comment *20* comment by: *George Knight*

Communicating with whom? Between themselves, with ATC or with passengers? Without further qualification this regulation could have some unexpected consequences such as preventing cabin crew talking to a passenger in a language not shared by all crew members! It appears to make it mandatory for all crew, including cabin crew, to speak English since ATC will normally use that.

comment *372* comment by: *EHOC*

The original text in this rule had two parts:

(a) that all crew members should communicate in a common language; and

(b) that the operator had to ensure that all operations personnel able to understand the language in which the parts of the Operations Manual are written. We are aware of some States where the OM is written in a language which cannot be understood by some Operations Personnel.

A suggest text is:

(b) The operator shall ensure that all operations personnel are able to understand the language in which those parts of the Operations Manual which pertain to their duties and responsibilities are written.

comment *548* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.025: change as follows:

OPS.GEN.025 Common language

~~**All crew members shall communicate in a common language.**~~

1. An operator must ensure that all crewmembers can communicate in a common language.

2. An operator must ensure that crewmembers are able to understand the language in which the relevant operations manuals are written.

Justification:

This is more in line with JAR-OPS 1.025. It shifts the responsibility for a common language to the operator i.nstead of the individual crewmember. Another option is to leave OPS.GEN.025 as it is and add the proposed text as AMC OPS.GEN.025.

comment *679* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.025: Insert text from EU OPS 1.025:

(a) An operator must ensure that all crew members can communicate in a common language.

(b) An operator must ensure that all operations personnel are able to understand the language in which those parts of the operations manual which pertain to their duties and responsibilities are written.

Justification:

The regulation is not sufficient, is should be ensured that communication is performed in ONE common language.

Note: in NPA 2009-02f, the cross-reference in the table is wrong for this provision. EU OPS 1.025 (b) is inappropriately cross-referenced to OR.OPS.015.MLR (d).

comment *901* comment by: *AECA(SPAIN)*

Question:

Who is responsible for designation of common language?

comment *902* comment by: *AECA(SPAIN)*

According to FCL rules, all flight crew members need to demostrate a proficiency language in english at a minimum level 4. We think this is sufficient to cover this rule.

comment *908* comment by: *CAA-NL*

Comment regarding:

All crew members shall communicate in a common language.

Include: All manuals shall be in a commom language

comment *1038* comment by: *AECA helicopteros.*

Add a new paragraph

b) The operator shall ensure that all operations personnel are able to understand the language in which those parts of the Operations Manual which pertain to their duties and responsibilities are written.

comment *1374* comment by: *Royal Danish Aeroclub*

We support the proposal of a common language for crew members.

comment *2286* comment by: *Austro Control GmbH*

OPS.GEN.025 Common language

All crew members shall communicate in a common language.

extend sentence for practical reasons *"...used in the AFM/Operations Manual".*

comment *2758* comment by: *Pietro Barbagallo ENAC*

Comment: The requirement concerning the comprehension of the language in which the Operations Manual is written, by all the concerned personnel of the operator as applicable, is missing.

Justification: This requirement already exists in EU-OPS1. Its purpose is to avoid misunderstanding and inproper interpretations of the procedures contained in the operations manual by all the involved operator personnel, in order to assure a safe and consistent application of such procedures.

comment *2903* comment by: *UK CAA*

Page No: 29

Paragraph No: OPS.GEN.025

Comment:

Common Language.

This requirement should also apply to operations staff and publications

Justification:

All operationally critical staff and publications, such as the flight crew, operations controllers and the operations manual, should use common language to prevent misunderstanding.

Proposed Text (if applicable):

(a) All crew members shall communicate in a common language.

(b) All operations staff shall be able to understand the language in which the Operations Manual is written.

comment *2962* comment by: *REGA*

Are there any requirements for commom language regarding documentation?

Proposal

The Manuals shall be written and available in the mother language of the crew member.

comment *3015* comment by: *AEA*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *3215* comment by: *Eurocontrol CND*

OPS.GEN.025 Common language

It is stated that: "All crew members shall communicate in a common

language.”

There is no statement as to the level of knowledge of the common language that is required.

There is no reference to ICAO language requirements for RT communications as prescribed in ICAO Annex 1.

comment *3365* comment by: *M Wilson-NetJets*

Original text:

All crew members shall communicate in a common language.

Suggested new text:

All crew members shall communicate in **one** common language.

Comment/suggestion:

The way the current text is written it might be that crewmembers swap between languages. For some crewmembers swapping between languages might be additionally stressful and reduces their spare capacity. Secondly, languages have "false friends" between them and switching between languages more quickly introduce these "false friends" which might lead to misunderstandings and subsequent reduction of flight safety. Therefore, it is advisable to communicate in one common language.

comment *3726* comment by: *Civil Aviation Authority of Norway*

Comment:

Common Language.

This requirement should also apply to operations staff and publications

Justification:

All operationally critical staff and publications, such as the flt crew, operations controllers and the operations manual, should use common language to prevent misunderstanding.

Proposed Text

(if applicable):

(a) All crew members shall communicate in a common language.

(b) All operations staff shall be able to understand the language in which the Operations Manual is written.

comment *4021* comment by: *Virgin Atlantic Airways*

Relevant Text:

All crew members shall communicate in a common language

Comment:

Crew members must not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph to reflect EU-OPS.

Proposal:

An operator must that all crew members can communicate in a common language

comment *4162* comment by: *DGAC*

The material of EU-OPS/JAR-OPS 3, § 1/3.025(b) must be transferred somehow here.

[1/3.025(b) An operator must ensure that all operations personnel are able to understand the language in which those parts of the Operations Manual which pertain to their duties and responsibilities are written.]

This material is said [X-ref table] to have been transferred to (d) of OR.OPS.015.MLR, but (d) only deals with access by the personnel to the portions of the Ops Manual they need to carry out there tasks.

Besides, for non commercial operator, a provision should be added to make sure that the crew understands the language in which placards and Flight Manual are written.

comment *4163* comment by: *DGAC*

Proposal :

All **operational** communications shall be made in a common language

Justification :

There is no safety justification to regulate other communication than operational communications

comment *4253* comment by: *KLM*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always

communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *4468* comment by: *TAP Portugal*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *4861* comment by: *Deutsche Lufthansa AG*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *5316* comment by: *Norwegian Air Sports Federation*

We do support the paragraph.

comment *5432* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *5873* comment by: *Danish Powerflying Union*

We agree on the suggestion that crew members use a common language.

comment *6742* comment by: *Icelandair*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *7126* comment by: *ECA - European Cockpit Association*

Comment: This requirement should be treated in a new paragraph OPS.CAT.025 as well, as follows (see also comment 548):

OPS.CAT.025 Common language

1. An operator must ensure that all crewmembers can communicate in a common language.

2. An operator must ensure that crewmembers are able to

understand the language in which the relevant operations manuals are written.

Justification:

This is more in line with JAR-OPS 1.025. It shifts the responsibility for a common language to the operator instead of the individual crew member.

comment *7178* comment by: *AIR FRANCE*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew member who have safety duties in the aircraft. In addition, crew member should not always communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

comment *7334* comment by: *FAA*

1. OPS.GEN.025

Comment:

The 'common language' requirement is not specific; more detail is requires. Under the proposed text, it is possibil that crewmembers agree to communicate in a 'common language' that NOT ALL crewmembers are fluent in, creating a communication hazard.

Recommendation:

Modify the regulation of the guidance material to indicate that each crewmember must be able to speak and understand the 'common language' being used.

comment *7440* comment by: *David ROBERTS*

I agree with this proposal.

comment *7451* comment by: *British Airways*

Relevant Text:

All crew members shall communicate in a common language

Comment:

This requirement should only apply to those crew members who have safety duties in the aircraft. In addition, crew members should not always have to communicate in a common language but should be able to do so. We therefore suggest amending this paragraph for clarity reasons.

Proposal:

All crew members **assigned to safety duties in the aircraft** shall **be able to** communicate in a common language **for safety related duties and procedures**

B. I. Draft Opinion - Part-OPS - Subpart A - Section I - OPS.GEN.030 Transport of dangerous goods p. 29-30

comment *619* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.030(b)(5): add text as follows:

(b) Dangerous goods shall only be transported by an operator approved in accordance with OPS.SPA.DG, except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions.

(2) required on board the aircraft in accordance with airworthiness and operational requirements;

(3) required on board the aircraft for specialised purposes;

(4) carried by passengers or crew members in accordance with the Technical Instructions; or

(5) in baggage which has been separated from its owner **during transit (e.g. lost baggage or improperly routed baggage) but which is carried by the operator.**

comment *903* comment by: *AECA(SPAIN)*

New wording:

The transport of dangerous goods by air shal be conducted in accordance with the **Edition in force** of the Technical...

Reasons:

Refer a specific edition of the Technical Instructions limit the validity of this rule to 2007 and 2008 only.

comment *954* comment by: *Quality Assurance, Denim Air*

The inability to allow dynamic references to other standards – in particular the ICAO TIs for DG – is of concern. If EASA does not keep up with international developments operators face double jeopardy – the NAA won't let us use a new ICAO rule, but a foreign NAA (during a ramp check, for example) will fine us for not having applied it. It is not credible that EASA cannot address this matter and avoid slipping behind on international rulemaking developments.

comment *1159* comment by: *CAA-NL*

Paragraph No: OPS.GEN.030 (a)

Comment1. : The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air

Justification: A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed Text:

"The transport of dangerous goods by air shall be conducted in accordance with the ~~2007-2008~~ current ~~E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.). "

Paragraph No: OPS.GEN.030 (b)

Comment 2: sub paragraphs (2) and (3) are redundant as they are addressed by sub paragraph (1).

Justification: Part 1 of the Technical Instructions, detailing those dangerous goods which are not subject to the Technical Instructions, includes dangerous goods required on board the aircraft in accordance with airworthiness and operational requirements (2) and those required on board for specialised purposes.

Proposed Text:

Delete OPS.GEN.030 (b) (2) and (3) and consequentially renumber (4) and (5)

Paragraph No: OPS.GEN.030 (d)

Comment 3: Editorial

Justification: The grammatical construction of this sub para could be improved because the preamble refers to "the accident or incident" without referring to an incident or accident previously.

Proposed Text :

"The operator shall, in accordance with the Technical Instructions, report

without delay ~~to the competent authority and the authority of the State where the accident or incident occurred~~:

(1) any incidents or accidents involving dangerous goods; and

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage

to the competent authority and the authority of the State where the accident or incident occurred."

Paragraph No: OPS.GEN.030

Comment 4: The text of EU-OPS 1.1220 relating to training programmes should be included.

Justification: NPA 2009-02f states that the above text has been addressed by AMC OPS.SPA.001.DG(b)(1) but this is not the case as it relates to the content of a training programme, not the requirement for training to be provided, a test to verify understanding etc. and more importantly this relates to all operators and so should be in OPS.GEN not OPS.SPA. Furthermore, the requirement for all training to be approved by the Authority, which appears to have been omitted, would be adopted. Also, if recurrent training is completed within the final three months of validity of previous training, the Technical Instructions provides for the period of validity of the recurrent training to extend until 24 months from the expiry date of that previous training.

Proposed Text:

1. Add a new sub paragraph (e) to OPS.GEN.030 as follows:

"The operator shall establish and maintain staff training programmes, as required by the Technical Instructions, which shall be approved by the Authority, and shall ensure that

(1) staff receive training in the requirements commensurate with their responsibilities;

(2) training is provided or verified upon the employment of a person in a position involving the transport of dangerous goods by air;

(3) all staff who receive training undertake a test to verify understanding of their responsibilities;

(4) all staff who require dangerous goods training receive recurrent training at intervals prescribed by the Technical Instructions;

(5) records of dangerous goods training are maintained for all staff as required by the Technical Instructions; and

(6) his handling agent's staff are trained as required by the Technical Instructions."

2. Move AMC OPS.SPA.001.DG(b)(1) to become AMC OPS.GEN.030 (e) (because this applies to all operators irrespective of whether an approval is held) but with the following amendments to paragraphs 5 and 6:

"5. Training in emergency procedures should include as a minimum:

a. For personnel other than crew members:

i. ~~Dealing with damaged or leaking packages; and~~

~~ii. Other~~ actions in the event of ground emergencies arising from dangerous goods;

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried by passengers ~~occurring in the passenger cabin or in the cargo compartments; and~~

~~ii. The notification to Air Traffic Services should an in-flight emergency occur.~~

c. For crew members other than flight crew members:

i. Dealing with incidents arising from dangerous goods carried by passengers~~; or~~

~~ii. Dealing with damaged or leaking packages in flight.~~

6. Training should be conducted at intervals of not longer than 2 years. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the date on which the recurrent training was completed until 2 years from the expiry date of that previous training."

3. Create a new AMC OPS.SPA.001.DG(b)(1) (which details those areas relevant if an approval is held) as follows:

"In addition to the training detailed in AMC OPS.GEN.030(e), training in emergency procedures should additionally include, as a minimum:

a. For personnel other than crew members:

i. Dealing with damaged or leaking packages; and

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried in the cargo compartments; and

ii. The notification to Air Traffic Services of any dangerous goods carried as cargo should an in-flight emergency occur.

c. For crew members other than flight crew members:

i. Dealing with damaged or leaking packages in flight. "

Comment 5 regarding:

OPS.GEN.030(d)(2)

Comment 5: OPS.GEN.030(d)(2) should be amended in respect of "undeclared or misdeclared dangerous goods" in passenger baggage.

Justification: The terms "undeclared" and "misdeclared" are not appropriate to passenger baggage because they relate to cargo i.e.

undeclared dangerous goods are those which have not been declared to the operator because of the absence of a Dangerous Goods Transport Document whereas misdeclared dangerous goods are those which are accompanied by a Dangerous Goods Transport Document which has been erroneously completed. With the exception of a small number of items which may only be carried in baggage with the approval of the operator there is no provision for declaration of dangerous goods by a passenger.

Proposed Text:

"(1) any incidents or accidents involving dangerous goods; ~~and~~

(2) the finding of undeclared or misdeclared dangerous goods ~~discovered~~ in cargo ~~or passengers' baggage~~; and

(3) the finding of dangerous goods in passenger baggage when not In accordance with the Technical Instructions."

comment *1378* comment by: *International Air Transport Association*

OPS.GEN.030 (a). The text refers to a specific, out-of-date edition of the ICAO Technical Instructions.

This text should be revised to read:

"The transport of dangerous goods by air shall be conducted in accordance with the current Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including any addendum to the Technical Instructions issued by ICAO, published by decision of the Council of the International Civil Aviation Organization."

comment *1379* comment by: *International Air Transport Association*

OPS.GEN.030 (b). The text contained in sub paragraphs (2) & (3) is redundant as the provisions for dangerous goods required on board an aircraft in accordance with airworthiness requirements and operational requirements and those required on board for specialised purposes are addressed in Part 1 of the Technical instructions as set out in sub paragraph (1).

comment *1397* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Regulations are already contained in ICAO Technical Instructions. **Comment / Proposal:**

(b) to (d) can be deleted.

Note:

AMC to be adapted accordingly by EASA.

comment *1399* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

- **OPS.GEN.030(a), page 29**
  The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed Text (if applicable):

"The transport of dangerous goods by air shall be conducted in accordance with the ~~2007-2008~~ current Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.). "

- **OPS.GEN.030(b), page 29**

Sub paragraphs (2) and (3) are redundant as they are addressed by sub paragraph (1). Part 1 of the Technical Instructions, detailing those dangerous goods which are not subject to the Technical Instructions, includes dangerous goods required on board the aircraft in accordance with airworthiness and operational requirements (2) and those required on board for specialised purposes.

Proposed Text (if applicable):

Delete OPS.GEN.030 (b) (2) and (3) and consequentially renumber (4) and (5).

- **OPS.GEN.030(d), page 29 Editorial**

The grammatical construction of this sub para could be improved because the preamble refers to "the accident or incident" without referring to an incident or accident previously.

Proposed Text (if applicable):

"The operator shall, in accordance with the Technical Instructions, report without delay ~~to the competent authority and the authority of the State where the accident or incident occurred~~:

(1) any incidents or accidents involving dangerous goods; and

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage to the competent authority and the authority of the State where the accident or incident occurred."

- **OPS.GEN.030, page 29**

The text of EU-OPS 1.1220 relating to training programmes should be included. NPA 2009-02f states that the above text has been addressed by

AMC OPS.SPA.001.DG(b)(1) but this is not the case as it relates to the content of a training programme, not the requirement for training to be provided, a test to verify understanding etc. and more importantly this relates to all operators and so should be in OPS.GEN not OPS.SPA. Furthermore, the requirement for all training to be approved by the Authority, which appears to have been omitted, would be adopted. Also, if recurrent training is completed within the final three months of validity of previous training, the Technical Instructions provides for the period of validity of the recurrent training to extend until 24 months from the expiry date of that previous training.

Proposed Text (if applicable):

1 Add a new sub paragraph (e) to OPS.GEN.030 as follows:

"The operator shall establish and maintain staff training programmes, as required by the Technical Instructions, which shall be approved by the Authority, and shall ensure that

1. staff receive training in the requirements commensurate with their responsibilities;

2. training is provided or verified upon the employment of a person in a position involving the transport of dangerous goods by air;

3. all staff who receive training undertake a test to verify understanding of their responsibilities;

4. all staff who require dangerous goods training receive recurrent training at intervals prescribed by the Technical Instructions;

5. records of dangerous goods training are maintained for all staff as required by the Technical Instructions; and

6. his handling agent's staff are trained as required by the Technical Instructions."

2 Move AMC OPS.SPA.001.DG(b)(1) to become AMC OPS.GEN.03

"5. Training in emergency procedures should include as a minimum:

a. For personnel other than crew members:

i. ~~Dealing with damaged or leaking packages; and~~

~~ii. Other a~~ Actions in the event of ground emergencies arising from dangerous goods;

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried by passengers; ~~occurring in the passenger cabin or in the cargo compartments; and~~

~~ii. The notification to Air Traffic Services should an in-flight emergency occur.~~

c. For crew members other than flight crew members:

i. Dealing with incidents arising from dangerous goods carried by passengers; ~~or~~

~~ii. Dealing with damaged or leaking packages in flight.~~

6. Training should be conducted at intervals of not longer than 2 years. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the date on which the recurrent training was completed until 2 years from the expiry date of that previous training."

3 Create a new AMC OPS.SPA.001.DG(b)(1) (which details those areas relevant if an approval is held) as follows:

"In addition to the training detailed in AMC OPS.GEN.030(e), training in emergency procedures should additionally include, as a minimum:
a. For personnel other than crew members:

i. Dealing with damaged or leaking packages; and

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried in the cargo compartments; and

ii. The notification to Air Traffic Services of any dangerous goods carried as cargo should an in-flight emergency occur.

c. For crew members other than flight crew members:

i. Dealing with damaged or leaking packages in flight.

- **OPS.GEN.030(d)(2), page 30**

OPS.GEN.030(d)(2) should be amended in respect of "undeclared or misdeclared dangerous goods" in passenger baggage. The terms "undeclared" and "misdeclared" are not appropriate to passenger baggage because they relate to cargo i.e. undeclared dangerous goods are those which have not been declared to the operator because of the absence of a Dangerous Goods Transport Document whereas misdeclared dangerous goods are those which are accompanied by a Dangerous Goods Transport Document which has been erroneously completed. With the exception of a small number of items which may only be carried in baggage with the approval of the operator there is no provision for declaration of dangerous goods by a passenger.

Proposed Text (if applicable):

"(1) any incidents or accidents involving dangerous goods; and

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage; and

(3) the finding of dangerous goods in passenger baggage when not in accordance with the Technical Instructions."

comment *1412* comment by: *British Parachute Association*

We suggest that an additional item (6) is added at the end of (b) to read as follows..

(6) Required to be used by parachutists who intend to exit the aircraft.

This is in order to enable the use of smoke trail devices by parachutists engaged on parachute displays. It will also ensure consistency with our comments 1604, 1632 and 1657.

comment *1432* comment by: *International Air Transport Association*

OPS.GEN.030

Missing from this part is the requirement that an operator must establish and maintain dangerous goods training programs for all categories of employees as set in Table 1-4 and Table 1-5 in the ICAO Technical Instructions. While OPS.SPA.001.DG(b)(1) requires that operators establish and maintain dangerous goods training programs this part only applies to operators holding an approval to transport dangerous goods. Many operators may elect not to transport dangerous goods as cargo, but with never the less still be handling dangerous goods that are permitted in passenger baggage. The ICAO TI requires that all flight crew, cabin crew, check-in personnel and baggage/ramp staff must receive initial and recurrent dangerous goods training, even where the operator does not carry dangerous goods in cargo.

Proposed amendment:

Add additional text into OPS.GEN.030 as a new (c) the provisions from the ICAO Technical Instructions as set out in Part 1;4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5.

Also missing from this part is:

1. a requirement that the operator shall provide information to passengers by way of notices at check-in areas, places where tickets are issued and aircraft boarding areas alerting passengers as to the types of dangerous goods they are forbidden from transporting in baggage; and

2. a requirement that the operator should have notices at cargo acceptance areas about the transport of dangerous goods.

This requirement applies regardless of whether the operator holds an approval to transport dangerous goods. The provisions are set out in ICAO TI Part 7;.5.1.1 and 7.4.7 respectively.

comment *1735* comment by: *Luftfahrt-Bundesamt*

- Character (a) refers to a specific version of the Technical instructions (edition 2007-2008) which is furthermore obsolete. Refering to a specific edition means that the Implementing Rule would have to be changed approximately every 2 years in order to be in compliance with the corresponding valid version of the Technical Instructions. Therefore „in accordance with the 2007 – 2008 Edition" should be changed into **„in accordance with the current edition"**

- With respect to character (b), the bullets (2) and (3) are already included in bullet (1). Therefore (2) and (3) should be deleted and (4) and (5) renamed accordingly.

- Because of recent changes in the regulations concerning Dangerous goods, paragraph (d)(2) has to be concretized as follows:

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or **mail**

(3) the finding of dangerous goods in passengers' baggage **when not in accordance with the Technical Instructions.**

- Refererring to Section I „ – General Requirements" in general, the training requirements in the range of Dangerous Goods should also be mentioned. Therefore a new sub-paragraph should be added:

(e) The operator must establish and maintain staff training programmes as stipulated in the Technical Instructions.

comment *2259* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Transport of dangerous goods

Comment / Proposal:

Additional issue on (b): (6) If transported as an helicopter external load.

Remarks:

DG as external load on helicopters need to be treated differently. The ICAO requirements (TL) has been developed for CAT operations. An operator transporting DG as external load should only have to follow simple procedures. All crew members shall be be able to identify the DG and their hazards to take appropriate action.

comment *2405* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

This refers to the 2007-2008 edition of ICAO Technical instructions which may well be superseded upon publication of the IR

Proposal:

Delete specific dated editions

comment *2504* comment by: *Royal Aeronautical Society*

Paragraph (a) makes reference to 'the 2007 – 2008 Edition of the Technical Instructions … etc'. If this specific reference is allowed to remain, it will be

out-of-date by the time these regulations come into effect. Any specific reference to these TIs will similarly need regular amendment as and when ICAO publishes replacements. It is suggested that the existing text be replaced by text published in JAR-OPS 1.1150 Terminology that reads, **'the latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284-AN/905), including the Supplement and any Addendum, approved and published by decision of the Council of the International Civil Aviation Organisation'**.

comment *2642* comment by: *AOPA-Sweden*

It has still to be possible to carry weapons and ammunitions for a hunting season in a remote area, and also gasoline in a drum for a motor-boat or a snow-mobile in very remote areas

comment *2759* comment by: *Pietro Barbagallo ENAC*

Comment: OPS.GEN.030(a) The text refers to an out of date edition of the ICAO's "Technical Instructions for the Safe Transport of Dangerous Goods by Air".

Justification: A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed text: Amend OPS.GEN.030 (a) as follows: "The transport of dangerous goods by air shall be conducted in accordance with the current edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization (ICAO Doc 9284-AN/905)."

comment *2760* comment by: *Pietro Barbagallo ENAC*

Comment 030(b): Sub paragraphs (2) and (3) are redundant as they are addressed by sub paragraph (1).

Justiifcation: Part 1 of the ICAO Technical Instructions, detailing those dangerous goods which are not subject to the Technical Instructions, includes dangerous goods required on board the aircraft in accordance with airworthiness and operational requirements (2) and those required on board for specialised purposes.

Proposal: to delete OPS.GEN.030 (b) (2) and (3) and consequentially renumber (4) and (5).

comment *2761* comment by: *Pietro Barbagallo ENAC*

Attachment #5

Comment: The text of EU-OPS 1.1220 relating to training programmes should be included.

Justification: NPA 2009-02F states that the above text has been addressed by AMC OPS.SPA.001.DG(b)(1) but this is not the case as it relates to the content of a training programme, not the requirement for training to be provided, a test to verify understanding etc., and more importantly this relates to all operators and so should be in OPS.GEN not OPS.SPA. Furthermore, the requirement for all training to be approved by the Authority, which appears to have been omitted, would be adopted. Also, if recurrent training is completed within the final three months of validity of previous training, the Technical Instructions provides for the period of validity of the recurrent training to extend until 24 months from the expiry date of that previous training.

comment *2762* comment by: *Pietro Barbagallo ENAC*

Comment: OPS.GEN.030(d)(2) should be amended in respect of "undeclared or misdeclared dangerous goods" in passenger baggage.

Justiifcation:The terms "undeclared" and "misdeclared" are not appropriate to passenger baggage because they relate to cargo i.e. undeclared dangerous goods are those which have not been declared to the operator because of the absence of a Dangerous Goods Transport Document whereas misdeclared dangerous goods are those which are accompanied by a Dangerous Goods Transport Document which has been erroneously completed. With the exception of a small number of items which may only be carried in baggage with the approval of the operator there is no provision for declaration of dangerous goods by a passenger.

Proposed text:bAmend OPS.GEN.030 (d) (2) as follows: "(1) any incidents or accidents involving dangerous goods; (2) the finding of undeclared or misdeclared dangerous goods in cargo; and (3) the finding of dangerous goods in passenger baggage when not in accordance with the Technical Instructions."

comment *2904* comment by: *UK CAA*

Page No: 29

Paragraph No: OPS.GEN.030 (a)

Comment: The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Justification: A new edition of the Technical Instructions is produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed Text (if applicable):

"The transport of dangerous goods by air shall be conducted in accordance with the ~~2007-2008~~ current ~~E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.). "

comment *2905* comment by: *UK CAA*

Page No: 29

Paragraph No: OPS.GEN.030 (b)

Comment: sub paragraphs (2) and (3) are redundant as they are addressed by sub paragraph (1).

Justification: Part 1 of the Technical Instructions, detailing those dangerous goods which are not subject to the Technical Instructions, includes dangerous goods required on board the aircraft in accordance with airworthiness and operational requirements (2) and those required on board for specialised purposes.

Proposed Text (if applicable):

Delete OPS.GEN.030 (b) (2) and (3) and consequentially renumber (4) and (5)

comment *2906* comment by: *UK CAA*

Page No: 29/30

Paragraph No: OPS.GEN.030 (d)

Comment:

1. The grammatical construction of this sub para could be improved because the preamble refers to "the accident or incident" without referring to an incident or accident previously. Also, rather than refer to "incidents or accidents involving dangerous goods" it is suggested preferable to use the terms "dangerous goods incidents" and "dangerous goods accidents" since these are defined terms in the Technical Instructions

2. OPS.GEN.030(d)(2) should be amended in respect of "undeclared or misdeclared dangerous goods" in passenger baggage.

Justification:

1. Clarity.

2. The terms "undeclared" and "misdeclared" are not appropriate to

passenger baggage because they relate to cargo i.e. undeclared dangerous goods are those which have not been declared to the operator because of the absence of a Dangerous Goods Transport Document whereas misdeclared dangerous goods are those which are accompanied by a Dangerous Goods Transport Document which has been erroneously completed. With the exception of a small number of items which may only be carried in baggage with the approval of the operator, there is no provision for declaration of dangerous goods by a passenger.

Furthermore, dangerous goods incidents/accidents and discoveries of undeclared/ misdeclared dangerous goods are required by the Technical Instructions to be reported to both the Competent Authority (of the State of the operator) and the State in which the incident, accident or discovery occurred; discoveries of forbidden dangerous goods need only be reported to the State in which the discovery occurred. It is suggested this is covered by the text "in accordance with the Technical Instructions" and no further qualification is required in the IRs.

Proposed Text (if applicable):

"The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the authority of the State where the accident or incident occurred:

(1) ~~any~~ dangerous goods incidents ~~or accidents involving dangerous goods~~; ~~and~~

(2) dangerous goods accidents;

~~(2)~~(3) the finding of undeclared or misdeclared dangerous goods discovered in cargo ~~or passengers' baggage~~; and

~~(3)~~(4) the finding of dangerous goods in passenger baggage when not in accordance with the Technical Instructions."

comment *2907* comment by: *UK CAA*

Page: 29

Paragraph No: OPS.GEN.030

Comment: The text of EU-OPS 1.1220 relating to training programmes should be included.

Justification: NPA 2009-02f states that the above text has been addressed by AMC OPS.SPA.001.DG(b)(1) but this is not the case as it relates to the content of a training programme, not the requirement for training to be provided, a test to verify understanding etc. and more importantly, this relates to all operators and so should be in OPS.GEN not OPS.SPA. Furthermore, the requirement for all training to be approved by the Authority, which appears to have been omitted, would be adopted. Also, if recurrent training is completed within the final three months of validity of previous training, the Technical Instructions provides for the period of validity of the recurrent training to extend until 24 months from the expiry date of that previous training.

Proposed Text (if applicable):

1. Add a new sub paragraph (e) to OPS.GEN.030 as follows:

"The operator shall establish and maintain staff training programmes, as required by

the Technical Instructions, which shall be approved by the Authority, and shall ensure that

(1) staff receive training in the requirements commensurate with their responsibilities;

(2) training is provided or verified upon the employment of a person in a position involving the transport of dangerous goods by air;

(3) all staff who receive training undertake a test to verify understanding of their responsibilities;

(4) all staff who require dangerous goods training receive recurrent training at intervals prescribed by the Technical Instructions;

(5) records of dangerous goods training are maintained for all staff as required by the Technical Instructions; and

(6) his handling agent's staff are trained as required by the Technical Instructions."

2. Move AMC OPS.SPA.001.DG(b)(1) to become AMC OPS.GEN.030 (e) (because this applies to all operators irrespective of whether an approval is held) but with the following amendments to paragraphs 5 and 6:

"5. Training in emergency procedures should include as a minimum:

a. For personnel other than crew members:

i. ~~Dealing with damaged or leaking packages; and~~

~~ii. Other~~ actions in the event of ground emergencies arising from dangerous goods;

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried by passengers ~~occurring in the passenger cabin or in the cargo compartments; and~~

~~ii. The notification to Air Traffic Services should an in-flight emergency occur.~~

c. For crew members other than flight crew members:

i. Dealing with incidents arising from dangerous goods carried by passengers~~; or~~

~~ii. Dealing with damaged or leaking packages in flight.~~

6. Training should be conducted at intervals of not longer than 2 years. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the date on which the recurrent training was completed until 2 years from the expiry date of that previous training."

3. Create a new AMC OPS.SPA.001.DG(b)(1) (which details those areas relevant if an approval is held) as follows:

"In addition to the training detailed in AMC OPS.GEN.030(e), training in emergency procedures should additionally include, as a minimum:

a. For personnel other than crew members:

i. Dealing with damaged or leaking packages; and

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried in the cargo compartments; and

ii. The notification to Air Traffic Services of any dangerous goods carried as cargo should an in-flight emergency occur.

c. For crew members other than flight crew members:

i. Dealing with damaged or leaking packages in flight. "

comment *2977* comment by: *CAA-NL*

Comment CAA-NL:

The CAA-NL proposes to EASA to clarify and clearly state in the rule what is meant by OPS.SPA.DG.

comment *3016* comment by: *AEA*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment *3180* comment by: *Austro Control GmbH*

(a) The transport of dangerous goods by air shall be conducted ~~in accordance with the 2007-2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).~~ ***in accordance to the procedures and instructions contained in the operations manual and in accordance with officially recognized standards or national legislation.***

Justification:

Reference to ICAO documents shall not be included in the requirement since as a consequence this document becomes rule (and must be translated). The reference shall be transferred to the AMC OPS.GEN.030.

comment *3558* comment by: *Walter Gessky*

OPS.GEN.030 Transport of dangerous goods

(a) The transport of dangerous goods by air shall be conducted ~~in accordance with the 2007-2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).~~ **in accordance to the procedures and instructions contained in the operations manual and in accordance with officially recognized standards or national legislation.**

Justification:

Reference to ICAO documents shall not be included in the requirement because than this document becomes rule (and must be translated). The reference shall be included in AMC OPS.GEN.030.

comment *3611* comment by: *Austro Control GmbH*

General comment:

it should be taken into account that avalanche blasting is a need in mountainous areas; there should be a distinction between general transport of dangerous good and transport of explosives for avalanche blasting.

With regard to ICAO requirements it is requested for practical need to solve this problem by establishing special rules for avalange blasting and notify this to ICAO.

comment *3617* comment by: *AUSTRIAN Airlines*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment *4254* comment by: *KLM*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment *4470* comment by: *TAP Portugal*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance

material

comment *4659* comment by: *Virgin Atlantic Airways*

Relevant Text:

The transport of dangerous goods by air shall be conducted in accordance with the 2007 - 2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).

Comment:

The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air

Proposed Text:

The transport of dangerous goods by air shall be conducted in accordance with the current e~~E~~dition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).

comment *4684* comment by: *Virgin Atlantic Airways*

Relevant Text:

Dangerous goods shall only be transported by an operator approved in accordance with OPS.SPA.DG, except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those instructions.

(2) required on board the aircraft in accordance with airworthiness and operational requirements;

(3) required on board the aircraft for specialised purposes;

Comment:

Sub paragraphs (2) and (3) are not applicable as they are covered in sub paragraph (1). Details in (2) and (3) are covered in the Technical Instructions.

Proposed Text:

Delete sub paragraphs (2) and (3) and renumber (4) and (5).

comment *4694* comment by: *Virgin Atlantic Airways*

Relevant Text:

(1) any incidents or accidents involving dangerous goods; and

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage.

Comment:

Terms "undeclared" and "misdeclared" are not appropriate to passenger baggage because they relate to cargo i.e. undeclared dangerous goods are those which have not been declared to the operator in the correct way i.e. on a shippers declaration. whereas misdeclared dangerous goods are those, which are accompanied by a shipper's declaration, but it has been completed incorrectly. With the exception of a small number of items which may only be carried in baggage with the approval of the operator there is no provision for declaration of dangerous goods by a passenger.

Proposed Text:

(1) any incidents or accidents involving dangerous goods; ~~and~~

(2) the finding of undeclared or misdeclared dangerous goods ~~discovered~~ in cargo ~~or passengers' baggage~~; and

(3) the finding of dangerous goods in passenger baggage when not In accordance with the Technical Instructions.

comment *4864* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the **latest edition** of the ICAO T.I. The current version is the 2009-2010 edition of the T.I. Since the ICAO T.I. is an evolving document which is a) regularly updated and b) subject to governments control as ICAO is not an industry body, but a global governmental organization, it is not necessary and should be avoided to refer to the edition in the implementing rules/hard-law.

Proposal:

Delete the edition number of the TI:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **latest edition** of the Technical Instructions….*

comment *5061* comment by: *IAOPA Europe*

It must still to be possible without special approvallto carry weapons and ammunition for a hunting season in remote areas, and also gasoline in a drum for a motor-boat or a snow-mobile into very remote areas.

comment

5226 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) The transport of dangerous goods by air shall be conducted in accordance with the 2007-2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).

Comment:

The Edition of the Technical Instructions should be changed before the IR-OPS has come into force.

comment

5433 comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment

5643 comment by: *ERA*

European Regions Airline Association Comment

Here and throughout the IR, document references [versions, publication dates, revision, etc] are made to outdated documents, All these references should be made as generic as possible, ICAO document reference numbers normally do not change but their version and dates do. Any subsequent change to these referenced documents means that the IR will have to be amended. ERA members therefore request that EASA use "latest effective edition" or a similar statement.

The following modification to paragraph (a) is suggested for clarity:

(a) The transport of dangerous goods by air shall be conducted in accordance with the latest Edition of the Technical Instructions for the Safe

Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905 and successive revisions).

comment *5884* comment by: *Civil Aviation Authority Finland*

Proposal:

(a) Delete the years 2007-2008 from the sentance:

... in accordance with ~~the 2007-2008 Edition of~~ the Technical Instructions for ...

Justification:

The ICAO TI Doc 9284-AN/905 itself defines the document clearly and it is amended every two years (an new edition) without changing the Doc number (Doc 9284-AN/905). Using the years of the edition is causing amendment of OPS.GEN every two years.

comment *6026* comment by: *Finnish CAA*

Paragraph No: OPS.GEN.030 (a)

Comment: The text refers to an outdated edition of ICAO Doc 9284.

Justification: ICAO Publishes a new revised edition of Doc 9284 every two years. Currently the 2009-2010 edition is valid.

Proposed text (if applicable):

"The transport of dangerous goods by air shall be conducted in accordance with the ~~2007-2008~~ current ~~E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization (ICAO Doc 9284-AN/905)."

comment *6036* comment by: *Finnish CAA*

Paragraph No: OPS.GEN.030 (b)

Comment: Sub paragraphs (2) and (3) are are redundant as they are addressed by (1).

Justification: Part 1 of the Technical Instructions, detailing those dangerous goods which are not subject to the Technical Instructions, includes dangerous goods required on board the aircraft in accordance with airworthiness and operational requirements (2) and those required on board for specialised purposes (3).

Proposed text (if applicable):

Delete OPS.GEN.030 (b) (2) and (3) and consequentially renumber (4) and (5).

comment *6070* comment by: *Finnish CAA*

Paragraph No: OPS.GEN.030

Comment: The text of EU-OPS 1.1220 relating to training programmes should be included.

Justification: NPA 2009-02f states that the above mentioned text has been addressed by AMC OPS.SPA.001.DG(b)(1) but this is not the case as it relates to the content of a training programme, not the requirement for training to be provided, a test to verify understanding etc. and more importantly this relates to all operators and so should be in OPS.GEN not OPS.SPA. Furthermore, the requirement for all training to be approved by the Authority, which appears to have been omitted, would be adopted. Also, if recurrent training is completed within the final three months of validity of previous training, the Technical Instructions provides for the period of validity of the recurrent training to extend until 24 months from the expiry date of that previous training.

Proposed text (if applicable):

1. Add a new sub paragraph (e) to OPS.GEN.030 as follows:

"The operator shall establish and maintain staff training programmes, as required by the Technical Instructions, which shall be approved by the Authority, and shall ensure that

(1) staff receive training in the requirements commensurate with their responsibilities;

(2) training is provided or verified upon the employment of a person in a position involving the transport of dangerous goods by air;

(3) all staff who receive training undertake a test to verify understanding of their responsibilities;

(4) all staff who require dangerous goods training receive recurrent training at intervals prescribed by the Technical Instructions;

(5) records of dangerous goods training are maintained for all staff as required by the Technical Instructions; and

(6) his handling agent's staff are trained as required by the Technical Instructions."

2. Move AMC OPS.SPA.001.DG(b)(1) to become AMC OPS.GEN.030 (e) (because this applies to all operators irrespective of whether an approval is held) but with the following amendments to paragraphs 5 and 6:

"5. Training in emergency procedures should include as a minimum:

a. For personnel other than crew members:

i. ~~Dealing with damaged or leaking packages; and~~

~~ii. Other~~ actions in the event of ground emergencies arising from dangerous goods;

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried by passengers ~~occurring in the passenger cabin or in the cargo compartments; and~~

~~ii. The notification to Air Traffic Services should an in-flight emergency occur.~~

c. For crew members other than flight crew members:

i. Dealing with incidents arising from dangerous goods carried by passengers~~; or~~

~~ii. Dealing with damaged or leaking packages in flight.~~

6. Training should be conducted at intervals of not longer than 2 years. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the date on which the recurrent training was completed until 2 years from the expiry date of that previous training."

3. Create a new AMC OPS.SPA.001.DG(b)(1) (which details those areas relevant if an approval is held) as follows:

"In addition to the training detailed in AMC OPS.GEN.030(e), training in emergency procedures should additionally include, as a minimum:

a. For personnel other than crew members:

i. Dealing with damaged or leaking packages; and

b. For flight crew members:

i. Actions in the event of emergencies in flight arising from dangerous goods carried in the cargo compartments; and

ii. The notification to Air Traffic Services of any dangerous goods carried as cargo should an in-flight emergency occur.

c. For crew members other than flight crew members:

i. Dealing with damaged or leaking packages in flight. "

comment *6132* comment by: *Finnish CAA*

Paragraph No: OPS.GEN.030(d)(2)

Comment: The expression "undeclared or misdeclared dangerous goods" is

appropriate in respect of cargo but inappropriate in respect of passengers' baggage. Therefore, the text should be amended.

Justification: The terms "undeclared" and "misdeclared" are not appropriate to passenger baggage because they relate to cargo i.e. undeclared dangerous goods are those which have not been declared to the operator because of the absence of a Dangerous Goods Transport Document whereas misdeclared dangerous goods are those which are accompanied by a Dangerous Goods Transport Document which has been erroneously completed. With the exception of a small number of items which may only be carried in baggage with the approval of the operator there is no provision for declaration of dangerous goods by a passenger.

Proposed text (if applicable):

"(1) any incidents or accidents involving dangerous goods; ~~and~~

(2) the finding of undeclared or misdeclared dangerous goods ~~discovered~~ in cargo ~~or passengers' baggage~~; and

(3) the finding of dangerous goods in passenger baggage when not in accordance with the Technical Instructions."

comment *6230* comment by: *Lufthansa CityLine GmbH*

Here and throughout the IR document references [versions, publication dates, revision, etc] are made to outdated documents, All these references should be made as generic as possible, ICAO document reference numbers normally do not change but their version and dates do. Any subsequent change to these referenced documents means that the IR will have to be amended. Lufthansa CityLine therefore requests that EASA uses "latest effective edition" or a similar statement.

The reference to editions of publications means when new editions are published the reference in the rule needs to be updated. The following modification to paragraph (a) is suggested for clarity:

a) The transport of dangerous goods by air shall be conducted in accordance with the latest Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905 **and successive revisions**).

comment *6366* comment by: *Irish Aviation Authority*

Comment:

(a) - The ICAO reference to the Technical Instructions is not in date. This refers to 2007/8 addition of the TIs. The current edition is 2008/9.

All dates should be removed.

Justification:

Dates are subject to change as the TIs are updated.

Proposed text: Replace existing text as follows:

" with the current edition of the ICAO Technical Instructions"

comment *6477* comment by: *British Airways Safety & Security*

(a) - does this explicit reference require Part OPS to be revised every time an update to the ICAO document is published? Suggest that a more generic way of referring to this manual is supplied. (eg The most recent Edition of the Technical.... published on the ICAO website).

comment *6478* comment by: *British Airways Safety & Security*

(b) (5) This can be read to mean that as long as the baggage and owner are separated, then DGs can be carried in the baggage. Suggest (5) is deleted.

comment *6516* comment by: *IATA*

(a) The transport of dangerous goods by air

shall be conducted in accordance with the

2007-2008 Edition of the Technical Instructions for the Safe Transport Dangerous Goods by Air published by decision of the Council of tl International Civil Aviation Organization. (ICAO Doc 9284-AN/905.).

2007-2008 Edition is an old version

Proposal:

To avoid the change of the IR with each new edition replace the year by curre edition.

(d) The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the authority of

the State where the accident or incident occurred:

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage

Not clear enough; can result in many unnecessary reports!

Proposal:

(2) the finding of undeclared or misdeclared dangerous goods in cargo mail an

(3) the finding of dangerous goods in passenger baggage when not in accordance with the technical instructions

(b) Dangerous goods shall only be transported

by an operator approved in accordance with OPS.SPA.DG, except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions.

(2) required on board the aircraft in accor-

dance with airworthiness and operational requirements;

(3) required on board the aircraft for

specialised purposes;

(4) carried by passengers or crew members in accordance with the Technical Instructions; or

(5) in baggage which has been separated from

its owner.

No 2 and 3 are included in No 1

Proposal:

Delete No 2 and 3 and change No 4 and 5 accordingly

comment *6744* comment by: *Icelandair*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment *6970* comment by: *IACA International Air Carrier Association*

The rule shall not specify a specific edition but should refer to the latest edition. The reference to Technical Instructions 2007-2008 Edition is already outdated. The minimum guidelines should be the latest edition of ICAO Technical Instructions. Most airlines are already complying with the more stringent IATA Dangerous Goods.

Proposal: do not refer to specific editions.

comment *7181* comment by: *AIR FRANCE*

Relevant Text:

*(a) The transport of dangerous goods by air shall be conducted in accordance with the **2007-2008 edition** of the Technical Instructions….*

Comment:

Airlines have to comply with the latest version of the ICAO TI. The current version is the 2009-2010 edition of the TI..Since the ICAO TI is an envolving document which is regularly updated, it should be avoided to refer the edition in the implementing rules/hard-law. In-stead, the edition number could be referred in guidance material.

Proposal:

Delete the edition number of the TI from the hard-law and put it in guidance material

comment *7193* comment by: *AIR FRANCE*

(a) (3) delete "~~required on board the aircraft for specialized purposes~~" as it is already covered by Part 1 of the TIs

and renumber...

comment *7235* comment by: *ANE (Air Nostrum) OPS QM*

Here and throughout the IR, document references [versions, publication dates, revision, etc] are made to outdated documents, All these references should be made as generic as possible, ICAO document reference numbers normally do not change but their version and dates do. Any subsequent change to these referenced documents means that the IR will have to be amended. ERA members therefore request that EASA use "latest effective edition" or a similar statement.

The following modification to paragraph (a) is suggested for clarity:

(a)The transport of dangerous goods by air shall be conducted in accordance with **the latest Edition of** the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905 and

successive revisions)

comment *7384* comment by: *Axel Schwarz*

Making ICAO Doc 9284 applicable for all community operators would require issuing the Technical Instructions in all official EU-languages. Is such a translation planned?

Also, the current edition of Doc. 9284 (i.e. the 2009-2010 Edition) should be referred to.

comment *7386* comment by: *Axel Schwarz*

(b)(5) would allow the transport of any dangerous goods in separated baggage. A reference to the limitations applicable for passengers and crew should be included.

comment *7557* comment by: *AOPA UK*

It has still to be possible to carry weapons and ammunition for a hunting season in remote areas, and also gasoline in a drum for a motor-boat or a snow-mobile into very remote areas.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II p. 31

comment *1288* comment by: *Air-Glaciers (pf)*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1289* comment by: *Air-Glaciers (pf)*

Passenger briefing: The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *1929* comment by: *Berner Oberländer Helikopter AG BOHAG*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1930* comment by: *Berner Oberländer Helikopter AG BOHAG*

Passenger briefing: The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6595* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.105 Simulated abnormal situations in flight

~~Except in the case of flight instruction provided by a training organisation approved in accordance with Part-OR,~~ When carrying passengers or cargo or when conducting commercial operations the following shall not be simulated,:

(a) abnormal or emergency situations which require the application of abnormal or emergency procedures; or

(b) Instrument Meteorological Conditions (IMC) by artificial means.

In the case of flight instruction provided by a training organisation approved in accordance with Part-OR simulation of (a) and (b) is allowed.

Unclear definition:

If the intent of the rule is to prohibit abnormal, emergency procedures and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

comment *6918* comment by: *Christian Hölzle*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6919* comment by: *Christian Hölzle*

Passenger briefing: The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.100 Ice and other contaminants p. 31

comment *374* comment by: *EHOC*

There is no objective requirement for flight in icing conditions. An objective requirement for Flight in Expected of Known Icing Conditions should be appended to this rule.

"(c) The pilot-in-command shall not commence a flight in known or expected icing conditions unless the aircraft is certificated and equipped to cope with such conditions."

This goes beyond the ERs and places the responsibility with the PIC for entering icing conditions. This will also be seen by Private Pilots who will then know to avoid such conditions.

There might also be a need to provide an objective requirement on which to the requirement for procedures is hung - such as:

"(d) An operator shall establish procedures for flights in expected or actual icing conditions."

This might have to be limited to complex aircraft and commercial operations.

comment *1053* comment by: *AECA helicopteros.*

There is no objective requirement for flight in icing conditions. At least an objective requirement for Flight in Expected of Known Icing Conditions should be appended to this rule.

"(c) The pilot-in-command shall not commence a flight in known or expected icing conditions unless the aircraft is certificated and equipped to cope with such conditions."

This goes beyond the ERs and places the responsibility with the PIC for entering icing conditions. This will also be seen by Private Pilots who will then know to avoid such conditions.

There might also be a need to provide an objective requirement on which to the requirement for procedures is hung - such as:

"(d) An operator shall establish procedures for flights in expected or actual icing conditions."

This might have to be limited to complex aircraft and commercial operations.

comment *1474* comment by: *ECA - European Cockpit Association*

Comment: add paragraph (c) as follows:

(c) Such process shall comply with the procedures promulgated by or be acceptable to the type design certificate holder

Justification:

Although the AMC is comprehensive the Rule is very open and vague. It should be a requirement that the process is compliant with the aircraft certification. The wording is as suggested

comment *2908* comment by: *UK CAA*

Page No: 31

Paragraph No: OPS.GEN.100

Comment:

There is no objective rule for flight in icing conditions to amplify the requirement at ER 2.a.5.

AMC1 OPS.GEN.100 supports ER 2.a.5 directly but there should be a rule and the AMC should be linked to it.

Justification:

There is a need to provide an objective rule on which the requirement for procedures is based. This rule amplifies ER 2.a.5 and places the responsibility with the P-I-C for entering icing conditions. In addition, the rule will provide Private Pilots with information on how to avoid such conditions.

Proposed Text (if applicable):

(c) The pilot-in-command shall not commence a flight in known or expected icing conditions unless the aircraft is certificated and equipped to cope with such conditions.

(d) An operator shall establish procedures for flights in expected or actual icing conditions.

comment *3366* comment by: *M Wilson-NetJets*

Original text:

The operator shall apply ground de-icing/anti-icing processes whenever determined necessary, on the basis of inspections and weather conditions.

Suggested new text:

The **Pilot-In-Command** shall **ensure that** ground de-icing/anti-icing

processes **are applied** whenever determined necessary, on the basis of inspections and **current and expected** weather conditions.

Comment/suggestion:

Many non-scheduled/on-demand operators outsource their de/anti-icing activities and do not have any representation, directly affiliated with the operator, present at all aerodromes they fly to. Therefore, it is not the operator that can apply at those airports but it is the third party provider. The ultimate responsibility lies with the PIC and if he ensures that the processes are correctly applied as prescribed by the operator the safety is covered.

comment *3523* comment by: *IAOPA Europe*

The proper wording must be "the aircraft shall be clear of any deposit which may SIGNIFICANTLY affect its performance".

Any deposit will affect the performance of the aircraft so the current wording will in principle require any deposit to be removed. The intention must be that any deposit which has significance for the operation must be removed.

comment *3531* comment by: *Boeing*

NPA 2009-02b, Part Ops

OPS.GEN.100, Ice and other contaminants

Para (a) and (b)

Page 31 of 464

BOEING COMMENT:

(a) Paragraph (a) states: *"… the external surfaces of the aircraft shall be clear of any deposit …"* We suggest that this be either eliminated or clarified.

(b) We suggest revising paragraph (b) as follows:

*"The operator shall apply ground de-icing/anti-icing processes whenever determined necessary, on the basis of inspections, **if necessary,** and weather conditions."*

JUSTIFICATION:

(a) Ice on the fuselage, outside critical areas, and on lower wing surfaces, is acceptable according to the approved Boeing Flight Crew Operating Manual (FCOM). This should be taken into consideration.

(b) Our suggestion to add "if necessary" in the statement would eliminate the need to always inspect an aircraft.

comment *3725* comment by: *Civil Aviation Authority of Norway*

Comment:

There is no objective requirement here for flight in icing conditions to amplify the rule at ER 2.a.5. AMC1 OPS.GEN.100 supports ER 2.a.5 directly but it is felt that there should be a rule here and that the AMC should be linked to it. A requirement for Flight in expected or known Icing Conditions should be applied to this rule.

There might also be a need to provide an objective requirement on which to the requirement for procedures is hung. This might have to be limited to complex aircraft and commercial operations.

Justification:

This requirement will go beyond ER 2.a.5 and places the responsibility with the P-I-C for entering icing conditions. This will also be seen by Private Pilots who will then know to avoid such conditions.

Proposed Text

(if applicable):

(c) The pilot-in-command shall not commence a flight in known or expected icing conditions unless the aircraft is certificated and equipped to cope with such conditions.

(d) An operator shall establish procedures for flights in expected or actual icing conditions.

comment *4164* comment by: *DGAC*

Proposal : Amend the text as follows :

"**OPS.GEN.100 Ice and other contaminants**"

GROUND PROCEDURES

(a) At the commencement of a flight the external surfaces of the aircraft shall be clear of any deposit which might adversely affect its performance or controllability.

(b) The operator shall apply ground de-icing/anti-icing processes whenever determined necessary, on the basis of inspections and weather conditions.

IN-FLIGHT PROCEDURES - AEROPLANE AND HELICOPTER

(c)

(1) an operator shall (when appropriate in the case of helicopters), establish procedures for flights in expected or actual icing conditions.

(2) A commander shall not commence a flight nor intentionally fly into expected or actual icing conditions unless the helicopter is

certificated and equipped to cope with such conditions."

Justification :

As proposed, OPS GEN 100 is based on JAR OPS 1/3.345 which is restricted to ground procedures. This should appear in the title or in a subtitle.

Besides, some AMC & GM to this OPS.GEN.100 deal with in-flight procedures that the operator is supposed to develop. There must be a legal hook in the IR giving this obligation to the operator. §2.a.5 of the BR 216 is not precise enough to cover this aspect. Therefore it is proposed to reintroduce the material contained in (a) of EU/JAR-OPS 1/3.346.

JAR-OPS ACJ 1/3.346 is designed for aeroplane and helicopter only. No other category of aircraft is certified to fly in icing conditions.

Generally speaking, the nuances that have been achieved in the JAR-OPS texts were introduced on purpose after long discussions on the matters with experts of all domains.

This comment applies to other matters of the NPA as well…

comment *5645* comment by: *ERA*

European Regions Airline Association Comment

OPS.GEN.100 (b) Ice and other contaminants

ERA members have been in the forefront of applying pressure on EASA to develop without delay rulemaking action on aircraft ground de-icing / anti-icing operations. EASA consider this and other areas of this NPA provide provisions that may meet the concerns related to any lack of current individual rulemaking activity in this area. The ERA Directorate would disagree and stress that EASA as a matter of urgency should be looking at rulemaking action.

Here in sub-paragraph (b) the IR states that 'the operator shall apply ground de-icing/anti-icing processes…' , while the AMC2 OPS.GEN.100 1 states that 'De-icing and/or anti-icing procedures should…'. The latter implies the existence of 'procedures', but there is no explicitly stated requirement for the operator to establish procedures.

There is a need for explicit statements on the establishment of procedures and methods to be considered for incorporation.

comment *5648* comment by: *Irish Aviation Authority*

Paragraph (a) & (b)

Comment:

Paragraph (a) refers to "commencement of flight", aircraft may not be de-iced at commencement of flight (push-back from gate). Therefore it should read "should not commence take-off", as per OPS 1.345.

Justification:

To ensure aircraft is clear of ice at commencement of take-off.

comment *5892* comment by: *Civil Aviation Authority Finland*

Comment:

(a) The text "which might adversely affect its performance or controllability." will cause accidents, when the PIC has too open rights to deem, if the contamination or deposit can affect adversely.

Justification:

We have during the years had many of accidents, also some fatal in commercial operations, where the PIC has decided to take off with frost, snow, slash or ice on the surfaces of the aircraft trusting that the airflow will blow it away during the take-off run. Very often this does not happen and the controllability or performance of the aircraft is lost and the aircraft has crashed.

Therefore it should be written more exactly and required that the PIC shall not commence the flight if there is frost, snow, slash or ice on the surfaces of the aircraft.

comment *6972* comment by: *IACA International Air Carrier Association*

Contrary to the AMC, the rule is only dealing with pre-departure icing. Hence, the AMC should be restricted or the rule extended.

comment *7176* comment by: *ECA - European Cockpit Association*

Comment: change paragraph (b) as follows:

(b) The operator shall apply ground de-icing/anti-icing processes whenever determined necessary **by the operator or pilot in command**, on the basis of inspections and weather conditions.

Justification:

As it is currently worded, it could imply that the operator has sole discretion as to whether the aircraft requires deicing. However, it can happen that the PIC may need to take that decision. Proposed wording clarifies it.

comment *7292* comment by: *FAA*

1. OPS.GEN.100 (a) Ice and other contaminants

Comment:

The proposed text indicates: (a) At the commencement of a flight ***the external surfaces*** of the aircraft shall be clear of any deposit which might adversely affect its performance or controllability

Use of the phrase ***external surface*** could be misinterpreted to exclude contamination inside of engine inlets in front of the fan blades. The engine inlet must be free of frozen contaminates that could cause damage and failure of the engine during takeoff and initial climb.

Recommendation:

Proposed definition revision: (a) At the commencement of a flight the aircraft shall be clear of any deposit which might adversely affect its performance or controllability.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.105 Simulated abnormal situations in flight p. 31

comment *637* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.105: add the following proposed text:

An operator shall ensure that when passengers or cargo are being carried, no emergency or abnormal situations shall be simulated.

Justification:

No exception should be provided when an aircraft is carrying people or cargo. Proposed text is originating from ICAO Annex 6.

comment *909* comment by: *CAA-NL*

Suggestion CAA-NL:

Include testflights.

comment *1400* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Simulation of abnormal situations during commercial operations.

Comment / Proposal:

(a) during commercial air transport operations no abnormal situation or emergency shall be trained (not even in instruction).

comment *1531* comment by: *Christer Ullvetter*

Test flights should also be exempted.

comment *2723* comment by: *Southern Cross International*

Simulation of abnormal or emergency situations which require the application of abnormal or emergency procedures should not be carried out when carrying (paying) passengers or cargo.

Also, OPS.GEN.105 should make an exemption for test flights and demonstration flights.

It is proposed to change OPS.GEN.105 as follows:

When carrying passengers or cargo or when conducting commercial operations the following shall not be simulated:

(a) abnormal or emergency situations which require the application of abnormal or emergency procedures; or

(b) Instrument Meteorological Conditions (IMC) by artificial means,

except in the case of

(i) flight instruction provided by a training organisation approved in accordance with Part-OR or

(ii) test flights and demonstration flights in accordance with Part-21,

provided all persons on board have received a briefing on the type of training or tests that will be carried out.

comment *2909* comment by: *UK CAA*

Page No: 31

Paragraph No: OPS.GEN.105 - Simulated abnormal situations in flight

Comment:

The text introducing the exception to the conduct of simulated abnormal situations in flight will constrain Commercial Operators and GA pilots.

Justification:

The 'exception' text is unnecessary and can be removed without affecting the safety of Commercial Operations including the carriage of passengers or cargo

Proposed Text (if applicable):

~~Except in the case of flight instruction provided by a training organisation approved in accordance with Part-OR,~~ ***The following shall not be simulated when*** carrying passengers or cargo or when conducting commercial operations:

comment *2910* comment by: *UK CAA*

Page No: 31

Paragraph No: OPS.GEN.105 (b)

Comment:

The addition of the phrase "by artificial means" is unnecessary as the rule is complete without the phrase.

Justification:

Removal of unnecessary text.

Proposed Text (if applicable):

(b) Instrument Meteorological Conditions (IMC) ~~**by artificial means.**~~

comment *2964* comment by: *REGA*

Unclear definition: If the intent of the rule is to prohibit abnormal, emergency and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

comment *3780* comment by: *Civil Aviation Authority of Norway*

Comment:

The text introducing the exception to the conduct of simulated abnormal situations in flight will constrain Commercial Operators and GA pilots.

Justification:

The 'exception' text is unnecessary and can be removed without affecting the safety of Commercial Operations including the carriage of passengers or cargo

Proposed Text

(if applicable):

~~Except in the case of flight instruction provided by a training organisation approved in accordance with Part-OR,~~ ***When*** carrying passengers or cargo or when conducting commercial operations the following shall not be simulated:

comment *3880* comment by: *FOM ANWB MAA*

OPS.GEN.105 Simulated abnormal situations in flight

~~Except in the case of flight instruction provided by a training organisation approved in accordance with Part-OR,~~ When carrying passengers or cargo or when conducting commercial operations the following shall not be simulated,:

(a) abnormal or emergency situations which require the application of abnormal or emergency procedures; or

(b) Instrument Meteorological Conditions (IMC) by artificial means.

In the case of flight instruction provided by a training organisation approved in accordance with Part-OR simulation of (a) and (b) is allowed.

Unclear definition:

If the intent of the rule is to prohibit abnormal, emergency procedures and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

comment *3918* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Unclear definition: If the intent of the rule is to prohibit abnormal, emergency and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

comment *4525* comment by: *ADAC Luftrettung GmbH*

Unclear definition, how about medical passengers, how about a passenger to assist in lookout duty when simulating IMC. This can mean standdown for training purposes of a HEMS helicopter

Unclear definition: If the intent of the rule is to prohibit abnormal, emergency and simulated IMC during commercial operations than this must be clearly stated. "Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation."

comment *5230* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) abnormal or emergency situations which require the application of abnormal or emergency procedures;

Comment:

Should exclude test flights.

comment *5420* comment by: *ALFA-HELICOPTER*

Unclear definition: If the intent of the rule is to prohibit abnormal, emergency and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

comment *5631* comment by: *HSD Hubschrauber Sonder Dienst*

Easier to understand and to interprete would be:

" Abnormal or emergency situations or IMC-conditions shall not be simulated in an aircraft when there are commercial passengers on board."

This would leave the possibility for useful and required operational training and checking with the standard crew, at least in the helicopter regime.

comment *5766* comment by: *Norsk Luftambulanse*

Unclear definition: If the intent of the rule is to prohibit abnormal, emergency and simulated IMC during commercial operations than this must be clearly stated. Simulated abnormal and emergency situations are only allowed during training flights under an approved training organisation.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.110 Carriage of persons p. 31

comment *375* comment by: *EHOC*

Paragraph (a)

There appears to be a disparity between the intent of the original rule and the contents of this one; the original intent was to make entry into cargo holds a matter for the pilot-in-command.

No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, **unless temporary access has been granted by the pilot-in-command** for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *689* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.110(a): change as follows:

(a) No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein **and unless temporary access has been granted by the pilot-in-command**.

Justification:

PIC needs to be informed about presence of persons in these areas

comment *1028* comment by: *P.Becker ACG*

The aeroplanes used in Cargo operation do not have a cockpit door (OR.OPS.035.SEC).

Normally the AOC has an approval for cargo but not for passengers. The airlines have the need to transport cargo attendants. The definition in OPS.GEN.110 does not reflect this

propsal:

Carriage of persons without compliance with the passenger - carrying requirements
When authorized by the certificate holder, the following persons, but no others, may be carried aboard an airplane without complying with the passenger-carrying airplane requirements.

(1) A crewmember.

(2) A company employee.

(3) operational staff like loadmasters, mechanics, auditors

(4) An air carrier inspector of the Competent Authority or Regualtor who is performing official duties.(5) A person necessary for

a. The safety of the flight;

b. The safe handling of animals;

c. The safe handling of hazardous materials whose carriage is governed by regulations

d. The security of valuable or confidential cargo;

e. The preservation of fragile or perishable cargo;

f. Experiments on, or testing of, cargo containers or cargo handling devices;

g. The operation of special equipment for loading or unloading cargo; and

h. The loading or unloading of outsize cargo.

(6) A person described in paragraph (1-5) of this section, when traveling to or from his assignment.

(7) No certificate holder may operate an airplane carrying a person covered by this paragraph of this section unless

a. Each person has unobstructed access from his seat to the pilot compartment or to a regular or emergency exit;

b. The pilot in command has a means of notifying each person when smoking is prohibited and when safety belts must be fastened; and

c. The airplane has an approved seat with an approved safety belt for each person. The seat must be located so that the occupant is not in any position to interfere with the flight crewmembers performing their duties.

(8) Before each takeoff, each certificate holder operating an airplane carrying persons covered by paragraph of this section shall ensure that all such persons have been orally briefed by the appropriate crewmember on

a. Smoking;

b. The use of seat belts;

c. The location and operation of emergency exits;

d. The use of oxygen and emergency oxygen equipment; and

e. For extended overwater operations, the location of life rafts, and the location and operation of life preservers including a demonstration of the method of donning and inflating a life preserver.

(9) Each certificate holder operating an airplane carrying persons covered by paragraph(1-5) of this section shall incorporate procedures for the safe carriage of such persons into the certificate holder's operations manual.

(10) The pilot in command may authorize a person covered by paragraph (1-5) of this section to be admitted to the Flight Deck compartment of the airplane.

comment *1040* comment by: *AECA helicopteros.*

Modified to read

No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, **unless temporary access has been granted by the pilot-in-command** for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein **or due to duties tobe performed in aircraft.**

Reason. To cover technical activities must to be performed in aircraft, as e.g. HHO operations

comment *1119* comment by: *Heli Gotthard*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose

of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1164* comment by: *Stefan Huber*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1237* comment by: *Air Zermatt*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1285* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

Attachment #6

(c) "Prior to and during taxiing, take-off and landing, ..., each person on board shall occupy a seat or berth"

For some heliborne operations, and especially for Human External Cargo operations, workers don't necessary have a seat or a berth.

The image attached shows linemen in a cradle without any seats. The cradle is approved by an STC, thus it must be considered as a a part of the helicopter.

Proposal : "**Except for specific aerial works approved by the authority**, prior to ... each person on board shall occupy a seat or berth..."

or "**Except for Human External Cargo operations**, prior to ... each person on board shall occupy a seat or berth ..."

comment *1375* comment by: *Royal Danish Aeroclub*

OPS.GEN.110

Parachutists do use parts of airplanes for accomodation which are not designed for persons - i.e. standing on a wing bar before jumping from the plane. That an area not is constructed a passanger area does not neccessary

make the part or area of the airplane unusable for parachutists or persons.

We do not support this suggestion, unless the text is changed to this or similar:

No person skal be in any part of an aircraft in flight which is not a part designed for the accomodation of persons, unless for the purpose of taking action neccessary for the safety of the aircraft or of any animal or goods therein, unless the pilot in command do agree and a proper safety for the passangeres are keep i.e. by using parachutes for the passangers or crew placed outside passanger areas.

comment *1427* comment by: *British Parachute Association*

We suggest in (c) after the words "except in the case of parachute operations" there should be added the following...

..."(where parachutists may also be seated on the cabin floor)"...

There is otherwise the suggestion that although parachutists may not be required to use safety belts or harnesses they are nevertheless required to use a seat. Many aircraft flight manuals require seats to be removed for parachute operations.

This change will also ensure that this rule is consistent with the existing rule in OPS.GEN 405 (f) CARRIAGE OF PARACHUTISTS - which permits parachutists to be floor seated if necessary.

comment *1785* comment by: *Heli Gotthard AG Erstfeld*

Ops Gen 110 Carriage of persons

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *1850* comment by: *SHA (AS)*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2014* comment by: *Heliswiss AG, Belp*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2067* comment by: *Airbus S.A.S.*

EU-OPS, at paragraph OPS1.075 (2), addresses the possibility for a pilot in command to grant temporary access to part of the aircraft in which cargo or stores are carried, being a part which is designed to enable a person to have access thereto while the aeroplane is in flight.

The proposed paragraph OPS.GEN.105 (a) discards this possibility.

Rationales for this change would be appreciated. This possibility should be kept and addressed in IR-OPS, at least in OPS.CAT.110

comment *2086* comment by: *Dirk Hatebur*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2110* comment by: *Heliswiss*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2117* comment by: *Heliswiss NV*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2316* comment by: *heliswiss ag, belp*

Ops Gen 110 Carriage of persons

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2317* comment by: *heliswiss ag, belp*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2410* comment by: *Jan Brühlmann*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2543* comment by: *Walter Mayer, Heliswiss*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2830* comment by: *Philipp Peterhans*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *2911* comment by: *UK CAA*

Page: 31

Paragraph No: OPS.GEN.110 (a)

Comment: There appears to be a disparity between the intent of the rule as seen in EU-OPS and JAR-OPS and the contents of this one; the original intent was to make entry into cargo holds a matter for the pilot-in-command.

Furthermore, this paragraph must be modified to ensure that persons cannot be carried outside of the normal crew and passenger compartments in an approved harness designed for the carriage of persons unless additional safety measures are in place. This should at least consist of appropriate training for the crew and passenger(s). An AMC is needed to clarify the requirements.

Justification: Improvement to text and standardisation.

Wing walking and other similar activities that involve the carriage of persons on the wings, fuselage etc. is hazardous and therefore should be subject to additional regulatory measures.

Proposed Text (if applicable):

OPS.GEN.110 Carriage of persons

(a) No person shall be in ***or on*** any part of the aircraft which is not a part designed for the accommodation of persons ***unless temporary access has been granted by the pilot-in-command*** for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

(***b) A person shall not be carried outside of the crew or passenger compartments unless appropriate safety measures have been taken to ensure the safety of the aircraft and its occupants during the flight.***

Renumber subsequent paragraphs.

AMC1 OPS.GEN.110 Carriage of persons

If a person is to be carried outside of the crew or passenger compartments the operator must be satisfied that the pilot in command and the person being carried are fit and competent and have received adequate training.

Amend existing AMC:

AMC ***2*** OPS.GEN.110 Carriage of persons

comment *2912* comment by: *UK CAA*

Page No: 31

Paragraph No: OPS.GEN.110 (d)

Comment:

The text regarding multiple occupancy is equally relevant to aeroplanes and not just helicopters.

Justification:

Improvement to text and standardisation

Proposed Text (if applicable):

~~HELICOPTERS~~

(d) ***Aeroplane and helicopter operators*** shall specify which aircraft seats may be ***jointly*** occupied by one adult and one infant properly secured by a restraint device.

comment *2913* comment by: *UK CAA*

Page No: 31 & 126

Paragraph No: OPS.GEN.110 and GM1 OPS.GEN.110

Comment:

The rule contains no reference to how the carriage of persons relates to the classification of a flight (whether as private or commercial air transport etc). Neither does it contain any reference to the maximum number of persons who may be carried. But GM1 OPS.GEN.110 declares that the carriage of operational personnel indispensable to the performance of a task is not considered commercial air transport. It goes on to declare that "except for parachute operations, the number of persons carried should not exceed six, excluding crew members". These statements are not guidance as to how to comply with the rule. They are independent, unrelated declarations, which can have little or no weight. The subject matter of the two declarations in this GM are of sufficient importance that they should form part of a rule, or at the very least, a properly constructed AMC to an appropriate rule.

comment *2921* comment by: *Pascal DREER*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *3017* comment by: *AEA*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *3368* comment by: *M Wilson-NetJets*

Original text:

No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

Suggested new text:

No person shall be in any part of an aircraft **during flight which is not a part where persons can safely reside or is not designated by the manufacturer as an area where persons are allowed to reside during flight** ,unless for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

Comment / suggestion:

Many business jets have baggage areas that are accessible from the passenger cabin. The use of the word "accommodation" maybe interpreted that a baggage compartment is not specifically designed to accommodate persons.

comment *3423* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(c) "Prior to and during taxiing, take-off and landing, ..., each person on board shall occupy a seat or berth"

For some heliborne operations (e.g. Human External Cargo opertions) workers don't necessary have a seat or a berth.

Proposal : "**Except for specific aerial works approved by the authority,** prior to and during taxiing, take-off and landing...each person on board shall occupy a seat or berth,.."

comment *3491* comment by: *Heliswiss International*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or

goods therein.

comment *3559* comment by: *Walter Gessky*

5. OPS.GEN.110 Carriage of persons

AEROPLANES AND HELICOPTERS

(c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her safety belt or harness properly secured.

Comment:

Is it intended that in the case of parachute operation each person on board have his/her safety belt properly secured? Clarification requested.

comment *3587* comment by: *Aero-Club of Switzerland*

Please add:

ALL AIRCRAFT

(a) It is to PiC grant exceptional temporary access.

Justification: Our addition strengthens the position of the PiC.

comment *3618* comment by: *AUSTRIAN Airlines*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *3732* comment by: *Civil Aviation Authority of Norway*

Comment:

The text regarding multiple occupancy is equally relevant to aeroplanes and not just helicopters.

Justification:

Improvement to text and standardisation

Proposed Text

(if applicable):

~~HELICOPTERS~~

(d) ***Aeroplane and helicopter operators*** shall specify which aircraft seats may be occupied by one adult and one infant properly secured by a restraint device.

comment *3763* comment by: *KLM Cityhopper*

Comment:

With regard to cabin crew members, this requirements goes beyond the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members. Distinguish between crew members and passenger through a simply 'copy and paste' of EU-OPS 1.320

comment *3779* comment by: *Civil Aviation Authority of Norway*

Comment: There appears to be a disparity between the intent of the rule as seen in EU-OPS and JAR-OPS and the contents of this one; the original intent was to make entry into cargo holds a matter for the pilot-in-command

Justification:

Improvement to text and standardisation

Proposed Text

(if applicable):

No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, ***unless temporary access has been granted by the pilot-in-command*** for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *3936* comment by: *HDM Luftrettung gGmbH*

Ops Gen 110: Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein

comment *4013* comment by: *AIRBUS*

In the current applicable operational regulations, the temporary access can only be granted by the commander (the "pilot-in-command", according to the new terminology used by the EASA). This concept has disappeared in the proposed paragraph OPS.GEN.110.

comment *4103* comment by: *Benedikt SCHLEGEL*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *4165* comment by: *DGAC*

Proposal :

Delete "HELICOPTERS" before (d).

Justification :

There is no reason to restrict the provisions of paragraph (d) to helicopters: this provision exists in EU-OPS 1.320 as well as in JAR-OPS 3.320, therefore the paragraph should be applicable to aeroplanes as well.

comment *4255* comment by: *KLM*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *4471* comment by: *TAP Portugal*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *4507* comment by: *Christophe Baumann*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *4575* comment by: *British Airways Flight Operations*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing. In commercial air transport (aeroplanes) it is commonplace for the cabin crew to give the safety demonstration while the aeroplane is taxiing. If the cabin crew were required to be seated during taxxing that would not be possible.

NB, in EU Ops, taxiing is not a critical stage of flight, nor should it be.

Proposal:

Use the text from EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passengers through a simple transposition of EU-OPS 1.320.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4751* comment by: *Virgin Atlantic Airways*

Relevant Text:

(c) "Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her safety belt or harness properly secured."

Comment:

Refuelling takes place "prior to taxiing" and procedures require safety belts/harnesses to be unfastened. [Ref: AMC OPS.GEN.210(1)(b)(iv)].

Proposed Text:

(c) "If not refuelling during ground operations and immediately prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her safety belt or harness properly secured."

comment *4865* comment by: *Deutsche Lufthansa AG*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxiing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simple transposition of EU-OPS 1.320.

comment

5233 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

HELICOPTERS

(d) A helicopter operator shall specify which aircraft seats may be occupied by one adult and one infant properly secured by a restraint device.

Comment:

Para (d) should include all aircraft

Proposal (including ***new text***):

~~HELICOPTERS~~

(d) An ~~helicopter~~ operator shall specify which aircraft seats may be occupied by one adult and one infant properly secured by a restraint device.

comment

5319 comment by: *Norwegian Air Sports Federation*

What about Parachutists? They may have to be carried in areas of aircraft not designed for accommodation of persons for short time before drop.

comment

5435 comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment

5646 comment by: *ERA*

European Regions Airline Association Comment

With regard to cabin crew members, this requirements goes beyond the

requirements of EU-OPS.1320 (a) which does not refer to taxing

The ERA Directorate ptopose EASA stick to EU-OPS 1.320 (a) for the purpose of crew members. Distinguish between crew members and passenger through a simply 'copy and paste' of EU-OPS 1.320.

comment *5793* comment by: *Ph.Walker*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6037* comment by: *ECA - European Cockpit Association*

Comment on paragraph (a): add text as follows and renumber the following paragraphs accordingly:

ALL AIRCRAFT

(a) No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

(b) An operator shall not permit any person to enter or be in, and take all reasonable measures to ensure that no person enters or is in, an aeroplane when under the influence of alcohol or drugs to the extent that the safety of the aeroplane or its occupants is likely to be endangered.

Justification:

Original text from EU OPS did not allow any person under influence of Alcohol/drugs on board the aircraft. According to EASA, these persons are now allowed, there is not operator responsibility, nor support of PIC.

comment *6121* comment by: *Hans MESSERLI*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6223* comment by: *Irish Aviation Authority*

Comment:

(a) - No ref in text to access been granted by Commander. (EU-OPS 1.075 adn JAR-OPS 3.075 refers)

Justification:

Commanders responsibility to issue access

Proposed text:

Insert "unless temporary access has been granted by the Commander to any part of the A/C

comment *6351* comment by: *Trans Héli (pf)*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6355* comment by: *DGAC*

Proposal:

Rewrite (c)

"**Except for specific aerial works approved by the authority**, prior to and during taxiing, take-off and landing ..."

Justification:

For some heliborne operations (eg Human External Cargo Operations), workers don't necessarily have a seat or berth.

comment *6746* comment by: *Icelandair*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *6769* comment by: *ETF*

(c)

Comment: Even if the text says each person on board it leaves cabin crew in a strange position where it is unclear when and where cabin crew need to be secured.

comment *6894* comment by: *Swiss Helicopter Group*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6941* comment by: *Eliticino SA*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *6976* comment by: *IACA International Air Carrier Association*

The cabin crew should confirm with the person if they are willing and able to assist the rapid evacuation of the aircraft in an emergency.

comment *7198* comment by: *AIR FRANCE*

Relevant Text:

c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her seat belt or harness properly secured.

Comment:

With regard to cabin crew members, this **requirement goes beyond** the requirements of EU-OPS.1320 (a) which does not refer to taxing

Proposal:

Stick to EU-OPS 1.320 (a) for the purpose of crew members.

Distinguish between crew members and passenger through a simply transposition of EU-OPS 1.320.

comment *7241* comment by: *ANE (Air Nostrum) OPS QM*

With regard to cabin crew members, this requirements goes beyond the requirements of EU-OPS.1320 (a) which does not refer to taxing

We propose EASA stick to EU-OPS 1.320

(a) for the purpose of crew members. Distinguish between crew members and passenger through a simply 'copy and paste' of EU-OPS 1.320.

comment *7305* comment by: *ADAC Luftrettung GmbH*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

comment *7380* comment by: *new European Helicopter Association*

<![endif]-->

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.115 Passenger briefing p. 31

comment *376* comment by: *EHOC*

The text of the original is intended to set out the responsibility of the PIC; not the act of briefing.

It is suggested this be returned to the responsibility of the PIC rule.

comment *697* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.115: NIL

The change from EU OPS has been noted, but it is accepted.

comment *1120* comment by: *Heli Gotthard*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *1167* comment by: *Stefan Huber*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *1238* comment by: *Air Zermatt*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *1475* comment by: *ECA - European Cockpit Association*

Add text as follows :

Passengers shall be briefed on the location and use of emergency exits and relevant safety and emergency equipment **in an appropriate and timely manner considering the equipment, procedures, likely usage and the phase of flight.**

Justification:

Clarity as to when this should occur.

comment *1786* comment by: *Heli Gotthard AG Erstfeld*

Ops Gen 115 Passenger Briefing

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *1851* comment by: *SHA (AS)*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2016* comment by: *Heliswiss AG, Belp*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2087* comment by: *Dirk Hatebur*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2113* comment by: *Heliswiss*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2118* comment by: *Heliswiss NV*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2318* comment by: *heliswiss ag, belp*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2411* comment by: *Jan Brühlmann*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2445* comment by: *Catherine Nussbaumer*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods therein.

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2544* comment by: *Walter Mayer, Heliswiss*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2831* comment by: *Philipp Peterhans*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *2922* comment by: *Pascal DREER*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *3109* comment by: *UK CAA*

Page No: 31

Paragraph No: OPS.GEN.115

Comment:

The text of this section does not indicate any responsibility for the completion of passenger briefing and only describes the act of briefing. It is recommended that the responsibility is placed on the pilot in command to

ensure that the briefing has been conducted.

Justification:

Improvement to text and indication of responsibility.

Proposed Text (if applicable):

Passengers shall be briefed on the location and use of emergency exits and relevant safety and emergency equipment.

The pilot in command shall ensure that passengers are briefed on the location and use of emergency exits and relevant safety and emergency equipment.

comment *3320* comment by: *AEA*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *3588* comment by: *Aero-Club of Switzerland*

Please add by whom such a briefing has to be given!

Justificaton: We think it is the duty of the PiC to care for his passengers, therefore a passenger briefing falls under his responsibility. The presentation of a passenger briefing may be delegated by him to an adequately trained and properly informed crew member.

comment *3619* comment by: *AUSTRIAN Airlines*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *3729* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of this section does not indicate any responsibility for the completion of passenger briefing and only describes the act of briefing. It is recommended that the responsibility is placed on the pilot in command to ensure that the briefing has been conducted.

Justification:

Improvement to text and indication of responsibility.

Proposed Text

(if applicable):

"The pilot in command must ensure that passengers are briefed on the location and use of emergency exits and relevant safety and emergency equipment."

comment *3882* comment by: *FOM ANWB MAA*

Remark:

For operations under OPS.SPA.HEMS the requirement to brief a passenger is not alleviated for unconscious patients although it does not make sense.

comment *3919* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Remark: For operations under OPS.SPA.HEMS the requirement to brief a passenger must be alleviated for unconscious patients.

comment *3938* comment by: *HDM Luftrettung gGmbH*

Ops Gen 115: Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *4104* comment by: *Benedikt SCHLEGEL*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *4166* comment by: *DGAC*

Proposal :

Amend the paragraph by adding the underlined text as follows :

"Passengers shall be briefed on **safety instructions, including** the location and use of emergency exits and relevant safety and emergency equipment."

Justification :

Passenger briefing is not limited to "the location and use of emergency exists/equipment" but includes other items, such as safety procedures, instructions…

comment *4256* comment by: *KLM*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment

4394 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: Passengers, e**xcept patients in HEMS operation and patients on air ambulance flights**, shall be briefed on the location and use of emergency exits and relevant safety and emergency equipment.

comment

4473 comment by: *TAP Portugal*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment

4511 comment by: *Christophe Baumann*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment

4528 comment by: *ADAC Luftrettung GmbH*

And the unconscious passenger/ patient, or a child?

Remark: For operations under OPS.SPA.HEMS the requirement to brief a passenger must be alleviated for unconscious patients.

Passenger briefing :

The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *4579* comment by: *British Airways Flight Operations*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4866* comment by: *Deutsche Lufthansa AG*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency

exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *5421* comment by: *ALFA-HELICOPTER*

For operations under OPS.SPA.HEMS the requirement to brief a passenger must be alleviated for unconscious patients.

comment *5436* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *5470* comment by: *Peter Moeller*

Unconcious patients, children in HEMS helicopters cannot be briefed.

comment *5641* comment by: *HSD Hubschrauber Sonder Dienst*

In the HEMS-Community there are quite a lot of unconscious passengers, so

the end of the sentence should read:"... and emergency equipment, exept the unable passengers.

comment *5647* comment by: *ERA*

European Regions Airline Association Comment

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.
2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

The ERA Directorate proposes a change to the text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits

comment *5767* comment by: *Norsk Luftambulanse*

Remark: For operations under OPS.SPA.HEMS the requirement to brief a passenger must be alleviated for unconscious patients.

comment *5794* comment by: *Ph.Walker*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6123* comment by: *Hans MESSERLI*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6227* comment by: *Irish Aviation Authority*

Comment:

No ref in text as to the method of briefing

Justification:

A statement should exist as to how the briefing is presented

Proposed text:

Insert at the end of the existing text the following "by reference to an audio visual and/or verbal presentation. Passengers are also to be provided with a safety briefing card on which picture type instructions indicate the operation of emergency equipment and exits likely to be used by passengers.

comment *6292* comment by: *Heliswiss International*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6352* comment by: *Trans Héli (pf)*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6596* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

Remark: For operations under OPS.SPA.HEMS the requirement to brief a passenger must be alleviated for unconscious patients as it makes no sense to brief unconscious people.

comment *6606* comment by: *KLM Cityhopper*

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *6747* comment by: *Icelandair*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *6895* comment by: *Swiss Helicopter Group*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *6943* comment by: *Eliticino SA*

Passenger briefing : The text of the original is intended to set out the responsibility of the PIC; not the act of briefing. It is suggested this be returned to the responsibility of the PIC rule.

comment *7200* comment by: *AIR FRANCE*

Relevant text:

Passengers shall be briefed on the locations and use of emergency exits and relevant safety and emergency equipment.

Comment:

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

Proposal:

Change text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits.

comment *7243* comment by: *ANE (Air Nostrum) OPS QM*

This requirement can be interpreted in 2 different ways:

1. Passengers shall be briefed on the locations and use of emergency exits and shall be briefed on relevant safety and emergency equipment.

2. Passengers shall be briefed on the locations and use of emergency exits and the locations and use of safety and emergency equipment.

In case of number 2 the briefing will become rather long because also the use of emergency equipment should be briefed.

We propose a change to the text to read:

Passengers shall be briefed on relevant safety and emergency equipment and the locations and use of emergency exits

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.120 Securing of passenger cabin and galleys p. 31

comment *4167* comment by: *DGAC*

(a) :

Add "or translation" after "taxiing" to take helicopters into account.

comment *4765* comment by: *Virgin Atlantic Airways*

Relevant Text:

(b) "Prior to and during take-off and landing, and whenever deemed

necessary in the interest of safety by the pilot-in-command, all equipment and baggage shall be properly secured."

Comment:

Some equipment may be needed by the crew for use during taxiing, e.g. safety demonstration equipment, however all baggage should be secured before start of taxiing.

Proposed Text:

(b) "Prior to and during take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, all equipment ~~and baggage~~ shall be properly secured."

(c) "Immediately prior to and during taxi, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, all baggage shall be properly secured."

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.125 Portable electronic devices p. 32

comment *315* comment by: *Aero-Club of Switzerland*

We ask the Agency to publish details about portable electronic devices that can adversely affect the systems of an aircraft.

Justification: To have an appropriate listing of such devices could represent a real safety gain, especially for the pilots flying well equipped light aircraft.

comment *988* comment by: *REGA*

Medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

Proposal (OPS.GEN.125)

Medical equipment: Portable electronic devices that have been proven to adversely affect the performance of the aircraft's systems and equipment shall not be used on board the aircraft.

comment *2260* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Portable electronic devices

Comment / Proposal:

Modify text:

Portable electronic devices that have been proven to adversely affect the performance of the aircraft's systems and equipment shall not be used on board the aircraft.

Remarks:

This modification is necessary especially for HEMS operations carrying electronic devices to support the health care.

comment *3018* comment by: *AEA*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *3608* comment by: *Austro Control GmbH*

"can" is not the right wording and to unclear:

Practical experience, especially in HEMS shows, that for health care electronic devices have to be used on board.

It should be proved that the electric device does not affect the aircraft systems.

Therefore suggestion to change the text:

"*Portable electronic devices* ***that adversely affect****....."*

comment *3620* comment by: *AUSTRIAN Airlines*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the

aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*.

comment *3838* comment by: *AUSTRIAN Airlines*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *3921* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *4028* comment by: *Virgin Atlantic Airways*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is

to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to EU-OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *4257* comment by: *KLM*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *4474* comment by: *TAP Portugal*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *4531* comment by: *ADAC Luftrettung GmbH*

Medical equipment, interference check required

medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved

comment *4587* comment by: *British Airways Flight Operations*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs which can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4867* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *5422* comment by: *ALFA-HELICOPTER*

Medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *5437* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *5768* comment by: *Norsk Luftambulanse*

medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *5900* comment by: *HSD Hubschrauber Sonder Dienst*

Actually it is the AMC OPS.GEN.125 in regard to Medical Equipment. It can not be approved by part 21 organisations. Clarification should be given, that only the fittings and fixtures for medical equipment need to be certfied by Part 21 organisations

comment *6233* comment by: *Lufthansa CityLine GmbH*

The phrase 'should consider' when it comes to operators installing detectors to detect unauthorised PED transmissions raises concerns. The first concern is as to what kind of detectors are we talking about and the second concerns that does EASA realise that all these "should consider", depends on the authority, and usually ends up as "must install", Recent examples of where a single authority has read the cabin surveillance 'should consider' requirement as meaning the installation of cabin surveillance cameras. Therefore Lufthansa CityLine requests the removal of such text.

comment *6598* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

Medicalequipmeny cannot be approved by part 21 organisations. Change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *6748* comment by: *Icelandair*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *6874* comment by: *PPL/IR Europe*

We recommend deleting 'can', the 5th word in this sentence. Otherwise, this sentence is unclear; whilst the AMC gives appropriate guidance for commercial ops there is no clarification for non-commercial ops.

For non-commercial operations of non-complex aircraft, the crew usually has much more direct and immediate control over the use of PEDs. All that is required is an awareness of PED issues, and action when required. The current wording could cause much unnecessary debated and confusion.

comment *6876* comment by: *Ryanair*

This text could be expanded for clarity

"PED's approved for use on board aircraft are permitted. Operators may define when PED's may be used through the relevant manuals"

comment *7202* comment by: *AIR FRANCE*

Relevant Text:

Portable Electronic Devices that can adversely affect the performance of the aircraft systems and equipment shall not be used on board the aircraft.

Comment:

This definition is different from EU-OPS. The responsibility of the operator is to have procedures and a PED policy to ensure that no passenger uses PEDs that can adversely affect flight safety but operators cannot be responsible for intentional and unintentional unauthorized use by some passengers. Moreover, this regulation does not apply to airline passengers but should specify the responsibilities of the aircraft operator.

Proposal:

Revert to OPS 1.110 (PED) "*An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board an aircraft a portable electronic device that can adversely affect the performance of the aircraft systems and equipment*."

comment *7360* comment by: *Europe Air Sports, VP*

Somebody is needed to clarify whether an electronic device has an adverse effect.

We suggest to add this to the responsibility of the pilot in command.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.130 Smoking on board p. 32

comment *377* comment by: *EHOC*

In the text there is a section entitled "COMPLEX MOTOR-POWERED AIRCRAFT".

It is not clear what a COMPLEX MOTOR-POWERED AIRCRAFT is! Should it have been COMPLEX AND MOTOR-POWERED AIRCRAFT or what?

comment *910* comment by: *CAA-NL*

Comment regarding:

ALL AIRCRAFT

(a) No person shall be allowed to smoke on board: (1) while the aircraft is on the ground, unless specifically permitted by the operator in accordance with specified procedures; (2) while the aircraft is being refuelled; or (3) whenever the pilot-in-command deems necessary in the interest of safety.

COMPLEX MOTOR-POWERED AIRCRAFT

(b) No person shall be allowed to smoke on board a complex motor-powered aircraft: (1) in cargo compartments or other areas where cargo is carried; (2) in those areas of the cabin where oxygen is being supplied; (3) if the operator has declared a flight to be operated as a non-smoking flight; or (4) outside those areas that the operator has designated smoking areas

Suggestion CAA-NL:

ALL AIRCRAFT

(a) No person shall be allowed to smoke on board: (1) while the aircraft is on the ground, unless specifically permitted by the operator in accordance with specified procedures; (2) while the aircraft is being refuelled; or (3) whenever the pilot-in-command deems necessary in the interest of safety.

(4) in cargo compartments or other areas where cargo is carried; (5) in those areas of the cabin where oxygen is being supplied; (6) if the operator has declared a flight to be operated as a non-smoking flight; or (7) outside those areas that the operator has designated smoking areas

comment *1004* comment by: *KLM*

This should be :

Smoking on board including artificial smoking.

comment *1609* comment by: *Luftfahrt-Bundesamt*

The LBA recommends to introduce the text of (b)(2) also in (a).

Reason: Smoking should also be not allowed in any other aircraft when oxygen is supplied. One can even question why the rule distinguishes between all and complex motor powered aircraft.

comment *1721* comment by: *claire.amos*

(b) (3)

This is a much improved statement and one that should be included.

comment *2061* comment by: *Airbus S.A.S.*

Procedures defined by operator, to allow smoking on board while the aircraft is on the ground, should be clearly addressed in the Operations Manual.

Paragraph OPS.GEN.130 (a)(1) should read:

"while the aircraft is on the ground, unless specifically permitted by the operator in accordance with procedures defined in the Operations Manual".

comment *2352* comment by: *Dassault Aviation*

Technical comment:

Page 32 OPS.GEN.130 §(b)(2) Smoking on board: since oxygen is supplied in basically all areas of the cabin for a complex motor powered aircraft, compliance with this subparagraph (b)(2) will prohibit smoking everywhere in the cabin. To keep the intent of this subparagraph, we rather suggest the following: "in those areas of the cabin where oxygen flow is continuous".

comment *3020* comment by: *AEA*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *3621* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *4030* comment by: *Virgin Atlantic Airways*

Relevant Text

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *4168* comment by: *DGAC*

All items should be applicable to all aircraft.

The separation between "ALL AIRCRAFT" and "COMPLEX MOTOR-POWERED AIRCRAFT" does not make any sense in that context. Moreover, it is erroneous as (b)(2) is applicable to all aircraft anyway.

comment *4169* comment by: *DGAC*

As written, the prohibition from smoking on board does not apply to seaplanes during surface operations.

Proposal :

Replace "on the ground" with "on the surface".

comment *4258* comment by: *KLM*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *4475* comment by: *TAP Portugal*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *4590* comment by: *British Airways Flight Operations*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The

requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4868* comment by: *Deutsche Lufthansa AG*

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *5256* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Should include all aircraft.

Proposal (including new text):

ALL AIRCRAFT

(a) No person shall be allowed to smoke on board: (1) while the aircraft is on the ground, unless specifically permitted by the operator in accordance with specified procedures; (2) while the aircraft is being refuelled; or (3) whenever the pilot-in-command deems necessary in the interest of safety.

~~COMPLEX MOTOR-POWERED AIRCRAFT~~

(b) No person shall be allowed to smoke on board ~~a complex motor-powered aircraft~~: (1) in cargo compartments or other areas where cargo is carried; (2) in those areas of the cabin where oxygen is being supplied; (3) if the operator has declared a flight to be operated as a non-smoking flight; or (4) outside those areas that the operator has designated smoking areas.

comment *5286* comment by: *Department for Transport UK*

OPS.GEN.130 states that no one shall be allowed to smoke outside of those areas that the operator has designated a smoking area and OPS.CAT.130 states that non-smoking areas shall include the aisles and toilets. However, there appears to be no rule which specifically requires operators to designate smoking and non smoking areas.

comment *5438* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *6232* comment by: *Irish Aviation Authority*

Comment:

(a) & (b) - The text is different for both all A/C and Complex Motor-Powered A/c

Justification:

Why have different requirements ?

Proposed text:

Suggest the text reads for All aircraft and combine both set of requirements.

comment *6750* comment by: *Icelandair*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

comment *7205* comment by: *AIR FRANCE*

Relevant Text:

(a) No person shall be allowed to smoke on board…

Comment:

As written this requirement seems to apply to aircraft passengers/individuals. This is not consistent with the fact that this NPA should specify the requirements applicable to aircraft operators. The requirement should therefore be realigned with EU-OPS 1.335 (Smoking On-Board)

Proposal:

Realign with EU-OPS 1.335

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.135.A Taxiing of aeroplanes p. 32

comment *378* comment by: *EHOC*

As a matter of interest, this text repeats the requirement contained in ER 3.a.8; this is not a criticism but indicates that completeness dictates that IRs should be complete and not just contain references to ERs/BRs.

comment *701* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.135.A: change as follows:

Aeroplanes shall only be taxied on the movement area of an aerodrome when the person at the controls is properly qualified ~~**to taxi an aeroplane**~~

Justification:

Safety reasons, best practice.

comment *1909* comment by: *Ingmar Hedblom*

The text means that no qualification is required for taxing a powered sailplane (or a TMG?) since sailplanes are not aeroplanes. Furthermore, helicopters are not covered.This is probably not intended.

comment *3533* comment by: *Boeing*

NPA 2009-02b, Part Ops

OPS.GEN.135.A, Taxiing of aeroplanes

Page 32 of 464

BOEING COMMENT:

This paragraph states: *"Aeroplanes shall only be taxied on the movement area of an aerodrome when the person at the controls is properly qualified to taxi an aeroplane."*

We request clarification on how "properly qualified" is demonstrated to authorities. What are the requirements to become properly qualified?

JUSTIFICATION: This issue needs clarification in order for those regulated by it to comply appropriately.

comment *5299* comment by: *Light Aircraft Association UK*

The word 'aeroplane' should be substituted with 'aircraft' to cover aircraft not defined as aeroplanes, such as powered sailplanes, gyroplanes, etc.

comment *6715* comment by: *Greger Ahlbeck*

Paragraph text: Aeroplanes shall only be taxied on the movement area of an aerodrome when the person at the controls is properly qualified to taxi an aeroplane

Comment: The text means that no qualification is required for taxing a powered sailplane (or a TMG?) since sailplanes are not aeroplanes. This is probably not intended.

Proposal (including ***new text***):

Change the lead in to "Aeroplanes, powered sailplanes and TMG shall only be taxied…"

comment *6718* comment by: *Greger Ahlbeck*

Paragraph text: Aeroplanes shall only be taxied on the movement area of an aerodrome when the person at the controls is properly qualified to taxi an aeroplane

Comment: The text means that no qualification is required for taxing a powered sailplane (or a TMG?) since sailplanes are not aeroplanes. Furthermore, helicopters are not covered. This is probably not intended.

Proposal (including ***new text***):

Change to "Aircraft shall only be taxied on the movement area of an aerodrome when the person at the controls is properly qualified to taxi an aircraft"

comment *6801* comment by: *EFLEVA*

The EFLEVA suggests that the term 'aeroplane' should be replaced by 'aircraft' to allow for those types not defined as aeroplanes, such as powered sailplanes, gyroplanes, etc.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.140.H Rotor engagement p. 32

comment *379* comment by: *EHOC*

As a matter of interest, this text repeats the requirement contained in ER 3.a.8; this is not a criticism but indicates that completeness dictates that IRs should be complete and not just contain references to ERs/BRs.

comment *960* comment by: *Fjallflygarna AB*

There are situations when a pilot has to leave the controls with the rotor spinning for safety reasons or for practical reasons. With this cognizance we believe it is better to allow pilots to leave the aircrafts while the rotor is spinning provided that the operator in the Operations Manual has stated the special conditions that should be met and provided that it is not inappropriate because of the construction of the helicopter. It is better that this is done legally and under stated conditions than illegal and out of control.

comment *968* comment by: *Jämtlands Flyg AB*

To whom this concerns

We must stress that actual situations do arise when a pilot has to leave the controls with the rotor turning under power for safety reasons or for practical reasons. With this acknowledgment as basis we believe the writing should allow for pilots to leave the helicopter whilst the rotor is turning under power provided that the operator in the Operations Manual has stated those special conditions that should be met, and provided that it is not inappropriate due to the construction of the helicopter or the specific type of job carried out. With the wide variety of work and environments operators and pilots face,

we forcefully conclude it is in line with the EASA statues that this is controlled and carried out in line with stated conditions rather than out of control – speedy and concealed due to risk of detection. This would enhance the risk of accidents which in turn would be detrimental to the public's view and trust of the aviation business.

Best regards

Jon Håkansson, LLM

Jämtlands Flyg AB

Operating five single engine helicopters in the remote and montanious regions of northern Sweden.

comment *1401* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

For the purpose of flight.

Comment / Proposal:

When the rotor is engaged under power the person at the controls must be qualified in any case to do so. Replace "pilot" by "qualified person". Delete "for the purpose of flight".

comment *3110* comment by: *UK CAA*

Page No: 32

Paragraph No:

OPS.GEN.140.H Rotor Engagement

Comment:

The intent of this paragraph is to ensure that only qualified persons are at the controls of a helicopter when its rotors are turned under power. In this configuration, unlike an aeroplane, the helicopter is able to become airborne easily.

However as presented, the focus of the text is on when the rotors are turned for the purpose of 'flight' which might allow someone other than a pilot but who is qualified to conduct ground runs to interpret that ground taxiing as acceptable. Ground taxiing is essentially the helicopter flying in contact with the ground due the nature of the propulsion force being applied. This is an unacceptable interpretation.

A small change to the text overcomes this misinterpretation.

Justification:

The change to the text will ensure that a person other than a qualified pilot does not try move a helicopter by use of its rotors under power.

Proposed Text (if applicable):

"A helicopter rotor shall only be turned under power for the purpose of ***ground movement or*** flight with a qualified pilot at the controls."

comment *3228* comment by: *Eurocontrol CND*

OPS.GEN.140.H Rotor engagement

In accordance with this rule, a mechanic may turn the main rotor under power as long as it is not for the purpose of flight. This paraphrasing of the ICAO provisions introduces a significant difference from ICAO Annex 6 where it is said: ´2.2.3.2 A helicopter rotor shall not be turned under power without a qualified pilot at the controls." In this context it is noted that through this change it is assumed that aeroplanes and helicopters can be dealt with in the same way, which is a dangerous assumption. It should also be noted that "flight time" for helicopters is "The total time from the moment a helicopter's rotor blades start turning." [Emphasis added] Consequently, the EASA rule allows for a non qualified person to be at the controls during flight time.

comment *3777* comment by: *Civil Aviation Authority of Norway*

Comment:

The intent of this paragraph is to ensure that only qualified persons are at the controls of a helicopter when its rotors are turned under power. In this configuration, unlike an aeroplane, the helicopter is able to become airborne easily.

However as presented, the focus of the text is on when the rotors are turned for the purpose of 'flight' which might allow someone other than a pilot but who is qualified to conduct ground runs to interpret that ground taxiing as acceptable. Ground taxiing is essentially the helicopter flying in contact with the ground due the nature of the propulsion force being applied. This is an unacceptable interpretation.

A small change to the text overcomes this misinterpretation.

Justification:

The change to the text will ensure that a person other than a qualified pilot does not try move a helicopter by use of its rotors under power.

Proposed Text

(if applicable):

"A helicopter rotor shall only be turned under power for the purpose of ***ground movement or*** flight with a qualified pilot at the controls'

comment *4395* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Additional to that it shold be noted that: **A helicopter rotor shall only be turned under power for the purpose of a ground run with a qualified person at the controls**

comment *6547* comment by: *SFR Sweden*

Section: OPS.GEN.140.H Rotor engagement

Relevant Text:

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

Comment: In certain situations where ground staff are not available (ie remote landing sites in hostile area) it might be safer for the pilot to leave the helicopter running and assist passengers embarking/disembarking

Proposal: To allow for the possibility to have the rotors turning under power without a pilot at the controls providing safety assessment shows that this imposes a lower hazard that actually shutting down the engine, and that there is a procedure established for such situations.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.145 Use of aerodromes / operating sites p. 32

comment *3021* comment by: *AEA*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *3622* comment by: *AUSTRIAN Airlines*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *4259* comment by: *KLM*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *4476* comment by: *TAP Portugal*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the

necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *4601* comment by: *British Airways Flight Operations*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition does not accord with the definition of an adequate aerodrome from EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety. Aeroplanes do not tend to use operating sites; requirements for aeroplanes and helicopters should not be published in the same document

Proposal:

Realign with EU-OPS

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4869* comment by: *Deutsche Lufthansa AG*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *5439* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *6751* comment by: *Icelandair*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *7207* comment by: *AIR FRANCE*

Relevant Text:

An operator shall only use aerodromes or operating sites that are adequate for the type of aircraft and operation concerned

Comment:

This definition is not line with the definition of an adequate aerodrome as defined in EU-OPS. It does not take into account rescue and fire fighting services (RFFS). the need for aerodrome to be available at the expected time of use and the need for the aerodrome to be equipped with the necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services. This definition of adequate aerodromes could potentially reduce flight safety.

Proposal:

Realign with EU-OPS

comment *7447* comment by: *David ROBERTS*

The question here is 'what is the interpretation of operating sites'?

Aeroplanes, helicopters, and gliders sometimes have to put down (land) at other than a recognised aerodrome or 'operating site' This is usually in an emergency. Gliders also have to land in fields when the pilot is unable to find rising air to stay airborne in order to reach the planned destination. Balloons nearly always 'land out' in a field.

Proposal: Add 'except in an emergency when a landing elsewhere is necesary or, in the case of sailplanes and balloons when the pilot has to land elsewhere of necessity'.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.147 Visual Flight Rules (VFR) Operating minima p. 32-33

comment *62* comment by: *Air Southwest*

ICAO Doc 4444 Chapter 7.14 (7.14.1.3) states that SVFR may only be authorised when the GROUND visibility is not less than 1500m. The activities permitted are also defined in the paragraph. OPS.GEN.147 implies GROUND or FLIGHT visibility. This is incorrect.

comment *114* comment by: *Martin Gregorie*

The requirement for 1000 ft vertical and 1.5 km horizontal is unrealistic for sailplanes. In many cross country days in thre UK that would restrict operation to below 2500 ft, which means almost continuous searching for a land-out sight and severely restricts the ability for older 35:1 gliders to cross unlandable regions.

comment *316* comment by: *Aero-Club of Switzerland*

ICAO conformity?

comment *380* comment by: *EHOC*

HELICOPTERS

Paragraph (c)

Missing is the limit on cloud ceiling for VFR flight over-water and out of sight of land of 600ft by day and 1,200ft by night. Text might be:

"(d) Except as provided in (e) below, overwater flights out of sight of land are only to be conducted under VFR when the cloud ceiling is greater than 600ft by day and 1 200ft by night."

renumber old (d) to (e).

Justification

This text was put into JAR-OPS 3.465 as a safety net rule to prevent en-route descent (mostly by night) when the cloud base had not been established by report and/or forecast to be above 1 200ft. It was expected that, when cloud ceiling was lower than 1 200ft, an ARA would be performed. In States where there is no VFR 500ft level flight rule (the UK for example), the absence of this limitation would permit the pilot to descend below 500ft with the concomitant risk of inadvertent entry into cloud. That this is a dangerous procedure, has been demonstrated recently when an EC225 descended into an area where cloud was forecast (and reported) to be below 1 200ft lost visual reference and flew into the sea.

Paragraph (c)(1)

Editorial: amend 'for short period' either: to 'short periods'; or 'a short period'.

comment *819* comment by: *Reto Ruesch*

Night VFR 5 km vis.

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *999* comment by: *British Gliding Association*

Many European sailplane pilots currently have the privilege of flying close to and in, cloud. In many parts of Europe, and in particular North Western Europe where maritime air masses are prevalent, European glider pilots can only fly in thermals and mountain wave by flying close to cloud. This aspect of gliding is the basis of participating in sport gliding and achieving international sporting awards.

There is no known safety case that should prevent sailplane pilots from flying within 300m (1000') vertically and 1500m horizontally of cloud

Cloud base within many European countries is invariably between 3,000ft and 4,500ft AMSL during summer cross-country flying days. The proposed VFR limits would effectively present an operational ceiling for sailplanes of between 2,000ft and 3,500ft AMSL.

The direct negative impact on safety that the IR proposal will have on gliding will be to;

- Increase the amount of sailplane traffic in a smaller vertical layer – that which is predominantly flown in by the largest proportion of the GA community – thus increasing the risk of collisions
- Increase already high cockpit workloads
- Increase the risk of out-landing
- Force pilots to focus primarily on selecting suitable out-landing fields to the detriment of flying the sailplane

In addition, the ongoing social and economic impact would include;

- Limit the enjoyment and value of the sport
- Negative financial impact on the gliding industry in Europe
- Negative impact on sporting participation
- Negative impact on the value of sailplanes which are generally owned and operated by tax paying private citizens

A blanket application of ICAO VFR above 3000' to sailplane flying rather than ensuring European gliding as a major aviation stakeholder has an appropriate and proportional VFR requirement will unwittingly reduce overall levels of safety. Indeed, there is compelling evidence to demonstrate that such a restriction would actually decrease safety. This is clearly not the intention of the proposed IR.

It is the qualified view of the BGA that the retained ability of sailplane pilots to fly close to cloud actually supports an improved safety case for future European aviation.

Therefore, the BGA propose that the wording of OPS.GEN.147 Visual Flight Rules (VFR) Operating minima is modified as follows;

(a) Visual flight rules (VFR) flights by aeroplanes and helicopters shall be conducted in accordance with the Visual Flight Rules and table 1.

And…

Sailplanes

(e) Visual flight rules (VFR) flights by sailplanes in airspace classes A, B, C,

D and E shall be conducted in accordance with the Visual Flight Rules and table 1. Visual flight rules (VFR) flights by sailplanes in airspace classes F and G shall be conducted clear of cloud and in sight of the surface

comment *1057* comment by: *AECA helicopteros.*

Referred to paragraph c, Helicopters,

Missing is the limit on cloud ceiling for flight over-water and out of sight of land of 600ft by day and 1,200ft by night. Text might be:

"(d) Overwater flights out of sight of land are only to be conducted under VFR when the cloud ceiling is greater than 600ft by day and 1 200ft by night."

renumber old (d) to (e).

comment *1121* comment by: *Heli Gotthard*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1168* comment by: *Stefan Huber*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1230* comment by: *Royal Swedish Aeroclub*

Airspace G below 3000 ft AMSL or 1000 above terrain.

Visibility 5 km is in generally good but can be a big hindrance to many flights that could be done safe. The Swedish rules today are in generally good. We suggest the following exemptions from visibility 5 km based on the Swedish rules:

1. In general momentary visibility 3 km should be accepted, for instance for passing a rain shower. That will make it possible to go thru a shower instead of making a longer distance. You don't have to turn back when it is obvious that in short time the visibility will be better again.

2. Local flight near the airfield of take off, a visibility of 3 km should be accepted. In Sweden this distance is today 25 NM and that is what we suggest for a local flight. You normally know the terrain so close to the airport. You can train take-offs and landings and you can train pilots flying in low visibility.

comment *1239* comment by: *Air Zermatt*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1290* comment by: *Air-Glaciers (pf)*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1590* comment by: *Royal Danish Aeroclub*

I airspace class G the flight visibility should be 3 km for airplanes in the landing patterns and 1.5 km for balloons.

The current regulation with these suggested values work fine, and should be keept.

comment *1747* comment by: *Danish Powerflying Union*

Tabel 1, OPS.GEN.147 Visual Flight Rules (VFR) Operation Minima is not identical to ICAO Annex 2 Rules of the air. We assume it is an editorial mistake and encourage EASA to set regulations for Visual Flight

Rules according to ICAO standards.

The current Danish regulation permit aircrafts established in the aerodrome traffic circuit, to fly with a flight visibility of at least 1.5 KM clear of cloud and with the aerodrome in sight. This works without problems and should also be possible in the future regulations.

comment *1787* comment by: *Heli Gotthard AG Erstfeld*

Ops Gen 147 Operating minima

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1852* comment by: *SHA (AS)*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *1931* comment by: *Berner Oberländer Helikopter AG BOHAG*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2005* comment by: *Klaus HARTMANN*

Für flight visibility gibt es im Luftraum G nur eine Ausnahme für Hubschrauber zum Unterschreiten der 5 km. In diesem Falle soll die Geschwindigkeit, zur Möglichkeit des Ausweichens bei Hindernissen, entsprechend angepasst sein. Dazu wird in AMC OPS.GEN.147(c) (1)

ausgeführt :

Bei einer Sicht < 5km soll die Sicht nicht kleiner sein als der Hubschrauber in 30 Sekunden zurücklegt. Die entsprechenden Werte sind in einer Tabelle zusammengefasst. Dabei sollen für die minimal angegebene Mindestsichtweite von 800 m eine Geschwindigkeit von 50 kts nicht überschritten werden.

Ein Freiballon wird keine 50 kts im Luftraum G erreichen können. Normale Geschwindigkeiten von Freiballonen im Luftraum G liegen, bei Einhaltung der in den Flughandbüchern angegebenen maximalen Windgeschwindigkeiten am Startplatz, in der Regel zwischen 0 und 10 kts, sehr selten bis 20 kts. Selbst bei dieser Geschwindigkeit würden Hindernisse 1,5 Minuten vor dem Erreichen erkannt werden.

Bei der deutschen Bundesstelle für Flugunfalluntersuchung gibt es in der Statistik keine Unfälle die auf Grund mangelnder Sicht, bei Sichtweiten zwischen 800m und 5 km, ihre Ursache haben. Die Regelung der Mindestsichtweite von 800m für Freiballone im Luftraum G hat sich in Deutschland bewährt.

Daher sollte für Freiballone eine Mindestsichtweite von 800 m statt 5 km gefordert werden.

comment *2011* comment by: *Ulrich Baum*

From Table 1, it does not become clear whether class F airspace may exist below 900m AMSL (as it does in Germany today) or class G airspace may exist above 900m AMSL, and what VFR minima would be applicable in such cases. Please clarify.

comment *2012* comment by: *Ulrich Baum*

In class G airspace, Table 1 prescribes a minimum flight visibility of 5km. The only exception given is for helicppters. ICAO Annex 2 allows down to 1,5km in certain circumstances. Currently, Germany requires only 1,5km visibility in Class G airspace. Because of the geographic and meteorological conditions, low-altitude flight visibility between 1,5km and 5km due to haze is a frequent condition in many parts of Germany, but experience shows that VFR flights in small and relatively slow airplanes can be conducted safely in such conditions.The 1,5km minimum also allows flights to take off under VFR at an uncontrolled airfield (which allows neither an IFR nor a special VFR departure) and then switching to IFR when entering controlled airspace.

Compared to the status quo, prescribing a 5km minimum visibility in Class G airspace would severely restrict operations for small aircraft in Germany; in fact, this would mean that many uncontrolled (VFR-only) airfields would have to be frequently closed due to near-ground visibility below 5km while much better conditions prevail at somewhat higher altitudes. On the other hand, I am not aware of any evidence showing that such a higher VFR

minimum would significantly increase safety.

I suggest to set a 1,5km visibility minimum in Class G airspace. This would also correspond to FAA regulations which set a 1 statute mile (1,6km) minimum in low-altitude Class G airspace.

comment *2017* comment by: *Heliswiss AG, Belp*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2088* comment by: *Dirk Hatebur*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2116* comment by: *Heliswiss*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2123* comment by: *Heliswiss NV*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity

to observe any obstacle and avoid a collision during daylight.

comment *2262* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Visual Flight Rules (VFR) Operating minima

Comment / Proposal:

Modify text:

(c)(1) 1500m [...]the visibility may reduced.

Remarks:

Cancel the requirement of the 800m for short period in order to allow some flexibility for daily operations especially in the mountains.

comment *2339* comment by: *IDRF e.V. (association of regional airports)*

The VFR-minima shown in table 1 are almost indentical with EU-OPS 1.465 Appendix 1. But the EU-OPS shows a note, allowing speed category A and B aeroplanes to operate at flight visibilities less than 5 km but not less than 3 km (IAS = 140 kts or less), which is consistent with ICAO Annex 2, table 3-1.

The draft opinion doesn´t refer to this lower limit (other than for helicopters). Otherwise special VFR flights may however not be commenced when the VSBY is less than 3 km (and not otherwise conducted if the visibility is less than 1,5 km).

A "special VFR flight" is - as per ICAO-definition - a flight within a control zone (but not in airspace G). The existing NPA-text must therefore at least be corrected for consistency.

Apart from this, some memberstates allowing VFR-flights with a VSBY down to 1,5 km in airspace G without specifying any speed, as far as non-CAT flights are concerned. The legal basis to overregulate national law, which is conform to ICAO-regulations, is missing.

comment *2412* comment by: *Jan Brühlmann*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2446* comment by: *Catherine Nussbaumer*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2545* comment by: *Walter Mayer, Heliswiss*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2643* comment by: *AOPA-Sweden*

AOPA-S suggest the current Swedish rules: In Sweden there is a possibility to fly according the following conditions in airspace class G: At or below 3000ft MSL or 1000ft GND, whichever is highest:

Airspeed max 140 KTS: Flight visibility 3km, Clear of clouds and ground visible from aircraft.

In addition, with airport/aerodrome in sight: Lowest visibility 1,5km.

The rules should permit a return flight out of Airspace class G into airspace class C also if the visibility at the airport is below 3km. Example: The airport has visibility 2500m. An approaching VFR flight from outside the control zone has 4km visibility but may with the proposed regulation be prohibited from entering the control zone.

The 3 km possibility to take off with special VFR should also be possible from non-towered airports, as well as for aircraft taking off with 3km visibility and who wishes to continue outside the CTR. Therefore the VMC-minima of 3km (see above) that are used in Sweden should also in the future continue to be used. Change airspace class G requirements accordingly: (140knots and 3km flight visibility).

comment *2794* comment by: *REGA*

Proposal (c)

Helicopters shall be operated in a flight visibility of not less than: (1) 1 500 m during daylight, except when in sight of land, if the helicopter is maneuvered at a speed that will give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision, the visibility may be reduced ~~***to 800 m***~~ *for short period.*

comment *2832* comment by: *Philipp Peterhans*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2923* comment by: *Pascal DREER*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *3069* comment by: *AOPA Switzerland*

VFR visibility in airspace class Golf with airplanes: If speed allows a 180° turn within visibility range and other aircraft or obstacles may be seen in time, the visibility may go down to 1,5 km.

comment *3111* comment by: *UK CAA*

Page No: 32/33

Paragraph No:

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima paragraphs (a), (b) and (c) and Table 1

Comment:

These sections should not be included in the IRs.

ICAO Annex 2 (The Rules of the Air) lays down the criteria for VFR and IFR flight, amongst other factors, and includes the minima for VMC flight in various airspaces. Currently, States lay down their own interpretation of the Rules of the Air for use in their airspace through their own aviation legislation and Aeronautical Information Services. This section may be at variance from those rules of individual States. The minima indicated by sub-paragraph (c) for helicopters is below the current legal limit for VFR in the UK where also all night flight is IFR.

Table 1 as presented, and it appears to have been taken from JAR-OPS 3, is incorrect in its construction with the Class F and G boxes separated. These two boxes should be joined up and would have been corrected in JAR-OPS 3 but for the change in the regulatory environment.

Justification:

Amending OPS.GEN.147 will reduce confusion and confliction with the requirements of individual States Rules of the Air regulations thus enhancing the safe operation of aircraft within the Community.

Proposed Text (if applicable):

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

(a) Visual Flight Rules (VFR) flights shall be conducted in accordance with the ~~Visual Flight Rules~~ ~~and table 1~~ ***Rules of the Air Regulations specified by the State whose territory is overflown***.

(*Delete sub-paragraphs (b) and (c) and Table 1 plus notes*)

comment *3112* comment by: *UK CAA*

Page No: 33

Paragraph No:

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima paragraph (d) and Table 2 plus notes.

Comment:

This section should be restricted to Commercial Operators.

The text derives from JAR-OPS 3 and is specific to Offshore Commercial Operations with attendant control through an operations manual. As presented, the text might lead any operator to consider applying the limitations and this would not be a safe situation without the appropriate controls in place.

It is recommended that this section be annotated for Helicopter Commercial Operations only and be assigned a different paragraph number and heading.

Justification:

The text of OPS.GEN.147 (d) was intended for commercial air transport operations and controlled through an Operations Manual. As presented, it could be misused with attendant negative effect on flight safety.

Proposed Text (if applicable):

OPS.GEN.148 Minima for flying between helidecks located in Class G airspace

HELICOPTERS – COMMERCIAL OPERATIONS

(***a***) In Class G airspace, when flying between helidecks where the overwater sector is less than 10 nm, VFR flights are conducted in accordance with table ***1***.

(*Amend Table 2 to Table 1 and retain the table and notes*)

comment *3230* comment by: *Eurocontrol CND*

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

Table 1

First, the VMC visibility and distance from cloud minima are contained in ICAO Annex 2 – Rules of the Air, Chapter 3, Table 3-1. VFR operating minima are primarily an Air Traffic Management/Air Traffic Services matter. As such, it would be more appropriate to include these minima in an Implementing Rule on **Rules of the Air** instead of in these Implementing Rules for **Air Operations**. Accordingly, VFR operating minima should be removed from these Implementing Rules.

Second, this is an attempt to paraphrase ICAO Annex 2, Table 3-1, which have resulted in mistakes/omissions.

Table 1 in the NPA concerns "minimum visibilities for VFR operations" while there is no statement in the document as regards the minima for IFR flights to be operating in visual meteorological conditions (VMC). There should be a distinct differentiation between the expression "VFR operations" and "operations in VMC"

Class F airspace:

There is no requirement shown for distance from cloud below 900 m (3000 ft).

Class G airspace:

The distance from cloud requirement is only shown as "clear of cloud and in sight of the surface". There are no stated requirements for distance from cloud above 900 m (3 000 ft);

The requirement as regards visibility is 5 km at all levels whilst ICAO requirements are 8 km at or above 3050 m (10 000 ft) and 5 km below 3050 m (10 000 ft).

Other comments

The ICAO requirements: ** When so prescribed by the appropriate ATS authority:

Flight visibilities reduced to not less than 1 500 m may be permitted for

flights operating:

1) at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or

2) in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels."

These provisions are not covered except as mentioned in the paragraph below.

In paragraph (b) it is stated that "special VFR flights shall not be commenced when the visibility is less than 3 km and not otherwise conducted when the visibility is less than 1 500 m". That begs the question as to what a VFR flight should do when operating at a visibility of 1 500 m outside controlled airspace and then wishes to approach and land at a controlled aerodrome, i.e. commence a SVFR flight at that flight visibility? In this context it should be noted that over the high seas, ICAO Annex 2 applies without exception.

Regarding paragraph (c), to restrict flight by helicopters to 1 500 m during day and in particular, 5 km during night, would severely restrict the use of civil helicopters during search and rescue operations in adverse weather. This could have far-reaching consequences for States' SAR operations.

It should be noted that all of the requirements listed in this section also impacts e.g. ICAO Annex 11, paragraph 2.6, Chapter 3 and Appendix 4.

comment *3257* comment by: *Aero-Club of Switzerland*

Table 1, Flight visibility, column 3: Please add the following part of the text of (c) (1);

"1500 m during daylight when the crew will have adequate opportunity to observe other traffic and any obstacles in time to avoid collission."

Justifications: For local patterns a visbility of 1500 m are sufficient. even for training flights, as the area is known to the FI and to the student.

Especially for gliders, the proposal of the Agency would have a very negative impact. So please add:

(e) VFR flights by sailplanes in airspace classes A, B, C, D, E shall be conducted according to VFR and table 1. VFR flights in airspaces F and G shall be conducted clear of clouds and in permanent sight of the surface.

comment *3378* comment by: *guy Corbett*

Gliders in the UK can currently fly in VFR in class F when clear of cloud. The proposed 1 500 m horizontally 300 m (1 000 ft) vertically would reduce safety by concentrating gliders into a narrow space and forcing them to fly

lower than present therby increasing the risk of landing out and distracting the pilots from other activities such as keeping a good lookout. There is no evidence of any safety gain by this change.

comment *3406* comment by: *George Knight*

There is no safety case for preventing gliders from flying within 1300 metres vertically and 1500 metres horizontally from cloud. This removes the existing privilege most European glider pilots have of exploiting the best soaring conditions in wave and thermal lift.

It is attacking the fundamental principles of soaring for no known safety reason.

It will negatively impact safety in several ways including:

- Forcing more traffic into a narrower vertical band.
- Increase the number of field landings.
- Detract pilots from looking out because they will be looking for fields to land in.

I propose that VFR flight by sailplanes outside controlled airspace shall be conducted clear of cloud.

comment *3424* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(c) why does the flight visibilité cannot be reduce less that 1500m ?

Proposal : "Helicopters shall be operated in a flight visibility of not less than : 800 m ir 30s flight time during day light"

comment *3527* comment by: *IAOPA Europe*

The table with VFR minimas seems to be incomplete. Apparently there are no defined minimas for class G airspace above 3000 ft and for class F airspace below 3000ft.These minimas should be defined in accordance with ICAO.

comment *3528* comment by: *IAOPA Europe*

Most EU countries in accordance with ICAO allow for lower than 5 km visibility in class F and G airspace. For instance 3 km visibility if the aircraft is operated at less than 140 knots and thereby allows enough time to see

and avoid other traffic. This fundamental option for VFR flights should be preserved.

comment *3734* comment by: *Civil Aviation Authority of Norway*

Comment:

It is considered that this section should not be included in Part OPS.GEN or that it should be restricted to Commercial Operators.

The text derives from JAR-OPS 3 and is specific to Offshore Commercial Operations with attendant control through an operations manual. As presented, the text might lead any operator to consider applying the limitations and this would not be a safe situation without the appropriate controls in place.

It is recommended that this section be annotated for Commercial Helicopter Operations only and be assigned a different paragraph number and heading.

Justification:

The text of OPS.GEN.147 (d) was intended for commercial air transport operations and controlled through an Operations Manual. As presented, it could be misused with attendant negative effect on flight safety.

Proposed Text

(if applicable):

OPS.GEN.148 Minima for flying between helidecks located in Class G airspace

HELICOPTERS – COMMERCIAL OPERATIONS

(***a***) In Class G airspace, when flying between helidecks where the overwater sector is less than 10 nm, VFR flights are conducted in accordance with table ***1***.

(*Amend Table 2 to Table 1 and retain the table and notes*)

comment *3775* comment by: *Civil Aviation Authority of Norway*

Comment:

It is considered that these sections should not be included in the IRs.

ICAO Annex 2 (The Rules of the Air) lays down the criteria for VFR and IFR flight, amongst other factors, and includes the minima for VMC flight in various airspaces. Currently, States lay down their own interpretation of the Rules of the Air for use in their airspace through their own aviation legislation and Aeronautical Information Services. This section may be at variance from those rules of individual States. The minima indicated by sub-paragraph (c) for helicopters is below the current legal limit for VFR in the UK where also all night flight is IFR.

Table 1 as presented, and it appears to have been taken from JAR-OPS 3, is incorrect in its construction with the Class F and G boxes separated. These two boxes should be joined up and would have been corrected in JAR-OPS 3 but for the change in the regulatory environment.

It is recommended that this text be replaced as indicated and addressed through States AIS . In the longer term, it might be that a new Rules of the Air part be introduced to provide common European criteria for all operations under Annex IV to the Basic Regulation.

Justification:

Amending OPS.GEN.147 will reduce confusion and confliction with the requirements of individual States Rules of the Air regulations thus enhancing the safe operation of aircraft within the Community.

Proposed Text

(if applicable):

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

(a) Visual Flight Rules (VFR) flights shall be conducted in accordance with the ~~Visual Flight Rules and table 1~~ ***Rules of the Air Regulations specified by the State whose territory is overflown***.

(Delete sub-paragraphs (b) and (c) and Table 1 plus notes)

comment *3942* comment by: *HDM Luftrettung gGmbH*

Ops Gen 147: Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *4105* comment by: *Benedikt SCHLEGEL*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *4170* comment by: *DGAC*

For consistency purposes add "ALL AIRCRAFT" before (a), as (a) and (b) apply to all aircraft

comment

4396 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.Visibility may be reduced to 800 m for short periods when navigation is conducted by reference to visual landmarks and if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment

4509 comment by: *IAOPA Europe*

It seems the regulation contains no provisions for VFR on top operations where the aircraft is operated VFR but does not have the surface in sight. This is possible in several EU countries and this possibility should definitely be preserved since it will help to improve the safety of flights where the takeoff and landing area have a limited cloud cover but parts of the route has low level clouds or poor visibility.

comment

4513 comment by: *Christophe Baumann*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment

5060 comment by: *Trevor Wilcock*

It is difficult to comment on this paragraph in isolation; one needs fully to understand the airspace classifications that are proposed (the definitions here of Class F & G do not accord with UK practice) and the privileges that will apply in respect of VFR and IFR with the various categories of licence. However the proposed 300m/1500m separation from cloud in Class F airspace is restrictive compared with present UK limits (and those for some other European countries?) and would be particularly onerous for sailplanes, having an impact on the conduct, success and financial viability of the sport

and probably also detrimentally on overall safety. EASA regulations should not seek to be some sort of average or common factor of existing national regulations but should aim to provide the greatest freedoms consistent with safety. Unless there is an existing safety case which justifies the proposed limit, it is proposed that for sailplanes the VFR definition should be clear of cloud and in sight of the surface. The flight visibility limit for Class G is also more restrictive (not just for sailplanes) and a limit of 3km coupled to an appropriate speed limit (eg 140kn) should be considered. As an example a visibility of 3km would seem acceptable for winch-launched circuit training at a gliding site.

comment *5125* comment by: *Egon Schmaus*

OPS.GEN.147 VFR in Airspace "G":

Minimum visibility is lifted from presently 1500m to 5 km

OPS.GEN.147 VFR in Airspace "D":

Minimum visibility for special VFR is lifted from 1500m to 3 km for take-offs

In both cases should read: minimum visibility: 1500meters for aircraft

comment *5264* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

The table is a simplification of a more complicated rule. The row with "Airspace above 900 m . . ." and "At or below 900 m . . " shall be connected to both class F and class G. But for the next row below about "Distance from cloud" the two classes shall not be put together. And the same is valid for "Flight visibility".

Proposal:

In the headline "Airspace class", change class "F" to "FG" and class "G" to "FG'

comment *5268* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

HELICOPTERS

(c) Helicopters shall be operated in a flight visibility of not less than: (1) 1 500 m during daylight, except when in sight of land, if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision, the visibility may be

reduced to 800 m for short period.

Comment: The exception for helicopters to reduce the visibility minima to 800 meters for short periods should only be possible for commercial operations. Not for general aviation, including CPL-pilots performing private flights.

Proposal: State in the section that general aviation is not included and that the exception is only allowed for commercial operations.

comment *5320* comment by: *Norwegian Air Sports Federation*

We du support the BGA comments to this paragraph:

Our proposal:

(a) Visual flight rules (VFR) flights by aeroplanes classes shall be conducted in accordance with the Visual Flight Rules and table 1.

And…

Sailplanes

(e) Visual flight rules (VFR) flights by sailplanes in airspace classes A, B, C, D and E shall be conducted in accordance with the Visual Flight Rules and table 1. Visual flight rules (VFR) flights by sailplanes in airspace classes F and G shall be conducted clear of cloud and in sight of the surface

comment *5345* comment by: *Danish Balloon Organisation*

Typing Error ?

Table 1 is not in accordance with ICAO Annex 2 Rules of the Air.

We understand that the Commission has expressed its preference for maintaining an ICAO-based airspace classification in Europe.

Please change the table to reflect ICAO rules.

comment *5347* comment by: *Danish Balloon Organisation*

Flight visibility below 5 km is acceptable in Airspace class F and G at low level in accordance with ICAO rules as follows:

When so prescribed by the appropriate authority:

Flight visibilities reduced to not less than 1500 m may be permitted for flights operating:

1) at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or

2) in circumstances in which the probability of encounters with other traffic

would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.

We suggest that flight with manned balloons in Airspace class F and G at or below 450 M (1500 FT) MSL or 300 M (1000 FT) above terrain whichever is the higher is permitted with a flight visibility of at least 1,5 KM.

Justification: Balloons operate at very low speeds and 1,5 KM flight visibility has been used for many years without problems in Denmark.

comment *5651* comment by: *ERA*

European Regions Airline Association Comment

There is no reference here to reduced minima in class F/G airspace for reduced airspeeds and low traffic density (cf App1 to JAR-OPS 1.465). The table is therefore not consistent with Annex 2 Table 3-1.

The ERA Directorate would suggest some amendment was required

comment *5795* comment by: *Ph.Walker*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *5871* comment by: *Esko RUOHTULA*

1. The last two columns in table 1 should both be applicable for airspace classes F and G.

2.The logic in AMC1 OPS.GEN.147(c)(1) should be applicable also for airplane operations. Consequently the minimum flight visibility for airplanes in airspace classes F and G at and below 900 m AMSL or 300 m AGL should be:

5 km, IAS more than 140 kt

3 km, maximum IAS 140 kt

2 km, maximum IAS 120 kt

1.5 km, maximum IAS 100 kt

comment *5886* comment by: *SWISS AERODROMES ASSOCIATION*

The VFR minimum visibility should be 1500 m (and not 5 km) in Airspace G in order to allow local trafic, training and tuition for instance. National deviations should be possible.

comment *6015* comment by: *Konrad Polreich*

OPS.GEN.147 (c)(2)

Minimum flight visibility at night for onshore helicopter ops

This rule doesn't differentiate according crew composition (single or multi pilot), their qualifications (IR-qualified or just VFR-night) and the equipment (fully IFR versus basic VFR-night equipped). This limits operational possibilities of operators utilizing higher qualified crews as well as better equipped helicopters and doesn't encourage to invest in training/qualification and better equipment.
Own experience shows, that following limits seem adequate and reflect the great differences in equipment and training status

Suggestion:

Onshore operations

Conditions: Visibility/Ceiling

Single Pilot (VFR only): 8 km/1500ft AGL

Single Pilot (with IR): 5 km/1200ft AGL

Two Pilots (VFR only): 5 km/1200ft AGL

Two Pilots (with IR): 3 km/800ft AGL

comment *6017* comment by: *Irish Aviation Authority*

Comment:

(c)(i) - The use of the term "short periods" needs to better defined or quantified.

Justification:

Standardisation throughout the applicable NAAs to prevent a disparity in interpretation of the term.

Proposed text:

Period not exceeding 60 seconds at Vy.

comment *6124* comment by: *Hans MESSERLI*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *6200* comment by: *Irish Aviation Authority*

Comment:

Paragraph (c)(1) -

No ref to ATS authority authorisation when operating in a Flight Vis of 800 m by day.

No ref to VFR limits (cloud ceiling) for overwater ops out of sight of land by day and night.

Justification:

This reference to contained in App 1 to JAR-OPS 3.465 although it is missing in JAR-OPS 3.465

This ref is contained in JAR-OPS 3.465

Proposed text:

Insert at the end of the para the following – When so prescribed by the appropriate ATS Authority.

Insert VFR minima (cloud ceiling) for overwater ops for day and night i.e. 600 ft day and 1200 ft night

comment *6207* comment by: *Irish Aviation Authority*

Comment:

(a) Table 1 -

A third * is missing from "5km below 3050m (10,000 ft) AMSL** which is applicable to *** (c)(1) para.

Justification:

Typo error

Proposed text:

Insert missing *

comment *6290* comment by: *Heliswiss International*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *6353* comment by: *Trans Héli (pf)*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *6442* comment by: *DGAC*

Proposal:

Replace (c)(1) by:

"*1500 m during daylight, except when in sight of land, the visibility can be reduced to 30s flight time, but not less than 800m*."

Justification:

Already applied in french rules of the air.

comment *6529* comment by: *TG WHITING*

This proposal strikes at the heart of gliding as a sport in Europe. In many parts of Europe, particularly in Northern Europe in which maritime airmasses are frequent, it is necessary to fly close to cloud in order to climb in thermals and mountain wave. Restricting sailplanes from flying within (300m) 1000' vertically and 1500m horizontally of cloud will severely damage the options for sport gliding and for achieving international sporting awards, and does not appear to offer any safety or operational advantages to the GA community. In a Northern European summer it is quite normal to have cloud bases varying from 3,000 to 4,000ft on a typical cross country flying day. Restricting sailplanes as described in Class F airspace is likely to decrease the safety of the sailplane & GA community for the following reasons :

- Sailplanes will effectively be given an operational ceiling of 2,000 - 3,500 feet amsl, which will increase the traffic in a small vertical layer thus vasty increasing the risk of collisions. Non commercial GA

tends to use this height range heavily.

- The risk of outlandings will be greater, and the cross country workload will increase
- Sailplane pilots will be forced to spend a greater part of thier flying time selecting suitable fields rather than flying the sailplane.
- There will inevitably be more outlandings, and more possiblity of damage to crops, sailplanes and pilots.

In addition, it is likely that there will be an overall negative impact on sailplane flying within northern eurpoe, with pilots chosing not fly on the poorer days due to the additional risks of going cross country with a low operating ceiling.

It is not clear what benefit would be accrued from preventing sailplanes operating in this band of air in VFR conditions. I would ask that the VFR rules are amended to permit sailplanes to operate in VFR in airspace classes F and G clear of cloud and in sight of the surface.

comment *6539* comment by: *European Gliding Union (EGU)*

OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

The European Air Navigation Service Providers (ANSP) are at present in the process to harmonize the Air space regulations, but not necessarily implementing the ICAO Regulation out of Annex II. Different approaches have led to safe and meaningful deviations from ICAO. Full information is available through the Air Navigation Team (ANT) at Eurocontrol.

German Air Space regulation differ in the application of Air Space Class G below 10.000 feet in that respect that the vertical limit is always 2500 AGL. This general setup makes adherence to the regulation far easier than the ICAO regulation. The band of air space parallel to the surface allows safe flying to much of the GA and air sports community in weather conditions less than the required 5k and 1500m horizontally and 1000 feet vertically from clouds.

ANSP and Eurocontrol are evaluating the use of Air Space D used for Control zones as applicable in Germany were no distance from cloud i.e. clear of cloud is required up to a minimum cloud base of 1500 feet. As all traffic is known to the ATC unit separation and information is maintained.

Recommendation: Introduce the Air space classification agreed upon by the European ANSP.

comment *6543* comment by: *SFR Sweden*

Section: OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

Relevant Text:

HELICOPTERS

(c) Helicopters shall be operated in a flight visibility of not less than: (1) 1 500 m during daylight, except when in sight of land, if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision, the visibility may be reduced to 800 m for short period.

Comment:

As this is a general requirement, it allows for non-commercial operation (i.e pilots holding PPL) to operate in low visibility conditions for which they might not be fully qualified.

Proposal: Possibility to operate in visibility below 1500 m should be applicable to CAT & COM operations only.

comment *6545* comment by: *SFR Sweden*

Section: OPS.GEN.147 Visual Flight Rules (VFR) Operating minima

Relevant Text:

HELICOPTERS

(c) Helicopters shall be operated in a flight visibility of not less than: (1) 1 500 m during daylight, except when in sight of land, if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision, the visibility may be reduced to 800 m for short period.

Comment:

It should be possible for short periods to reduce the visibility to below 800 m during COM operations, to facilitate for various applications, for example where safe operations are possible at a work site but surrounding weather does not allow 800 m visibility.

Proposal: Possibility to operate in visibility below 800 m should be allowed for COM.

(Allowed today i.a.w Swedish national regulations)

comment *6563* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.147

Wording in the NPA

Airspace G

At and below 900 m (3 000 ft) AMSL or 300 m (1 000 ft) above terrain, whichever is the higher

Distance from cloud:

Clear of cloud and in sight of the surface

Flight visibility:

5 km

Our proposal

Be compliant with the air space classification agreed upon by the European ANSP**.**

Or

Add:

Airfields can be given a special airspace G extended to 600m (2000ft) AGL with a minimum flight visibility of 1.5 km in a radius of 2.5 NM around the airfield. Other dimensions can be specified if local conditions require it.

Issue with current wording

Airspace G regulation is too restrictive for operations in the vicinity of uncontrolled airfields

Rationale

On glider airfields with an elevation above about 500m gliders would be launched above airspace G during winch tows. In this case the required cloud distance for the adjacent airspace may not be maintainable if clouds are low but otherwise perfect conditions for flying in the pattern exist.

For training flights in the airport pattern especially with slow flying aircraft as typically used in non commercial flying flight visibility of 5 km is a too limiting requirement since conditions with less than 5 km visibility exist quite often in European airspaces. This limits the time for training flights unnecessarily which often already is limited to weekends in private flying.

Under marginal conditions flying in the airport pattern is still safe as the terrain is known to the pilots, coordination between the aircraft is easy to maintain and last not least there also is a training effect.

comment *6695* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

There are many of European sailplane pilots that are current valid privilege of flying in a cloud and therefore also close to a cloud. For example in Finland and Sweden "sailplane cloud flying right or cloud flying rating", based on applicable sailplane cloud flying training has long history as a specific part of gliding sports activity, for example to reach certain F.A.I defined altitude badges. In case of sailplane cloud flying operations, application of OPS.GEN.147 should therefore be referred to take-off, release, approach and landing phases of the flight, in order not to block the possibility of a qualified sailplane pilot from the sailplane cloud flying activity if applicable in a Member State in the area the flight is to be made. For example in Finland, basic intention of a sailplane cloud flying activity, where, as described above, take-off and landing is made under VFR conditions, is

gaining altitude inside a(n individual) cloud under which part of a flight VFR minimas as mentioned in this IR can not be applied. It is essential that "sailplane cloud flying activity" is not mixed with IFR-operations of powered aircraft having different purpose than what cloud flying by sailplanes is.

Should it be considered if there is a need for definition for "sailplane cloudflying" in between pure VFR and full IFR ?

comment

6794 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) Visual flight rules (VFR) flights shall be conducted in accordance with the Visual Flight Rules and table 1.

Comment:

Table 1 lacks requirements as regards VFR operations during night. As VFR flights during darkness puts additional burden upon the pilot it is motivated that a reference to visibility during night is made in the paragraph.

Proposal:

Add a requirement concerning VFR flights during night

comment

6873 comment by: *Luftsport-Verband Bayern*

zu: Airspace F: Above 900 m (3000 ft) AMSL or above 300 m (1000 ft) above terrain, whichever is the higher: Bitte um Überprüfung, ob Luftraum F tatsächlich erst oberhalb 900 m AMSL oder 300 m GND eingrichtet werden soll?

- zu: Special VFR flights shall not be commenced when the visibility is less than 3 km and not otherwise conducted when the visibility is less than 1.5 km: Bitte um Klarstellung, dass innerhalb der Lufträume A,B,C,D,E die ansonsten nötigen Parameter (insbes. Dist from cloads) im Falle des Sonder VFR nicht notwendig sind.

Vorschlag zur Neuformulierung: Special VFR flights shall not be commenced when the visibility is less than 3 km and not otherwise conducted when the visibility is less than 1.5 km.and stay clear of clouds.

comment

6881 comment by: *PPL/IR Europe*

A minimum flight visibility of 1500 m in class F and G should be prescribed for speeds below 140 KIAS

in accordance with the ICAO Annex 2 provision

*"** When so prescribed by the appropriate ATS authority:*

a) flight visibilities reduced to not less than 1 500 m may be permitted for flights operating:

1) at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or

any obstacles in time to avoid collision; or

2) in circumstances in which the probability of encounters with other traffic would normally be low,

e.g. in areas of low volume traffic and for aerial work at low levels."

comment *6896* comment by: *Swiss Helicopter Group*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *6920* comment by: *Christian Hölzle*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *6944* comment by: *Eliticino SA*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *7309* comment by: *ADAC Luftrettung GmbH*

Operating minima :

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *7335* comment by: *FAA*

1. OPS.GEN.147, (c)(1)

Comment:

The term "Short period" is not defined. The term 'short period' is impossible to interpret. A specified amount of time should be defined or this reference removed as different parties may take advantage of the lack of definition, possibly decreasing safety.

Recommendation:

Remove reference to "short period."

comment *7364* comment by: *Europe Air Sports, VP*

The VFR operating Minima are part of the ICAO letter classification system and not ICAO Annex 6 They need to be deleted from Ops.

comment *7367* comment by: *A. Mertz*

Die Reduzierung der Sichtminima für Hubschrauber auf 1,5 km Flugsicht wird damit begründet, dass Hubschrauber langsamer fliegen können als Flächenflugzeuge. Als Maximalgeschwindigkeit bei 1,5 km Flugsicht werden in diesem Dokument 100 kts genannt. Auch nicht komplexe Motorflugzeuge ,Segelflugzeuge und Luftsportgeräte können sicher mit Geschwindigkeiten unterhalb 100 kt betrieben werden.

Aufgrund der Gleichbehandlung mit Helikoptern sollten die Minima auch für die oben genannten "langsamen" Luftfahrzeuge gelten.Dies würde keinen Widerspruch zu den ICAO Forderungen darstellen:

"....it may be reduced to 1500m for slower aircraft, or in low intensity airspace"

Eine Formulierung könnte lauten:

Helicopters, airships, non-complex aeroplanes, micro lights and sailplanes shall be operated in a flight visibility of not less than:

(1) 1500 m during daylight, if the aircraft is operated at a speed ..... to

avoid a collision. For helicopters and airships, the visibility may be reduced to 800 m for a short period.

comment *7389* comment by: *Axel Schwarz*

Operations in airspace "G" below 1000ft AGL / 3000ft MSL may be conducted at visibilities as low as 1,5 km. This should be included in the table.

comment *7452* comment by: *David ROBERTS*

This subject is currently under debate within FCL.008.

For glider / sailplane pilots it is of the utmost importance that they can continue, where national rules allow, to fly in cloud or in less than VFR conditions as specified in this clause 147. This is necessary not only for cross country flying in thermal conditions but also essential often for accessing and descending from wave conditions.

Rather than repeating the argument here, please refer to the submission on this point by the British Gliding Association, which I fully endorse.

comment *7460* comment by: *European Sailplane Manufacturers*

Many European sailplane pilots currently have the privilege of flying close to and in, cloud. In many parts of Europe, and in particular North Western Europe where maritime air masses are prevalent, European glider pilots can only fly in thermals and mountain wave by flying close to cloud. This aspect of gliding is the basis of participating in sport gliding and achieving international sporting awards. There is no known safety case that should prevent sailplane pilots from flying within 300m (1000') vertically and 1500m horizontally of cloud Cloud base within many European countries is invariably between 3,000ft and 4,500ft AMSL during summer cross-country flying days. The proposed VFR limits would effectively present an operational ceiling for sailplanes of between 2,000ft and 3,500ft AMSL.

The direct negative impact on safety that the IR proposal will have on gliding will be to;

- Increase the amount of sailplane traffic in a smaller vertical layer – that which is predominantly flown in by the largest proportion of the GA community – thus increasing the risk of collisions
- Increase already high cockpit workloads
- Increase the risk of out-landing
- Force pilots to focus primarily on selecting suitable out-landing fields to the

detriment of flying the sailplane In addition, the ongoing social and economic impact would include;

• Limit the enjoyment and value of the sport

• Negative financial impact on the gliding industry in Europe

• Negative impact on sporting participation

• Negative impact on the value of sailplanes which are generally owned and operated by tax paying private citizens A blanket application of ICAO VFR above 3000' to sailplane flying rather than ensuring European gliding as a major aviation stakeholder has an appropriate and proportional VFR requirement will unwittingly reduce overall levels of safety. Indeed, there is compelling evidence to demonstrate that such a restriction would actually decrease safety. This is clearly not the intention of the proposed IR.

It is the qualified view of the BGA and the manufacturers that the retained ability of sailplane pilots to fly close to cloud actually supports an improved safety case for future European aviation. Therefore, we propose that the wording of OPS.GEN.147 Visual Flight Rules (VFR) Operating minima is modified as follows;

(a) Visual flight rules (VFR) flights by aeroplanes classes shall be conducted in accordance with the Visual Flight Rules and table 1.

And…

Sailplanes

(e) Visual flight rules (VFR) flights by sailplanes in airspace classes A, B, C, D and E shall be conducted in accordance with the Visual Flight Rules and table 1. Visual flight rules (VFR) flights by sailplanes in airspace classes F and G shall be conducted clear of cloud and in sight of the surface

comment *7513* comment by: *John Castle*

British glider pilots can only safely fly in thermals and wave by flying close to cloud. This is the basis of sport gliding.

Cloud base in Great Britain and many European countries is invariably between 3,000ft and 4,500ft

AMSL during our summer cross-country flying days. The proposed VFR limits would effectively present an operational ceiling for sailplanes of between 2,000ft and 3,500ft AMSL. The direct negative impact on safety that the IR proposal will have on gliding will be to;

Increase the amount of sailplane traffic in a smaller vertical layer –

that which is predominantly flown in by the largest proportion of the GA

community – thus increasing the risk of collisions

Increase already high cockpit workloads

Increase the risk of out-landing

Force pilots to focus primarily on selecting suitable out-landing fields to the

detriment of flying the sailplane

Additionally the impact of the proposal would;

Limit the enjoyment and value of the sport

Negative financial impact on the gliding industry in Europe as a whole

Negative impact on sporting participation

Negative impact on the value of sailplanes which are generally owned and operated by tax paying private citizens

A blanket application of ICAO VFR above 3000' to sailplane flying will actually reduce overall levels of safety.

comment *7558* comment by: *AOPA UK*

AOPA UK adherence to ICAO rules i.e. Class G: at or below 3000ft MSL or 1000ft GND, whichever is highest. ICAO SARPs meet the requirements as well as providing flexibility as the geography of States do vary considerably.

Airspeed max 140 KTS: Flight visibility 3km, Clear of clouds and ground visible from aircraft (lCAO).

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.150 Instrument Flight Rules (IFR) Operating minima p. 33-34

comment *21* comment by: *George Knight*

-(a) Whilst large commercial operators, conducting scheduled services to a known set of airfields, may have the resources to conduct formal investigations into each and every airfield into which they operate this is a disproportionate cost to small operators especially those conducting non-commercial IFR flights and to air-taxi operators who fly to a multitude of different airfields often at short notice. For smaller aircraft (say less than 19 seats) the operator should be allowed to use existing published data approved by the authority in the country where the airfield is situated.

comment *381* comment by: *EHOC*

General

This rule does not provide an 'Instrument Flight Rules (IFR) Operating Minima' but 'Aerodrome Operating Minina'; operating minima for IFR would have to encompass elements that are currently contained in other rules.

Paragraph (a)(2)

Clause 2 is not clear because it appears to require approval in accordance with OPS.SPA.LVO under all circumstances - it might better state:

(2) **When Low Visibility Operations are being undertaken**, require the prior approval...OPS.SPA.001.LVO"

Paragraph (b)

It is not clear that sections 2 and 3 of AMC2 OPS.GEN.150 can stand without a requirement. It might be better if there was an additional element in OPS.GEN.150 which would provide the objective on which this method of compliance is hung:

"(b) The minima referred to in (a) shall take account of any increment:

(1) imposed by the competent authority; and/or

(2) applied to non-precision minima when a stabilised approach is not flown."

The text from items 2 and 3 of the AMC could then be put into a separate AMC which is attached to OPS.GEN.150(b)(2).

Paragraph (d)

In the original text, there is the word 'full' – i.e. "shall take 'full' account of..."; it is only a small point but one which takes account of the understanding of the operator psyche.

To 'take account of' might imply that is should be considered but 'take full account of' implies much more. That is why the text was as it was; there is no justification for the change.

The correct wording can be seen in 'AMC1 OPS.SPA.020.LVO paragraph 4.':

"In establishing the aerodrome operating minima which will apply to any particular operation, an operator should take full account of:"

Paragraph (d)(3)

Use of just of the acronym 'FATO' would make this text much more readable than use of the acromym with the expansion. It is not clear why this language convention has not been used throughout the proposed regulation.

comment

589 comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.150(d): change as follows:

(d) In establishing the aerodrome operating minima which will apply to any particular operation, an operator ~~**shall**~~ **must** take account of:

comment

873 comment by: *Condor Flugdienst GmbH - FRA HO/R*

I am referring to OPS.GEN.150 (a):It should be clarified that not every

individual aerodrome minimum requires authority approval, but only the method of establishing such minima.

With regards to OPS.GEN.150(a)(2) the reference must be changed to "AMC 1 OPS.SPA.020 LVO"!

comment

1046 comment by: *AECA helicopteros.*

The text in (a)(1) should be amended as in (proposed) OPS.GEN.160(c) below:

(1) except as provided in OPS.GEN.160(a) not be lower than those specified by the State in which the aerodrome is located;

andClause 2 is not clear because it appears to exclude include Cat 1 and non-precision minima; it might better say:

(2) When Low Visibility Operations are being undertaken, require the prior approval...OPS.SPA.001.LVO"

comment

1047 comment by: *AECA helicopteros.*

To split the paragraph b.

It is not clear that sections 2 and 3 of AMC2 OPS.GEN.150 can stand without a requirement. It might be better if there was an additional element in OPS.GEN.150 which would provide the objective on which this method of compliance is hung:

"(b) The minima referred to in (a) shall take account of any increment:

(1) imposed by the competent authority; and/or

(2) applied to non-precision minima when a stabilised approach is not flown."

The text from items 2 and 3 of the AMC could then be put into a separate AMC which is attached to OPS.GEN.150(b)(2).

comment

2013 comment by: *Ulrich Baum*

In case of non-commercial IFR operations, adhering to published procedural and aerodrome minima (as found on approach plates) should be sufficient. Requiring non-commercial operators to fomally define their own operating minima seems to be overly burdensome and will, in most cases, not be practicable. The corresponding AMC (which allows use of commercially available information) is rather vague. Please clarify requirements for non-commercial IFR operations.

I suggest to make OPS.GEN.150 applicable to commercial operations only.

comment *2319* comment by: *heliswiss ag, belp*

Operating minima : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision during daylight.

comment *2338* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

The authority approval of every individual aerodrome minimum was introduced with EU-OPS and was not required before.

Proposal:

Instead of the approval of every individual minimum, EASA should require authority approval of the method used by the operator for establishing such minima. This would avoid the duplication of repetitive approvals of previously approved minima for the same airport and aircraft types. Safety will be better served if an operator could focus on what has not yet been assessed/approved, than having to duplicate what has already been done many times before.

comment *2644* comment by: *AOPA-Sweden*

The item does not make any sense. What does it mean with '*except when specially approved by the State*' when it is already in the first part of the paragraph already stated '*specified by the State*'?

comment *3022* comment by: *AEA*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO <u>operating minima</u>** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *3082* comment by: *Michael Hoeck*

Line 2 states that approval of the competent authority is required. AMC 1 states that an acceptable method of specifying aerodrome operating minima may be through commercially available information. Does that mean if I use e.g. a Jeppesen I do not need approval? If so, good, if not I venture the guess that the competent authorities are totally understaffed.

In light of line b) of OPS GEN 150 one could think every minima requires an approval for the individual operator.

PLEASE clarify language used and make it as simple as possible - that is true for a lot of the draft, not only 150...

comment *3115* comment by: *UK CAA*

Page No: 33

Paragraph No: OPS.GEN.150 (a)(2)

Comment:

The text is not clear because it appears to exclude Cat 1 and non-precision minima.

Justification:

Clarification of text.

Proposed Text (if applicable):

"**when Low Visibility Operations are being undertaken**, require the prior approval of the competent authority in accordance with OPS.SPA.001.LVO"

comment *3409* comment by: *Peter SCHMAUTZER*

If the state has specified the minimas, why should the competent authority give a special approval.

comment *3580* comment by: *PPL/IR Europe*

The phrasing in para (a) "the operator shall specify" is not appropriate for private flight. A private operator determines minima pre-flight (or in-flight under certain circumstances) and should be able to do so simply by reading

the available IAP plates without the more elaborate methods suited to a commercial operation.

comment *3623* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *4032* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Only LVO operating minima should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima.

comment *4260* comment by: *KLM*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *4477* comment by: *TAP Portugal*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *4870* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

EU-OPS 1.430 reads:

(a)1. An operator shall establish, for each aerodrome planned to be used, aerodrome operating minima that are not lower

than the values given in Appendix 1(Old) or Appendix 1 (New) as applicable. The **method** of determination of such

minima must be **acceptable** to the Authority.

The NPA proposes a significant change to the procedure than under EU-OPS: only the method had to be acceptable, and not an approval of every single minimum.

Proposal:

Re-align with EU-OPS 1.430 ff.

comment *5111* comment by: *Aero-Club of Switzerland*

We think letter (b) is not necessary!

Justification: It simply repeats in other words what is written under (a) (1).

comment *5441* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *5652* comment by: *ERA*

European Regions Airline Association Comment

Some correction is required as if paragraph (a) (1) is satisfied; paragraph (a)(2) is not invoked as clearly no SPA approval is then required. A simple change of the word 'and' to 'or' may suffice.

Editorial. Only LVO operating minima should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *6064* comment by: *DGAC*

Proposal:

In (a)(2) replace "in accordance with" by "when required by" to read "require the prior approval of the competent authority when required by OPS.SPA.001.LVO"

Justification:

Approval is only needed when specifying minima below those published by the state.

comment *6607* comment by: *KLM Cityhopper*

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *6752* comment by: *Icelandair*

Relevant Text:

(a) The operator shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall

(2) require prior approval of the competent Authority in accordance with OPS.SPA.001.LVO

Comment:

Editorial. **Only LVO operating minima** should be subject to prior approval by the Competent Authority.

Proposal:

Add reference to LVO operating minima (editorial).

comment *6982* comment by: *IACA International Air Carrier Association*

(a)

The authority approval with regards to Runway proving of every individual aerodrome minimum was introduced with EU-OPS and was not required before. Instead of the approval of every individual minimum through Runway proving, EASA should require authority approval of the method used by the operator for establishing such minima. This would avoid the duplication of repetitive approvals of previously approved minima for the same airport and aircraft types. Safety will be better served if an operator could focus on what has not yet been assessed/approved, than having to duplicate what has already been done many times before.

comment *6984* comment by: *IACA International Air Carrier Association*

(b)

With regards to OPS.GEN.150(a)(2) the reference must be changed to "AMC 1 OPS.SPA.020 LVO"!

comment *7246* comment by: *ANE (Air Nostrum) OPS QM*

There is no reference here to reduced minima in class F/G airspace for reduced airspeeds and low traffic density (cf App1 to JAR-OPS 1.465). The table is therefore not consistent with Annex 2 Table 3-1.

We would suggest some amendment was required

comment *7559* comment by: *AOPA UK*

The item does not make any sense. What does it mean with *'except when specially approved by the State'* when it is already in the first part of the paragraph already stated *'specified by the State'?*

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.155 Selection of alternate aerodromes p. 34-35

comment *22* comment by: *George Knight*

-(b) What about single engined aircraft?

comment *63* comment by: *Air Southwest*

OPS.GEN.155 contains an implied definition of a take-off alternate aerodrome that is in most respects a duplication of definition 70 (page 27). Suggest rewording of 155(a) to read "A take-off alternate shall be selected and specified in the FPL when required."

comment *64* comment by: *Air Southwest*

OPS.GEN.155(e)(3) states the criteria for dispensing with an alternate aerodrome under IFR where the destination aerodrome is isolated. OPS.CAT.155.A (a) repeats this requirement without the additional criteria. OPS.CAT.155.A (a) states 'Notwithstanding OPS.GEN.155'.

This implies that OPS.GEN.155 is to be ignored for CAT operations. OPS.CAT.155.A (c) exempts the requirements of OPS.GEN.150 for an isolated destination aerodrome, and finally for an isolated destination aerodrome OPS.CAT.155.A (d) directs the operator to Table 1A.

Under JAR-OPS this was neatly covered in JAR-OPS 1.295 and 1.297. As it is written here, the process is laborious with the possibility of confusion. I suggest that OPS.GEN.155 should contain a pre-amble directing commercial operators directly to OPS.CAT.155.A if it is intended that the section is not applicable to CAT.

comment *382* comment by: *EHOC*

Paragraph (d)

It is not clear what is intended here; the text of (d) appears to require compliance for CAT helicopters; however, the requirements is already contained in OPS.CAT.156.H (see also the note contained in OPS.CAT.H.155).

comment *549* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.155(a): change as follows: choose one of the options below:

(a) A take-off alternate aerodrome shall be selected and specified in the **operational** flight plan if the weather conditions at the aerodrome of departure are ~~**at or**~~ below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

OR

(a) A take-off alternate aerodrome shall be selected and specified in the **operational** flight plan if ~~**the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or**~~ it would not be possible to return to the aerodrome of departure for **meteorological or** other reasons.

Justification:

Changed from '…AT or below..' (a departure aerodrome with weather conditions AT the applicable minima is still suitable for landing).

This is a more general definition and in line with JAR.OPS 1.295 (b)

comment *550* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.155(b)(1):change as follows:

(b) The take-off alternate aerodrome shall be located within the following

distance from the aerodrome of departure:

(1) aeroplanes having two power-units. ~~**Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed; and**~~**:**

(i) Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed;

(ii) Not more than a distance equivalent to the operator's approved ETOPS diversion time, up to a maximum of two hours, subject to any MEL restriction, at the single-engine cruise speed based. and;

Justification:

Compliance with former EU OPS requirement. (b) (1) does not cater for a two-hour ETOPS take-off alternate. This is specified in OPS.CAT.156.A, so OPS.GEN.155 (b) should allow this as well. Another option is to add 'Notwithstanding OPS.GEN.155 to OPS.CAT.156.A (b)'.

comment *551* comment by: *KLM*

OPS gen 155 (b)(1) Aeroplanes having two power-units etc...

Except with an ETOPS approval then the maximum flying time to a take-off alternate may be two hours/120 minutes in still air and standard conditions.

comment *620* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.155(e)(1): The concept of Reasonable Time should be better specified. Change text as follows:

(e) For a flight to be conducted in accordance with instrument flight rules (IFR), at least one destination alternate shall be selected and specified in any flight plan, unless:

(1) for aeroplanes, the duration of the flight and the available current meteorological information indicates that, at the estimated time of arrival at the place of intended landing, and for a **reasonable period** before and after such time, the approach and landing may be made under visual meteorological conditions; or

comment *874* comment by: *Condor Flugdienst GmbH - FRA HO/R*

I am refering to OPS.GEN.155(e)(3): Isolated Aerodrome Minima are specified as "Minimum Ceiling plus

1.000 ft/Minimum visibility plus 4km (resp. 5.5 km). This is contradictory to OPS.CAT.155(d) which

specifies normal alternate aerodrome minima.

comment *1476* comment by: *ECA - European Cockpit Association*

Comment: change as follows:

a. A take-off alternate aerodrome shall be **available** ~~**selected**~~ and ~~**specified**~~ **nominated by the pilot in command to the other flight deck crew member** ~~**in the flight plan if the**~~ **if** weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

Justification:

This wording is copied from EU OPS.

comment *1840* comment by: *claire.amos*

(e)(1)Definition of "reasonable", requires clarification. easyjet currently operates +/- 1 hour

comment *1915* comment by: *Ingmar Hedblom*

OPS.GEN.155(b)(1)

Power units is not defined. Could be mis-interpreted as electrical power units….

Include a definition of power unit in the definitions

comment *2320* comment by: *heliswiss ag, belp*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2341* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Destination Alternate Aerodromes

(e)

(3)

Isolated Aerodrome minima are specified as "Minimum Ceiling plus 1000ft/minimum visibility plus 4 km [resp. 5.5]. This is contradictory to OPS.CAT.155(d) which specifies normal alternate aerodrome minima and is consistent with EU-OPS 1.297 minima.

Amend:

OPS.GEN.155 i.a.w. OPS.CAT.155, or alternatively, specify that restrctions in GEN.155 are not applicable for CAT operators.

comment *2646* comment by: *AOPA-Sweden*

The sections (b) and (c) should shift, because the current section (b) only refers to multi-engine aircraft. Just for the logic.

comment *2647* comment by: *AOPA-Sweden*

(e) (1):

There is no AMC or GM defining reasonable time, AOPA-S proposes plus minus one hour of ETA.

comment *2648* comment by: *AOPA-Sweden*

(e) (3):

A definition of isolated aerodrome (referring to planning etc) should be given in the beginning of the Part OPS.

comment *3023* comment by: *AEA*

Relevant Text:

(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure ***are at or below the applicable aerodrome operating minima*** *or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *3024* comment by: *AEA*

Relevant Text:

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will ***be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *3025* comment by: *AEA*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *3026* comment by: *AEA*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven

structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *3027* comment by: *AEA*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *3116* comment by: *UK CAA*

Page No: 34

Paragraph No: OPS.GEN.155

Comment:

The requirement to specify a Take-off Alternate for non-complex motor powered aeroplanes is in excess of ICAO standards specified in Annex 6 Part II Section 2. The title of the section should be amended to reflect the relevant aircraft.

Justification:

Alignment with ICAO SARP's and current practice

Proposed Text (if applicable):

OPS.GEN.155 Selection of alternate aerodromes

TAKE-OFF ALTERNATE AERODROMES

~~ALL AEROPLANES~~ ***COMPLEX MOTOR-POWERED AEROPLANES USED IN NON-COMMERCIAL OPERATIONS AND AEROPLANES USED IN COMMERCIAL OPERATIONS***

comment *3129* comment by: *UK CAA*

Page No: 34

Paragraph No: OPS.GEN.155 Para (b)

Comment:

Selection of take off alternate.

There is no mention of all distances being calculated in still air, standard conditions.

Justification:

EU-OPS 1.295 (b) includes the words 'in still air standard conditions'. This is essential for planning purposes.

Proposed Text (if applicable):

ALL AEROPLANES

(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

(b) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:

(1) aeroplanes having two power-units. Not more than a distance equivalent to a flight time of one hour, ***in still air standard conditions***, at the single-engine cruise speed; and

(2) aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours, ***in still air standard conditions***, at the one-engine inoperative cruise speed.

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

comment *3131* comment by: *UK CAA*

Paragraph No: OPS.GEN.155.(e)

Comment:

Sub-paragraph (20 defines additional requirements for helicopters in regards to the need for an Destination Alternate. This text is derived from ICAO Annex 6 Part III section III. The UK does not mandate this requirement and has filed a difference. The weather requirements are excessive when compared with those for aeroplanes at sub-paragraph (1), which is drawn from ICAO Annex 6 Part II, and therefore should be removed. In addition, flight at night in the UK is conducted under IFR even when flown in VMC, where there is no requirement to file a flight plan or have an destination alternate.

A small adjustment to sub-paragraph (1) as indicated below will provide a better requirement and adequate safety.

Justification:

Clarification and alignment of text with current regulations.

Proposed Text (if applicable):

(e) For a flight to be conducted in accordance with instrument flight rules (IFR), at least one destination alternate shall be selected and specified in any flight plan, unless:

(1) ~~for aeroplanes,~~ the duration of the flight and the …..

(2) Delete in toto

(~~3~~***2***) the place ……

comment *3469* comment by: *M Wilson-NetJets*

Original text:

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

Suggested new text:

For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at **a reasonable time before and after** the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

Comment/suggestion:

Under OPS.GEN the selection of a take-off alternate does not have a clause for the weather to be within limits before and after the time of estimated use. Analogue to selection of take-off alternate aerodromes in OPS.CAT and the selection of destination alternate aerodromes in OPS.CAT and OPS.GEN there should be a provision to have suitable forecasted/expected weather conditions before and after the estimated time of use of the take-off alternate.

comment *3529* comment by: *IAOPA Europe*

For OPS.GEN.155 a, b and c it is not stated that the requirements are for IFR operations only. This is assumed to be the case but should be specified clearly.

comment *3530* comment by: *IAOPA Europe*

OPS.GEN.155 d) The inclusion of special requirements for commercial air transport does not seem to belong in this general section. It should be included in the section specifically dealing with CAT.

comment *3535* comment by: *Boeing*

NPA 2009-02b, Part Ops

OPS.GEN.155, Selection of alternate aerodromes

Page 34 of 464

BOEING COMMENT:

This entire section is not in accordance with the new proposed amendment to ICAO Annex 6, Part I, Operation of Aircraft. We suggest updating this rulemaking to reflect the standards set forth in new ICAO Document AN-WP/8387.

JUSTIFICATION: Consistent international criteria for safe operating practices will ensure the safety of air navigation worldwide and maintain a level playing field.

comment *3579* comment by: *PPL/IR Europe*

Paras (a),(b)&(c) ahould only apply to Commercial Operations

Otherwise, the application (a), (b) and (c) on selection of take-off alternates to non-commercial operations exceeds ICAO Annex 6 Part II requirements and therefore in the absence of an explicit safety case, violates the provisions of Art 8(6) of the Basic Regulation. See our General remarks.

comment *3624* comment by: *AUSTRIAN Airlines*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *3840* comment by: *AUSTRIAN Airlines*

Relevant Text:

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions

will ***be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *3841* comment by: *AUSTRIAN Airlines*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *3842* comment by: *AUSTRIAN Airlines*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *3843* comment by: *AUSTRIAN Airlines*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *4035* comment by: *Virgin Atlantic Airways*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Change text to read:

(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome **landing** minima or it would not be possible to return to the aerodrome of departure for other reasons.

comment *4037* comment by: *Virgin Atlantic Airways*

Relevant Text:

*(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will **be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the aerodrome **landing minima.**

Proposal:

Change text to read:

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome **landing** minima for that operation.

comment *4040* comment by: *Virgin Atlantic Airways*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a negative impact on flight operations and cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *4171* comment by: *DGAC*

The requirement in OPS.GEN.155(a) applies to all aircraft, whatever the number of engines is.

However OPS.GEN.155(b) does not define the maximum distance of the take-off alternate for single-engined aircraft.

comment *4172* comment by: *DGAC*

The purpose of this paragraph, in order to select a take-off alternate, is to determine a distance threshold equivalent to flying during 60 minutes (or 120 minutes) in still air standard conditions (see EU-OPS 1.295 for CAT). We should find in this paragraph or the conditions for calculation of the distance threshold because the way it is written, it seems to be dependant on the actual conditions (temperature, wind, etc...) which is not feasible.

comment *4261* comment by: *KLM*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *4263* comment by: *KLM*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *4264* comment by: *KLM*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven

structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS

comment *4265* comment by: *KLM*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *4479* comment by: *TAP Portugal*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *4480* comment by: *TAP Portugal*

Relevant Text:

*(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will **be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *4481* comment by: *TAP Portugal*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *4482* comment by: *TAP Portugal*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *4483* comment by: *TAP Portugal*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one

destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *4611* comment by: *British Airways Flight Operations*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS 1.295 *Selection of Aerodromes*

Proposal:

Realign with EU-OPS 1.295

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4617* comment by: *British Airways Flight Operations*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS owing to the lack of reference to '**in still air standard conditions**' (EU OPS 1.295). The proposed definition would have a tremendous impact on flight operations which cannot be justified.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4619* comment by: *British Airways Flight Operations*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4626* comment by: *British Airways Flight Operations*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS 1.295

Proposal:

Realign with EU-OPS 1.295

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4871* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *4872* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will **be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *4873* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *4874* comment by: *Deutsche Lufthansa AG*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *4875* comment by: *Deutsche Lufthansa AG*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *5301* comment by: *Light Aircraft Association UK*

Paragraph b).

The use of the terminology "power units" is confusing and an alternative should be found, e.g. "power plant" or "engines".

comment *5442* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *5444* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will ***be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *5445* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *5446* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *5447* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *6044* comment by: *Irish Aviation Authority*

Comment:

(e)(3)(iv) Isolated Location

There is no definition of an "Isolated Location" for helicopter operations

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Definitions should be expanded to include a definition for "Isolated Locations" with regard to helicopter operations.

comment *6720* comment by: *AIR FRANCE*

"(a) A take-off alternate aerodrome shall be selected and specified in the flight plan" suggest to add "in the operational flight plan" for clarity as there

is no place for this information in the ATC flight plan.

comment *6740* comment by: *Greger Ahlbeck*

Paragraph text: aeroplanes having two power-units. …..resp three or more power units

Comment: Power unit is not defined. Could be misinterpreted as auxiliary power unit, electrical power units or some other power unit.

Proposal (including ***new text***):

Include a definition of power unit in the definitions or use the word engine instead of power unit

comment *6755* comment by: *Icelandair*

Relevant Text:

*(a) A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure **are at or below the applicable aerodrome operating minima** or it would not be possible to return to the aerodrome of departure for other reasons.*

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *6757* comment by: *Icelandair*

Relevant Text:

*(c) For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will **be at or above the aerodrome operating minima for that operation.***

Comment:

This definition is not consistent with EU-OPS. It should refer to the applicable aerodrome **landing minima.**

Proposal:

Realign with EU-OPS

comment *6760* comment by: *Icelandair*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *6761* comment by: *Icelandair*

Relevant text:

OPS GEN.155 Selection of Aerodromes

Comment:

The applicability of this paragraph to commercial operators is confusing when reading the paragraph in conjunction with OPS.CAT.155. It outlines that the new rule structure proposed by EASA is not user-friendly and leads to many misunderstandings which could potentially decrease flight safety. There is no added value for EASA to alter the well known and well proven structure of EU-OPS and JARs.

Proposal:

Realign with EU-OPS.

comment *6762* comment by: *Icelandair*

Relevant Text:

e) For a flight to be conducted in accordance with IFR at least one destination alternate shall be selected and specified in any flight plan unless…

Comment:

This definition is not in line with EU-OPS.

Proposal:

Realign with EU-OPS.

comment *6804* comment by: *EFLEVA*

Comment on OPS.GEN.155 b)

Page 34

The EFLEVA suggests that the term "power units" should be replaced by "engines" in order to prevent confusion.

comment *6997* comment by: *IACA International Air Carrier Association*

(e)(3)

Isolated Aerodrome Minima are specified as "Minimum Ceiling plus 1.000 ft/Minimum visibility plus 4km (resp. 5.5 km). This is contradictory to OPS.CAT.155(d) which specifies normal alternate aerodrome minima and is consistent with EU-OPS 1.297 minima.

Amend OPS.GEN.155 i.a.w. OPS.CAT.155, or alternatively, specify that restrictions in GEN.155 are not applicable for CAT operators.

comment *7218* comment by: *AIR FRANCE*

Relevant Text:

(b) The take off alternate aerodrome shall be located within the following distance from the aerodrome of departure

(1) Aeroplanes having two power units. Not more than a distance equivalent to a flight time of one hour at the single-engine cruise speed

(2) Aeroplanes having three or more power-units. Not more than a distance equivalent to a flight time of two hours at the one-engine inoperative cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions**' (EU OPS 1.295). The still air standard conditions shall be in the IR not in an AMC. Otherwise it would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS 1.295 to add '**in still air standard conditions**'

comment *7224* comment by: *AIR FRANCE*

(e) (1) This is an example where the new structure is clearly misleading when OPS.CAT.155 states something else for the commercial transport.

comment *7336* comment by: *FAA*

1. OPS.GEN.155, (e)(1)

Comment:

The term 'Reasonable period' is not defined. The term 'reasonable period' is impossible to interpret. A specified amount of time should be defined or this reference removed as different parties may take advantage of the lack of definition, possibly decreasing safety.

Recommendation:

Remove reference to 'reasonable period.'

comment *7337* comment by: *FAA*

1. OPS.GEN.155, (e)(3)(iv)

Comment:

The term 'PNR' is not defined. Without defining all the technical terms within the regulation, it remains open to interpretation.

Recommendation:

Revise the Definitions section to include 'PNR' definition.

comment *7560* comment by: *AOPA UK*

The sections (b) and (c) should move, because the current section (b) only refers to multi-engine aircraft.

comment *7561* comment by: *AOPA UK*

There is no AMC or GM defining reasonable time,AOPA UK proposes plus minus one hour of ETA.

comment *7562* comment by: *AOPA UK*

A definition of isolated aerodrome (referring to planning etc) should be given in the beginning of the Part OPS.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.160 Departure and approach procedures p. 35

comment *317* comment by: *Aero-Club of Switzerland*

Is "State responsible" to be understood to mean "member state" or "any state"?

comment *383* comment by: *EHOC*

This text does not adequately capture the intent of the original and also uses a non-ICAO term for the State; the intent could be restored such:

"(a) Except as provided in (c) below, an operator shall use the departure and approach procedures established by the State of Operation.

(b) ...

(c) Alternative procedures to those required to be used in accordance with sub-paragraph (a) above may only be implemented by an operator provided they have been approved by the State of Operation."

This would permit discrete company procedures to be developed – e.g. for offshore approaches.

comment *1048* comment by: *AECA helicopteros.*

This text does not adequately capture the intent of the original and also uses a non-ICAO term for the State; the intent could be restored such:

"(a) Except as provided in (c) below, an operator shall use the departure and approach procedures established by the State of Operation.

(b) ...

(c) Alternative procedures to those required to be used in accordance with sub-paragraph (a) above may only be implemented by an operator provided they have been approved by the State of Operation."

This will permit discrete company procedures to be developed – e.g. for offshore approaches.

comment *3133* comment by: *UK CAA*

Page No: 35

Paragraph No: OPS.GEN.160 Departure and approach procedures

Comment:

The text of this section has been reduced from the original EU-OPS and JAR-OPS text and has lost some of the meaning and intent.

The previous text should be reinstated.

Justification:

Clarity and accuracy of text.

Proposed Text (if applicable):

~~(a) Unless otherwise approved by the State responsible for an aerodrome, an operator shall use the departure and approach procedures established by that State.~~

(a) An operator shall ensure that instrument departure and approach procedures established by the State in which the aerodrome is located are used.

(b) ***Notwithstanding sub-paragraph (a),*** the pilot-in-command shall only accept an Air Traffic Control (ATC) clearance to deviate from a published departure or arrival route, provided obstacle clearance criteria can be observed and full account is taken of the operating conditions. In any case, the final approach shall be flown visually or in accordance with the published ***instrument*** approach procedures.

(c) Different procedures to those required to be used in accordance with sub-paragraph (a) may only be implemented by an operator provided that they have been approved by the State in which the aerodrome is located, if required, and accepted by the Competent Authority.

comment *3534* comment by: *IAOPA Europe*

It seems that OPS.GEN.160 b places the responsibility for obstacle clearance on the pilot when he follows an ATC clearance.

It is a well established principle that if the controller provide radar vectors to an aircraft then the controller has the responsibility for obstacle clearence. The pilot in practice has no way of determining if a an ATC radar vector provides sufficient obstacle clearance.

comment *3733* comment by: *Civil Aviation Authority of Norway*

Comment:

There is conflict between para (a) and (b). Para (a) states that an operator shall use the procedure published by the state and para (b) discusses deviation from the published procedure. Text of para (a) needs to be

clarified.

Justification:

Correction of error in syntax

Proposed Text

(if applicable):

(a) Unless otherwise approved by the State responsible for an aerodrome ***or under and in accordance with a clearance from ATC*** an operator shall use the departure and approach procedures established by that State.

comment *3772* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of this section does not adequately capture the intent of the original text used in JAR-OPS 3 and also uses a non-ICAO term for the State.

The intent could be restored by the proposed change.

Justification:

This change will permit discrete company procedures to be developed – e.g. for offshore helicopter approaches.

Proposed Text

(if applicable):

"(a) Except as provided in (c) below, an operator shall use the departure and approach procedures established by the State of Operation.

(b) ...

(c) Alternative procedures to those required to be used in accordance with sub-paragraph (a) above may only be implemented by an operator provided they have been approved by the State of Operation."

comment *4173* comment by: *DGAC*

OPS.GEN.160 is only relevant for IFR operations

comment *6886* comment by: *PPL/IR Europe*

Para (a) and (b) should apply only to Commercial operations. Otherwise, the requirement to use only published procedures or a visual approach for non-commercial operations exceeds ICAO Annex 6 Part II requirements and therefore in the absence of an explicit safety case, violates the provisions of Art 8(6) of the Basic Regulation. See General remarks.

Note that Annex 6 Part II 4.16.1 is open to interpretation. One

interpretation would require, for example, the UK to design an IAP and DP for every aerodrome used at night, as such flights must be under IFR. For the reasons described in the general comments, mandatory use of approved procedures for all non-commercial operations under IFR would be clearly disproportionate.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.165 Noise abatement p. 35

comment *541* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.165: change as follows:

~~**Operating procedures shall take into account the need to minimise the effect of aircraft noise.**~~ **Aeroplane operating procedures for noise abatement should comply with the provisions of PANS-OPS (Doc 8168), Volume I, Chapter 7.**

Justification:

ECA strongly opposes to the obligatory nature of this text and proposes deletion of this paragraph. The objections were already raised in the ECA response to NPA 2008-15 on Essential Requirements for Civil Aviation Environmental Protection.

1) It's ICAO policy to address noise only if noise is a problem , i.e. health hazards or annoyance. Flexibility should be incorporated in the requirements so as to allow implementing rules to be adapted to the size and nature of the problem.

2) To minimize means to reduce to the smallest possible amount, but ECA strongly stresses that safety considerations must prevail over environmental issues in the operational field. To minimize noise can mean at the cost of flight safety. A thorough safety-environmental interdependency assessment should be made, in which all safety implications should be considered. A degradation of the flight safety level can not be tolerated. Flight safety must not be affected by environmental considerations.

This can not be assured by the sole compliance to the safety related essential requirements.

3) ECA endorses the usage of ICAO standards and a uniform approach to environmental issues.

ECA endorses the balanced approach in order to alleviate the environmental burden of air traffic. It consists of a balanced combination of effective measures in the field of technology, operations, restrictions, market-based measures and land-use management. This proposal merely focusses on measures in the field of operations.

4) The need to minimize noise may increase the level of LAQ and GHG emissions and is therefore not in line with the objective to mitigate health

hazards, annoyance and climate effects related to noise and emissions.

5) The effect of aircraft noise is difficult to quantify. In contrast with flight safety, noise impact research is not mature, quantitative health impacts for noise (and emissions) are uncertain and management tools lack.

comment *638* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.165:

Reference to ICAO PANS OPS Volume 1 should be added for harmonising reasons (rationale: noise is more related to aircraft certification than operator procedures – aircraft noise certification must comply with ICAO).

comment *1025* comment by: *EUROCOPTER*

AMC & GM show that the requirement is only applicable to aeroplanes – Proposal is to add 'aeroplanes' in OPS.GEN.165 title.

comment *3035* comment by: *AEA*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235 at the level of hard law

comment *3625* comment by: *AUSTRIAN Airlines*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to us since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

comment *4034* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to Lufthansa since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Transfer complete EU-OPS 1.235 into IR, especially to re-incorporate the basic principle of EU-OPS 1.235 (a):

"The operator shall ensure that safety has priority over noise abatement" at prominent first place.

comment *4174* comment by: *DGAC*

When first introduced in JAR-OPS 1.165 this provision was meant to give a legal tool to the pilot in command to refuse unsafe procedures in case such procedures was designed by an airport. The priority should be safety.

Therefore it is necessary to upgrade to IR the rest of the JAR provision left in the AMC

comment *4266* comment by: *KLM*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

comment *4484* comment by: *TAP Portugal*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

comment *4634* comment by: *British Airways Flight Operations*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command deviating from noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental

issue above safety. The spread of noise abatement requirements between hard-law, AMC and guidance material is ambiguous. This proposal is unacceptable since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *5449* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

comment *6763* comment by: *Icelandair*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235

comment *7233* comment by: *AIR FRANCE*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The JAA NPA 53 about NADP goal was to help operators to refuse some unsafe procedures based on the OPS regulation.

Proposal:

Therefore we proposed to upgrade it to the rule level.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.170 Minimum terrain clearance altitudes – IFR flights p. 35

comment *65* comment by: *Air Southwest*

Given that this paragraph is a generality, it should however, include the requirement for minimum flight level for flight above the transition altitude. For IFR flight the minimum safe FL is more 'user friendly' for the en route phase and such information is generally included in the operational flight plan rather than 'safety altitude'. For the terminal phase of the flight, minimum sector altitude (MSA) will be specified on the instrument plate.

comment *2649* comment by: *AOPA-Sweden*

An item together with an AMC without any use. No pilot will plan a CFIT.

comment *3135* comment by: *UK CAA*

Page No: 35

Paragraph No: OPS.GEN.170 & 175

Comment:

These two paragraphs would have appeared to confuse the ICAO Rules of the Air requirements for VFR and IFR flight 'Minimum Heights' and 'Minimum Levels' respectively.

OPS.GEN.170 introduces the term 'Minimum terrain clearance altitudes – IFR' which is not a recognised term and one which appears to have been drawn from the requirements of EU-OPS 1.250 or JAR-OPS 3.250 'Establishment of minimum flight altitudes'. This confuses the requirements and conflicts with the current OPS.GEN.175 'Minimum flight altitudes' which is not contextualised by either VFR or IFR.

The requirement for minimum heights over certain areas is partially captured in OPS.GEN.315(b) (Performance general) when it should perhaps be covered more appropriately at this section. The actual minimum heights are set by individual States within their Rules of the Air regulations.

It is recommended that the subject paragraphs are reorganised into two topics: 'Minimum Heights' and 'Minimum Levels' to reflect the ICAO requirements at the general aviation level. These can be supplemented for Complex and Commercial operations.

Associated AMCs and GM may need to be adjusted to compensate for the change.

Justification:

The text of the subject paragraphs does not reflect ICAO minimum standards for all flights and has introduced non-standard phraseology and confused the meaning of height and altitude.

Proposed Text (if applicable):

~~**OPS.GEN.170 Minimum terrain clearance altitudes – IFR flights**~~

~~For each flight to be conducted in accordance with instrument flight rules (IFR), terrain clearance altitudes for the route to be flown shall be specified.~~

~~**OPS.GEN.175 Minimum flight altitudes**~~

~~An aircraft shall not be flown below minimum altitudes established by the State overflown, except when: (a) necessary for take-off or landing; or (b) descending in accordance with procedures established by that State subject to demonstration by the operator that the operation does not create a hazard to persons or property on the surface.~~

OPS.GEN.170 Minimum Heights

(a) In order not to hazard persons or property on the surface, aircraft shall not be flown:

(1) except when necessary for take-off or landing, or except by permission from the appropriate authority, over the congested areas of cities, towns or settlements or over an open-air assembly of persons; or

(2) elsewhere,

below the minimum heights specified by the State whose territory is being overflown.

OPS.GEN.175 Minimum Levels

AEROPLANES AND HELICOPTERS - IFR

(a) Except when necessary for take-off or landing, or except as specifically authorised by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown, or, where no such minimum flight altitude has been established:

(1) over high terrain or in mountainous areas, at a level which is at least 600 m (2000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft; or

(2) Elsewhere than as specified in (1), at a level which is at least 300 m (1000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

COMPLEX MOTOR POWERED AIRCRAFT USED IN NON-COMMERCIAL OPERATIONS, AEROPLANES AND HELICOPTERS USED IN COMMERCIAL OPERATIONS

***(b) An operator of a complex motor powered aircraft or an aeroplane or helicopter used in commercial operations shall establish minimum flight altitudes for all route segments to be flown which provide the required terrain clearance taking into account the performance of the aircraft Where minimum flight altitudes established by the State overflown are higher than those established* by the operator, the higher values shall apply.**

comment *3581* comment by: *PPL/IR Europe*

For a private operator flying ad-hoc IFR, possibly not on an IFPS flight plan and outside controlled airspace, the pilot should plan and be aware of terrain clearance altitudes at all times, but the wording "shall be specified" is not appropriate.

comment *3770* comment by: *Civil Aviation Authority of Norway*

Comment:

These two paragraphs would have appeared to confuse the ICAO Rules of the Air requirements for VFR and IFR flight 'Minimum Heights' and 'Minimum

Levels' respectively.

OPS.GEN.170 introduces the term 'Minimum terrain clearance altitudes – IFR' which is not a recognised term and one which appears to have been drawn from the requirements of EU-OPS 1.250 or JAR-OPS 3.250 'Establishment of minimum flight altitudes'. This confuses the requirements and conflicts with the current OPS.GEN.175 'Minimum flight altitudes' which is not contextualised by either VFR or IFR.

The requirement for minimum heights over certain areas is partially captured in OPS.GEN.315(b) (Performance general) when it should perhaps be covered more appropriately at this section. The actual minimum heights are set by individual States within their Rules of the Air regulations.

It is recommended that the subject paragraphs are reorganised into two topics: 'Minimum Heights' and 'Minimum Levels' to reflect the ICAO requirements at the general aviation level. These can be supplemented for Complex and Commercial operations.

Associated AMCs and GM may need to be adjusted to compensate for the change.

Justification:

The text of the subject paragraphs does not reflect ICAO minimum standards for all flights and has introduced non-standard phraseology and confused the meaning of height and altitude.

Proposed Text

(if applicable):

OPS.GEN.170 Minimum Heights

(a) In order not to hazard persons or property on the surface, aircraft shall not be flown:

(1) except when necessary for take-off or landing, or except by permission from the appropriate authority, over the congested areas of cities, towns or settlements or over an open-air assembly of persons; or

(2) elsewhere,

below the minimum heights specified by the State whose territory is being overflown.

OPS.GEN.175 Minimum Levels

AEROPLANES AND HELICOPTERS - IFR

(a) Except when necessary for take-off or landing, or except as specifically authorised by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown, or, where no such minimum flight altitude has been established:

(1) over high terrain or in mountainous areas, at a level which is at least 600 m (2000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft; or

(2) Elsewhere than as specified in (1), at a level which is at least 300 m

(1000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

COMPLEX MOTOR POWERED AIRCRAFT USED IN NON-COMMERCIAL OPERATIONS, AEROPLANES AND HELICOPTERS USED IN COMMERCIAL OPERATIONS

(b) An operator of a complex motor powered aircraft or an aeroplane or helicopter used in commercial operations shall establish minimum flight altitudes for all route segments to be flown which provide the required terrain clearance taking into account the performance of the aircraft Where minimum flight altitudes established by the State overflown are higher than those established by the operator, the higher values shall apply.

comment *6024* comment by: *Irish Aviation Authority*

Comment:

The Title of the paragraph uses the term "Minimum Terrain Clearance Altitude" which is not defined in the definitions. Additionally this is a term that is not in common use within the aviation world at present.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Revert to use of "Minimum Safe Altitude" or "Minimum Obstacle Clearance Altitude".

comment *7563* comment by: *AOPA UK*

An item together with an AMC does not have any use. No pilot will plan a CFIT.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.175 Minimum flight altitudes p. 35

comment *384* comment by: *EHOC*

Whilst it is understood that this is in GEN and therefore is available to anyone, it was provided in the original to permit en-route let down whilst offshore - i.e. a cloud break procedure over water to VFR below (used to: avoid complex RADAR let downs at the oil field; or as part of the coastal airport procedure etc.). Attempting to generalize the rule has now made it completely obscure and probably not practical. Perhaps the best that can be done it to return the use to the application for which it was provided -

offshore operations.

"An aircraft shall not be flown below specified minimum altitudes, except when:

(a)...

(b) descending in accordance with with procedures approved by the State of the Operator."

This was never intended to be used for VFR operations as is now evident in by GM OPS.GEN.175; perhaps that element 2. of that GM should be removed.

It is also not clear how an approval could be obtained from the 'State Overflown'.

comment *1055* comment by: *AECA helicopteros.*

Attempting to generalize the rule has now made it completely obscure and probably not practical. Perhaps the best that can be done it to return the use to the application for which it was provided - offshore operations.

"An aircraft shall not be flown below specified minimum altitudes, except when:

(a)...

(b) descending in accordance with procedures approved by the State of the Operator."

This was never intended to be used for VFR operations as is now evident in by GM OPS.GEN.175; perhaps that element 2. of that GM should be removed.

comment *3231* comment by: *Eurocontrol CND*

OPS.GEN. 175 Minimum flight altitudes

Is this applicable to IFR and VFR? As regards IFR, there is no mentioning of the fact that there are areas outside of controlled airspace where no minimum altitude has been established by the State, in which case the minima stated in ICAO Annex 2 should apply (i.e. 300 m (in high/mountainous terrain, 600 m) above the highest obstacle within 8 km of the estimated position of the aircraft.

comment *3538* comment by: *IAOPA Europe*

It seems that to descend according to procedures established by the State, each individual operator must first demonstrate that the operation does not create a hazard to persons or property on the ground. This does not make

any sense.

comment *3771* comment by: *Civil Aviation Authority of Norway*

Comment:

These two paragraphs would have appeared to confuse the ICAO Rules of the Air requirements for VFR and IFR flight 'Minimum Heights' and 'Minimum Levels' respectively.

OPS.GEN.170 introduces the term 'Minimum terrain clearance altitudes – IFR' which is not a recognised term and one which appears to have been drawn from the requirements of EU-OPS 1.250 or JAR-OPS 3.250 'Establishment of minimum flight altitudes'. This confuses the requirements and conflicts with the current OPS.GEN.175 'Minimum flight altitudes' which is not contextualised by either VFR or IFR.

The requirement for minimum heights over certain areas is partially captured in OPS.GEN.315(b) (Performance general) when it should perhaps be covered more appropriately at this section. The actual minimum heights are set by individual States within their Rules of the Air regulations.

It is recommended that the subject paragraphs are reorganised into two topics: 'Minimum Heights' and 'Minimum Levels' to reflect the ICAO requirements at the general aviation level. These can be supplemented for Complex and Commercial operations.

Associated AMCs and GM may need to be adjusted to compensate for the change.

Justification:

The text of the subject paragraphs does not reflect ICAO minimum standards for all flights and has introduced non-standard phraseology and confused the meaning of height and altitude.

Proposed Text

(if applicable):

OPS.GEN.170 Minimum Heights

(a) In order not to hazard persons or property on the surface, aircraft shall not be flown:

(1) except when necessary for take-off or landing, or except by permission from the appropriate authority, over the congested areas of cities, towns or settlements or over an open-air assembly of persons; or

(2) elsewhere,

below the minimum heights specified by the State whose territory is being overflown.

OPS.GEN.175 Minimum Levels

AEROPLANES AND HELICOPTERS - IFR

(a) Except when necessary for take-off or landing, or except as specifically authorised by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown, or, where no such minimum flight altitude has been established:

(1) over high terrain or in mountainous areas, at a level which is at least 600 m (2000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft; or

(2) Elsewhere than as specified in (1), at a level which is at least 300 m (1000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

COMPLEX MOTOR POWERED AIRCRAFT USED IN NON-COMMERCIAL OPERATIONS, AEROPLANES AND HELICOPTERS USED IN COMMERCIAL OPERATIONS

(b) An operator of a complex motor powered aircraft or an aeroplane or helicopter used in commercial operations shall establish minimum flight altitudes for all route segments to be flown which provide the required terrain clearance taking into account the performance of the aircraft Where minimum flight altitudes established by the State overflown are higher than those established by the operator, the higher values shall apply.

comment *6009* comment by: *Civil Aviation Authority Finland*

Comment:

The minimum flight altitudes for Aerial Work operations should be defined.

Special Aerial Work operations (dusting and crop spraying, fire fighting and inspection of electrical wires, photographing etc.) are flown at very low altitudes and paragraphs OPS.GEN.175 (a) or (b) do not fit for this, because it is not question of descending, landing or take-off, but the whole operation is done at very low altitude.

The paragraph OPS.COM.270 does not solve the problen either.

Also some Aerial Work operations are flown as private operations (ie. spraying the own crop fields or forests of the farmer).

comment *6031* comment by: *Irish Aviation Authority*

Comment:

The Title of the paragraph uses the term "Minimum Flight Altitude" which is not defined in the definitions. Additionally this is a term that is not in common use within the aviation world at present.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Revert to use of "Minimum Safe Altitude" or "Minimum Obstacle Clearance Altitude".

comment *6213* comment by: *Irish Aviation Authority*

Comment:

(b) - The Statement in (b) is very vague

Justification:

Needs further clarification

Proposed text:

(b) in accordance with procedures approved by the State of operation and subject to compliance with minimum heights established by the State overflown.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.180 Routes and areas of operation p. 36

comment *1049* comment by: *AECA helicopteros.*

It has been suggested that ERs 2.a.1, 2.a.4, 2.a.6 and 3.a.5 contain the original intent of this rule.

However, the original intent (in accordance with Annex 6 Part I Chapter 4.1 - Annerx 6 Part I Chapter 2.1) was to ensure that, over-and-above general considerations for flight, specific elements that address the Area and Route of Operation are considered. This could include additional equipment - e.g. offshore, the met coverage for the area (offshore operations), performance in the case of mountains etc.

ER is only general and requirement should be put into an IR expanded out into its respective parts.

comment *6922* comment by: *Christian Hölzle*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity

to observe any obstacle and avoid a collision.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.185 Meteorological conditions p. 36

comment *302* comment by: *Rega / Swiss Air-Ambulance*

OPS.GEN.185 Meteorological conditions

Scope:

A flight in accordance with instrument flight rules shall always have (pre-flight planning or in-flight replanning) two landing possibilities.

Text to be added:

(b) A flight in accordance with instrument flight rules (IFR) shall only be initiated or continued towards the planned destination aerodrome when the latest available meteorological information indicates that, at the estimated time of arrival, the weather conditions at the destination, **and** at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

Proof:

A flight in accordance with instrument flight rules shall always have (pre-flight planning or in-flight replanning) two landing possibilities. Nevertheless it shall be possible to plan without destination alternate aerodrome when the requirements according OPS.CAT.155.A are fulfilled.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *391* comment by: *EHOC*

Paragraph (b)

The text of paragraph (b) contains a concatenation of ICAO Annex 6, Part II, Chapters 2.2.3.4.2 and 2.2.4.1.1 by combining the respective 'commenced' and 'continued' of ICAO into the single 'initiated or continued'; notwithstanding this, the intent of ICAO Annex 6 Part II for General Aviation (GA) appears to have been satisfied. However, in the previous requirements for Commercial Air Transport (CAT) the two clauses were kept separate because of the distinction between: those conditions that obtain before take-off; and those which apply once the flight has commenced.

Apart from the restriction on wind speed for helidecks and elevated heliports for helicopters, there are no additional requirements for CAT in the proposal. It is therefore suggested that additional text for CAT should be provided meeting the principles stated above. It is not clear how this can be done by modifying the text of OPS.GEN.185(b); perhaps, therefore, it is necessary to provide a new OPS.CAT.185.

The text in the new IR could separate the two clauses: one for commencement of take-off; and the other for continuation to destination. A skeleton of the rule might be:

OPS.CAT.185 Meteorological conditions

Notwithstanding OPS.GEN.185(b), a flight to be conducted in accordance with the instrument flight rules shall not be:

(a) commenced unless information is available which indicates that conditions will, at the estimated time of arrival:

(1) when one alternate is required; at the aerodrome of intended landing and the destination alternate aerodrome; or

(2) when two alternates are required; at the two destination alternate aerodromes,

be at or above the planning minima

(b) continued towards the aerodrome of intended landing unless the latest available meteorological information indicates that conditions at that aerodrome, or at least one destination alternate aerodrome, will, at the estimated time of arrival, be at or above the specified aerodrome operating minima.

Note: The text of (a) has to be slightly modified from the ICAO because of the provision, in OPS.CAT.155.X(b), for two destination alternates.

comment *820* comment by: *Reto Ruesch*

Meteo conditions. How can we know the conditions en route or on site ?

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any

obstacle and avoid a collision.

comment *1122* comment by: *Heli Gotthard*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1169* comment by: *Stefan Huber*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1240* comment by: *Air Zermatt*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMSpage 64.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision

comment *1291* comment by: *Air-Glaciers (pf)*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1376* comment by: *Royal Danish Aeroclub*

Page 36

OPS.GEN.185

The paragraph could be understood in a way that will demand the pilot to check the weather every minute until the last minute before the flight. And for all flights, independent upon the weather and the length of the flight.

The text in paragraph (a) should be added.

"If the weather conditions are of such kind that the latest avalaible meteorological information will be similar to the previous issued information the pilot can fly based upon that information."

For example in high pressure, sunshine a short local flight do not need the latest weather information along the route and at the intended destination. The pilot can see the weather and easily judge that it is possible to fly and should be able to fly without more information or unneccessary demand for weather ananlysis.

If the pilot do not have information about the weather along the route and the destination weather information should be collected.

comment *1788* comment by: *Heli Gotthard AG Erstfeld*

Meteo conditions. How can we know the conditions en route or on site

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision

comment *1854* comment by: *SHA (AS)*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1932* comment by: *Berner Oberländer Helikopter AG BOHAG*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2018* comment by: *Heliswiss AG, Belp*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2089* comment by: *Dirk Hatebur*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision

comment *2119* comment by: *Heliswiss*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2126* comment by: *Heliswiss NV*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2261* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Meteorological conditions

Comment / Proposal:

Modify text:

(a) Except for helicopters, the pilot-in-command [...].

Remarks:

This regulation makes no sense for helicopters that can be put on ground most anytime.

comment *2413* comment by: *Jan Brühlmann*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2546* comment by: *Walter Mayer, Heliswiss*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2795* comment by: *REGA*

OPS.GEN.185 Meteorological conditions

(a) Other than airplanes, helicopters can land every time.

Proposal (a)

Except for helicopters: The pilot-in-command shall not initiate or continue a Visual Flight Rules (VFR) flight unless (…)

comment *2833* comment by: *Philipp Peterhans*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2924* comment by: *Pascal DREER*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *3542* comment by: *IAOPA Europe*

So long as the pilot has an alternative plan there should be no reason why a flight cannot commence and continue towards a destination where the weather is below VFR operating minima. The concept of an alternative airport is allowed for IFR operations so why not for VFR?

comment *3582* comment by: *PPL/IR Europe*

OPS.GEN.185 is completely unsuitable for private operations, which are often of a much more ad-hoc nature than commercial operations and subject to both higher weather limits (in VFR) and available forecasts which are much less deterministic (eg. to aerodromes without a TAF, or low-level enroute forecasts which are not very specific or accurate).

A private operator should not be bound this kind of determinism in "intended destination", and "destination alternate" in the IFR case. A commercial flight will rarely depart except for the express purpose of reaching a specified destination. A private flight may depart with many contingencies intended, subject to the weather that prevails enroute and towards the potential destination(s). Therefore, the obligations of a PIC in private flight, under IFR or VFR, should be to ensure that the he has "latest available meteoroligcal information relevant to the intended flight". Beyond that, VFR flight is covered by the Visual Flight Rules - there is no justification to overlay an additional Rule that says VFR flight may not be initiated or continued unless a forecast to an intended destination is favourable. IFR flight is similarly covered by the Instrument Flight Rules (including the Alternate requirements).

In addition, by requiring the positive evidence that "information indicates....weather conditions...at or above the applicable VFR minima", this wording could, in effect, ground VFR operations in all but perfect weather conditions. GA weather forecasts are rarely able to clearly "indicate" enroute conditions and much of the discipline of VFR flight is about managing the likelihood of encountering weather which is below VFR limits.

The required phrasing could not be simpler - every conceivable situation is dealt with by the intersect of the following

1. the requirement for the PIC to get appropriate weather information pre-flight

2. the requirement to observe VFR or IFR, as appropriate

3. the other requirements of the PIC for safe operation of the flight (eg. fuel reserves, and Aerodrome Operating Minima)

If the intent of OPS.GEN.185 really is to introduce a new restriction on VFR pilots decision-making and ability to initiate a flight into uncertian conditions, then this is an unprecedented step of very major importance which we reject, and we certainly do not believe it can be "slipped in" to a 464 page NPA produced under tight time conditions. It must be left for a time when EASA can make a proper study and safety case, etc.

comment *3589* comment by: *Aero-Club of Switzerland*

Looking at (a), we think, that the word "initiate" has to be deleted.

Justification: Especially in mountain aereas and during helicopter operations weather conditions may change rapidly. An "initiated" flight must then be discontinued. PiC are trained to take such decisions in time.

comment *3950* comment by: *HDM Luftrettung gGmbH*

Ops Gen 185: Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *4106* comment by: *Benedikt SCHLEGEL*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *4397* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *4515* comment by: *Christophe Baumann*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.
Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *5796* comment by: *Ph.Walker*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6125* comment by: *Hans MESSERLI*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6293* comment by: *Heliswiss International*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6354* comment by: *Trans Héli (pf)*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6697* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

There are many of European sailplane pilots that are current valid privilege of flying in a cloud and therefore also close to a cloud. For example in Finland and Sweden “sailplane cloud flying right or cloud flying rating”,

based on applicable sailplane cloud flying training has long history as a specific part of gliding sports activity, for example to reach certain F.A.I defined altitude badges. In case of current sailplane cloud flying operations, take-off, release from launch to free flight, approach and landing shall be able to be made under VFR, but cloud flying part in a thermal inside a convection cloud is made under VFR-minima (inside a cloud). The proposed OPS.GEN.185 however, seems to be ignoring completely sailplane cloud flying activity currently and historically allowed in several Member States.

comment

6795 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) The pilot-in-command shall not initiate or continue a Visual Flight Rules (VFR) flight unless the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the appropriate time will be at or above the applicable VFR operating minima.

Comment:

For safety reasons the SCAA suggests that EASA act in order to look over the requirements concerning operation limitations for non local VFR flights conducted during night over water or terrain with limited visual references. The rationale for the suggestion is that when flying over such areas during darkness, visual references might be reduced very fast even with small weather changes. During e.g. level changes a pilot might unintentionally fly in to clouds and be in IMC conditions. A pilot without applicable IFR-training might not be able to handle such a case with loss of control as a consequence. In order to reduce the possibility for such occurrences limitations to fly VFR on top during darkness is suggested.

Proposal:

It is suggested that EASA act in order to look over the requirements in line with comments above. E.g. add a new paragraph/requirement which limits the possibility to fly on top of clouds during night over water or terrain with limited visual references and specify meteorological conditions for the planning phase.

comment

6898 comment by: *Swiss Helicopter Group*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6958* comment by: *Eliticino SA*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *7310* comment by: *ADAC Luftrettung GmbH*

Meteo conditions :

There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.190 Take-off conditions p. 36

comment *394* comment by: *EHOC*

This is one of three rules that were provided so that a final check against gross error could be completed when approaching the take-off so that the pilot would be satisfied that he had checked the 'take-of conditions', the 'application of take-off minima' and 'fuel and oil supply'; to replace 'be satisfied' with 'ensure' would imply a calculation rather than this check-against-gross-error. This rule would be improved if the wording were changed from 'ensure' to 'be satisfied'.

Paragraph (a)

This too wordy; once FATO has been defined, the acromym should be used.

comment *552* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.190(b): change text as follows:

OPS.GEN.190 Take-off conditions

Before commencing take-off, the pilot-in-command shall ensure that:

(a) according to the information available, the weather at the aerodrome or operating site and, for motor-powered aircraft, the condition of the runway/Final Approach and Take-off Area (FATO) intended to be used, will not prevent a safe take-off and departure; and

(b) the visibility/Runway Visual Range (RVR) ~~**and the ceiling**~~ in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Justification:

For take-off a ceiling limit is usually not required. This would limit LVTO operations.

comment *789* comment by: *KLM*

(b) the applicable aerodrome operating minima should be:

the applicable minima for take off.

It now says here that the minima have to be the landing minima, which is not required when a take off alternate is specified. Ceiling to be deleted as only VIS/RVR is required for take-off

comment *2447* comment by: *Catherine Nussbaumer*

Meteo conditions : There is no possibility to determine in flight the distance and therefore that shall be at pilot's discretion for SAR or HEMS to assess the risk of flying temporarily into reduced visibility against the need to provide emergency medical service see GM OPS.SPA.020.HEMS page 464.

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision

comment *3036* comment by: *AEA*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *3138* comment by: *UK CAA*

Page No: 36

Paragraph No: OPS.GEN.190

Comment:

The requirement placed on the pilot-in-command, before commencing take-off, to "ensure that" according to the information available ….." is too onerous and unachievable. It is proposed that the text be amended to require the pilot to 'be satisfied that'. This was how the requirements are covered in JAR-OPS/EU-OPS.

Justification:

This change will make the requirement more realistic and achievable.

Proposed Text (if applicable):

"Before commencing take-off, the pilot-in-command shall ~~ensure~~ ***be satisfied*** that:"

comment *3626* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *3738* comment by: *Civil Aviation Authority of Norway*

Comment:

The requirement placed on the pilot-in-command, before commencing take-off, to "ensure that" according to the information available ….." is considered to be rather too onerous and possibly unachievable. It is proposed that the

text be amended to require the pilot to 'be satisfied that'. This was how the requirements are covered in JAR-OPS / EU-Ops.

Justification:

This change will make the requirement more realistic and achievable.

Proposed Text

(if applicable):

"Before commencing take-off, the pilot-in-command shall ***be satisfied*** that:"

comment *4267* comment by: *KLM*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *4485* comment by: *TAP Portugal*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *4640* comment by: *British Airways Flight Operations*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement differs from EU-OPS, and appears to be a consequence of mixing requirements for helicopters and aeroplanes. Ceiling only needs be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4876* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *5450* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to

OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *5659* comment by: *ERA*

European Regions Airline Association Comment

OPS.GEN.190 Take-off conditions

Before commencing take-off, the pilot-in-command shall ensure that:.....

(b) The visibility/Runway Visual Range (RVR) **and the ceiling** in the take-off direction are equal to or better than the applicable aerodrome operating minima.

ERA members have noted that the ceiling requirement is new compared to EU OPS which raise the following concerns:

- There is no known justification for it.
- It can be very penalizing in case of acceptable RVR with no ceiling at all (frequent in foggy conditions).

Therefore paragraph (b) should read:

The visibility/Runway Visual Range (RVR) in the take-off direction is equal to or better than the applicable aerodrome operating minima

comment *6240* comment by: *Lufthansa CityLine GmbH*

Lufthansa CityLine has noted that the ceiling requirement is new compared to EU OPS which raise the following concerns:

There is no known justification for it.

It can be very penalizing in case of acceptable RVR with no ceiling at all (frequent in foggy conditions).

Therefore paragraph (b) should read:

the visibility/Runway Visual Range (RVR) in the take-off direction is equal to or better than the applicable aerodrome operating minima

comment *6498* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *6766* comment by: *Icelandair*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *7234* comment by: *AIR FRANCE*

Relevant Text:

b) the visibility/Runway Visual Range (RVR) and the ceiling in the take-off direction are equal to or better than the applicable aerodrome operating minima.

Comment:

This requirement is not in line with EU-OPS. Ceiling should only be taken into account where there is a specific need to see and avoid obstacles on departure and / or for a forced landing (see Appendix 1 (new and old) to OPS 1.430 (Aerodrome Operating Minima) (a) (1) (i)

Proposal:

Realign with EU-OPS

comment *7253* comment by: *ANE (Air Nostrum) OPS QM*

OPS.GEN.190 Take-off conditions

Before commencing take-off, the pilot-in-command shall ensure that:.....

(b) The visibility/Runway Visual Range (RVR) **and the ceiling** in the take-off direction are equal to or better than the applicable aerodrome operating minima.

We have noted that the ceiling requirement is new compared to EU OPS which raise the following concerns:

There is no known justification for it.

It can be very penalizing in case of acceptable RVR with no ceiling at all (frequent in foggy conditions).

Therefore paragraph (b) should read:

(b) The visibility/Runway Visual Range (RVR) in the take-off direction is equal to or better than the applicable aerodrome operating minima

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.195 Approach and landing conditions p. 36

comment *396* comment by: *EHOC*

For the same reasons mentioned in OPS.GEN.185 and 190, this rule would be improved if the wording were changed from `ensure' to 'be satisfied'.

This too wordy; once FATO has been defined, the abbreviation should be used.

comment *1056* comment by: *AECA helicopteros.*

This probably needs to be modified to:

"(c) Except as provided in Part SPA.LVO, the approach may be continued..."

There are different visual references specified for CAT II and CAT III.

comment *3141* comment by: *UK CAA*

Page No: 36

Paragraph No:

OPS.GEN.195 Approach and landing conditions

Comment:

Although this requirement has been copied from JAR/EU-OPS 1, it continues to be deficient, particularly for commercial operations, because it does not specify what landing distance margin should be applied by the pilot-in-command that would result in a safe landing being achieved.

Justification:

In order to ensure an harmonised standard across all operators, it is necessary to quantify the 'in-flight' landing distance factor that should be applied, in the same way that the landing distance factor at despatch is also quantified (albeit in AMC material in these proposals). The value of such a factor needs to be developed by appropriate specialists.

comment *3143* comment by: *UK CAA*

Page No: 36

Paragraph No: OPS.GEN.195

Comment:

The requirement placed on the pilot-in-command, before commencing an approach to land, to "ensure that" according to the information available the conditions are as listed is too onerous and unachievable. It is proposed that the text be amended to require the pilot to 'be satisfied that'. This was how the requirements are covered in JAR-OPS/EU-OPS.

Justification:

This change will make the requirement more realistic and achievable.

Proposed Text (if applicable):

"Before commencing an approach to land, the pilot-in-command shall ~~ensure~~ ***be satisfied*** that …….:"

comment *3736* comment by: *Civil Aviation Authority of Norway*

Comment:

The requirement placed on the pilot-in-command, before commencing an approach to land, to "ensure that" according to the information available the conditions are as listed is considered to be rather to onerous and possibly unachievable. It is proposed that the text be amended to require the pilot to 'be satisfied that'. This was how the requirements are covered in JAR-OPS / EU-Ops

Justification:

This change will make the requirement more realistic and achievable.

Proposed Text

(if applicable):

"Before commencing an approach to land, the pilot-in-command shall ***be satisfied*** that …….:"

comment *4175* comment by: *DGAC*

This paragraph is similar to actual EU-OPS 1.400 in subpart D.

It should be detailed with indications about how a pilot must calculate in flight the landing performances. Particularly when the actual conditions for landing are different from the expected ones at time of dispatching the aircraft (contaminated runway for example).

Besides, the case of an in-flight failure affecting landing performance is not taken into account.

For CAT operations in performance class A : it should be clear whether in-flight checks must be performed by applying a factor to the AFM landing distances (as the dispatch requirements) or other method in order to keep some safe margins from certified landing distances.

This important issue hasn't been considered by JAR- OPS1 and EU-OPS1 but IR-OPS could improve the safety level and comply with the amendment 33 of ICAO annex 6 Part 1 supplement C below by defining an acceptable safety margin :

"7.4 Performance considerations before landing

The operator should provide the flight crew with a method to ensure that a full stop landing, with a safety margin acceptable to the State of the Operator, that is at least the minimum specified in the Type Certificate holder's aircraft flight manual (AFM), or equivalent, can be made on the runway to be used in the conditions existing at the time of landing, and with the deceleration means that will be used."

Moreover in the AMC2 OPS.CAT.A(a)(1) Landing requirements-Aeroplanes, the paragraph (8) requires that "before commencing an approach to land at the destination aerodrome, the pilot in command should ensure that a safe landing can be made".

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.200 Commencement and continuation of approach p. 36-37

comment *397* comment by: *EHOC*

General

It is stated in the explanatory text that "The provisions on commencement and continuation of approach (OPS.GEN.200) transpose Subpart E Appendix 1 to EUOPS 1.430 and JAROPS 3.430." This is not correct and there has

been substantial amendment to the wording (and principles) that were contained in those texts.

Paragraph (a) and (b)

When the Approach Ban was introduced to ICAO Annex 6 in 1999 (AN 11/1.1.26-99/19) - as a result of the accident record, the ICAO Standard was based primarily on the text of in JAR-OPS 1.405 (and the principles of FAR 121.651); this included reference to reported visibility as well as RVR (the JAR text also providing a clause dealing with a convertion of visibility to RVR). Whilst it is understood why JAR-OPS 1.405(b) has been replaced into AMC OPS.GEN.200, the removal of the reference to 'reported visibility' in OPS.GEN.200(a) breaks the link between the objective contained in the IR and the method of compliance. This could introduce the following misunderstandings: (1) the approach ban applies only to landing sites where RVR is reported; (2) the approach ban applies only to precision approaches (i.e. not for non-precision approaches which are not normally dependent upon the reporting of RVR); and (3) there is no ability to utilise a conversion of visibility to runway visual range (Converted Meteorological Visibility (CMV)).

The revision of the previous text from "...if the reported RVR/visibility is less than the applicable minima" to "...is at or above the applicable minima specified for the runway." is incorrect in the following examples: (1) the applicable minima is not for the runway but is a function of a number of elements of which the type of procedure being used is the most significant - i.e. there will be a number of applicable minima for any runway; and (2) the use of 'runway' appears to preclude the approach ban in those cases where there no runway is present (e.g most helicopter procedures).

The wording and intent of the original should be restored; alternatively, the text in (a) could be slightly amended to include 'Converted Meteorological Visibility (CMV)' if it is felt that use of CMV (and the associated definition) would provide more clarity:

(a) ...when the RVR/CMV is at or above the applicable minima.

Paragraph (c)

The text of paragraph (c) is a concatenation of: the original rule for the continuation of the approach - which was primarily concerned with the application of the 'approach ban'; and, the requirement for appropriate 'visual reference' that was contained in the prescriptive requirement for each type of approach (in Appendix 1 to JAR-OPS x.430 one each for ARA, non-precision, Cat I, Cat II and Cat III). It would appear to have been assumed that by including elements (in GEN.200) that were formerly contained in the *'Visual reference'* paragraph of each type of approach procedure, it is not necessary to provide them in the description of each type of approach.

By doing this the clarity, which was previously achieved by providing a general text in 'commencement and continuation of approach', and a precise requirement for the *'visual reference'* in each type of approach, is now missing. This has implication for the approach ban in those procedures for which the 'list' does not represent those precise elements which are required as *visual reference*.

It is recommended: (1) that the elements that are contained in paragraph (c) are removed and the principle reverted to that which formerly existed; and (2) the description for those approaches (non-precision and Cat I) which have been revised to remove the reference to *'visual reference'* are revisited and the original text restored.

The original text should be reinstated - i.e. "The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference is established at the DA/H or MDA/H and is maintained.".

comment *553* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.200(c): change as follows:

(c) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that ~~**at least one of the following visual references for the intended runway**~~ **the required visual reference** is established at the DA/H or MDA/H and maintained:

Justification:

The current text is too specific regarding required visual references and does not allow for CAT IIIB (no DH) operations. Proposed text is according JAR-OPS 1.405 (e). Specific requirements as in the current text can be added in a (new) OPS.CAT.200 or added to AMC OPS.GEN.200

comment *767* comment by: *Swiss Air Ambulance*

(this comment applies especially for helicopter operations):

a) According to OPS.GEN.195 an approach may not be commenced without the RVR being at or above the minimum. This is to restrictive for IFR operations. In my opinion an IFR approach may be commenced and continued below 1000ft regardless of the reported RVR. The decision to land or go-around is taken at the DA/H or MDH/A by the PIC

Pure GPS Approaches:

c) Approach may be continued below MDA when VMC prevail.

comment *773* comment by: *ECA - European Cockpit Association*

Comment , add text as follows:

(a) An instrument approach may be commenced regardless of the reported visibility/RVR.

~~**(a)**~~ **(b)** An instrument approach shall only be continued below 1 000 ft above the aerodrome on the final approach segment when the reported

Runway Visual Range (RVR) is at or above the applicable minima specified for the runway.

~~**(b)**~~ **(c)** If, after passing 1 000 ft above the aerodrome on the final approach segment, the RVR falls below the applicable minimum, the approach may be continued to Decision Altitude/Height (DA/H) or Minimum Descent Altitude/Height (MDA/H).

~~**(c)**~~ **(d)** The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained: [...]

Justification:

<![endif]-->This is according JAR-OPS 1.405 (a). The header of OPS.GEN.200 reads 'Commencement and continuation of approach' but commencement is not mentioned in the current text.

comment *923* comment by: *REGA*

This comment applies especially for helicopter operations:

a) According to OPS.GEN.195 an approach may not be commenced without the RVR being at or above the minimum. This is too restrictive for IFR helicopter operations. An IFR approach may be commenced and continued below 1000 ft regardless of the reported RVR. The decision to land or go-around is taken at the DA/H or MDH/A by the PIC. Additonally heliports (e.g. operating bases or landings sites at hospitals) do not provide RVR informations.

Proposal (a)

An instrument approach shall only be continued below 1000 ft above the aerodrome on the final approach segment when the reported Runway Visual Range (RVR) is at or above the applicable minima specified for the runway or alternatively the decision can be taken Decision Altitude/Height (DA/H) or Minimum Descent Altitude/Height (MDA/H).

Proposal (c)

Approach may be continued below MDA when VMC prevail.

comment *934* comment by: *French SAMU using helicopters for medical transport*

OPS .GEN .200

This chapter is too much aerodrome oriented, helicopters are conducting Point In Space approaches or departures from operating sites (hospitals) where the equipment does not provide RVR information but visibility and cloud base information; In addition the important fact is that after bkeaking clouds the pilots does identify visual cues which will permit him indentify his landing site and the flight path he must follow to land.

(c) should be modified in order to give such a possibility by introducing

(x) Other visual cues accepted by the Authority(such as FATO identifying flash light)

comment *1058* comment by: *AECA helicopteros.*

Referred to paragraph (c)

This probably needs to be modified to:

"(c) Except as provided in Part SPA.LVO, the approach may be continued..."

There are different visual references specified for CAT II and CAT III.

comment *3037* comment by: *AEA*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *3234* comment by: *Eurocontrol CND*

OPS.GEN.200 Commencement and continuation of approach

Regarding (a) it is noted that this provision would mean that operators from outside the EU could continue their approaches down to DA/H whilst community operators can not continue below 1 000 ft.

Regarding (c), it is noted that, according to the NPA it is sufficient that e.g. visual reference is established at the DA/H and maintained whilst ICAO Annex 6, definition of DA/H, Note 2, indicates that "… that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path."

comment *3474* comment by: *M Wilson-NetJets*

Original text:

(a) An instrument approach shall only be continued below 1 000 ft above the aerodrome on the final approach segment when the reported Runway Visual Range (RVR) is at or above the applicable minima specified for the runway.

Suggested new text:

(a) An instrument approach shall only be continued below 1 000 ft above the aerodrome on the final approach segment when the Runway Visual Range (RVR) is at or above the applicable minima specified for the runway.

Comment/suggestion:

The RVR can also be vissually assessed by the pilot(s) on final to be above the required minimums or CMV can be used. Therefore, the use of the word reported will not allow the pilot(s) to use all the inputs available to assertain the actual RVR.

comment *3537* comment by: *Boeing*

NPA 2009-02b, Part Ops

OPS.GEN.200, Commencement and continuation of approach

Page 36 of 464

BOEING COMMENT:

By referring to "1000 feet above the aerodrome" (i.e., *"An instrument approach shall only be continued below 1 000 ft above the aerodrome on the final approach segment …"*), an essential change of current procedures would be required.

For this requirement, we request that EASA revert to the original wording (regarding "outer marker") that is currently in EU-OPS 1.405.

JUSTIFICATION: By specifying the "approach gate" at *1000 feet above the aerodrome*, additional new crew procedures would be required, which will necessitate additional training and updating of FCOM publications -- all at a significant cost to operators. (The cost would need to be reflected in the RIA.) In light of this, we request that the proposed language in the NPA be deleted and replaced with the current EU-OPS 1 language for this same item. This will ensure consistency of requirements.

comment *3627* comment by: *AUSTRIAN Airlines*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may

be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *4042* comment by: *Virgin Atlantic Airways*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS to include "other visual references"

comment *4269* comment by: *KLM*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *4486* comment by: *TAP Portugal*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *4647* comment by: *British Airways Flight Operations*

Comment:

The text has been changed from that in EU Ops without need.

Proposal:

Revert to the text in EU Ops 1.405

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4877* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for

the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *5451* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *5661* comment by: *ERA*

European Regions Airline Association Comment

- Reference to altitude above ground in place of an "outer marker" is considered positive; however, shouldn't this reference also be made to an altitude addition to minima? There are approaches with higher minima values and this could be interpreted that the pilot may go below. The suggestion is maybe: "1000 ft or approach minima, whichever is higher".

(c) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and

maintained:

- Paragraph "(x) other visual references accepted by the Authority" of Appendix 1 to EU-OPS1.430 appears to have been removed. But this is of paramount important in approaches with very high MDA/H such as Ajaccio/France where it is not possible to see any of the references (1) to (9) simply because when reaching the MDA/H, the runway is far beyond minimum visibility. ERA members are therefore seeking the reinstatement of paragraph **"(x) other visual references accepted by the Authority"**

comment *6218* comment by: *Irish Aviation Authority*

Comment:

(c) - Inappropriate wording re approach and landing below DA/H or MDA/H

Justification:

Needs further clarification

Proposed text:

The pilot-command shall only continue an approach and landing below DA/H or MDA/H when at least one of the following visual references… etc

comment *6247* comment by: *Lufthansa CityLine GmbH*

(c)

Paragraph "(x) other visual references accepted by the Authority" of Appendix 1 to EU-OPS1.430 appears to have been removed. But this is of paramount important in approaches with very high MDA/H such as Ajaccio/France where it is not possible to see any of the references (1) to (9) simply because when reaching the MDA/H, the runway is far beyond minimum visibility. Lufthansa CityLine is therefore seeking the reinstatement of paragraph " **(x) other visual references accepted by the Authority"**

Reference to altitude above ground in place of an "outer marker" is considered positive; however, shouldn't this reference also be made to an altitude addition to minima? There are approaches with higher minima values and this could be interpreted that the pilot may go below. The suggestion is maybe: "1000 ft or approach minima, whichever is higher".

comment *6768* comment by: *Icelandair*

Relevant Text:

The approach may be continued below DA/H or MDA/H and the landing may

be completed provided that at least one of the following visual references for the intended runway is established at the DA/H or MDA/H and maintained:

(1) Elements of the approach light system; (2) The threshold; (3) The threshold markings; (4) The threshold lights; (5) The threshold identification lights; (6) The visual glide slope indicator; (7) The touchdown zone or touchdown zone markings; (8) The touchdown zone lights; or (9) Runway/Final Approach and Take-off Area (FATO) edge lights.

Comment:

The lack of reference to '**other visual references'** is not in line with EU-OPS.

Proposal:

Realign with EU-OPS indicating "other visual references"

comment *7149* comment by: *Virgin Atlantic Airways*

Relevant Text:

New Text

Comment:

Text relating to commencement of an approach has not been included as per EU-OPS 1.405

Proposal:

Insert the following text from EU-OPS 1.405 as a new paragraph (a):

(a) The commander or the pilot to whom conduct of the flight has been delegated may commence an instrument approach

regardless of the reported RVR/Visibility but the approach shall not be continued beyond the outer marker, or equivalent

position, if the reported RVR/visibility is less than the applicable minima (see OPS 1.192).

comment *7257* comment by: *ANE (Air Nostrum) OPS QM*

OPS.GEN.200 (a) and (b)

Reference to altitude above ground in place of an "outer marker" is considered positive; however, shouldn't this reference also be made to an altitude addition to minima? There are approaches with higher minima values and this could be interpreted that the pilot may go below. The suggestion is maybe: "1000 ft or approach minima, whichever is higher".

OPS.GEN.200 (c)

Paragraph "(x) other visual references accepted by the Authority" of Appendix 1 to EU-OPS1.430 appears to have been removed. But this is of

paramount important in approaches with very high MDA/H where it is not possible to see any of the references (1) to (9) simply because when reaching the MDA/H, the runway is far beyond minimum visibility.

We are therefore seeking the reinstatement of paragraph :

"(10) other visual references accepted by the Authority"

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.205 Fuel and oil supply p. 37-38

comment *23* comment by: *George Knight*

This regulation is may be too restrictive for self-sustaining and self-launching sailplanes (powered sailplanes), and TMGs if they are considered to be aeroplanes, rather than gliders. Rules are not clear into which category they fall.

Self-sustaining and self-launching sailplanes may only have 30 minutes endurance, or less, when the batteries are fully charged or the fuel tanks full. They should be excluded from the scope of the regulation.

comment *399* comment by: *EHOC*

General

The two elements of the original rule which dealt with 'Fuel policy' and 'Fuel and oil supply' have been condensed into a single rule. Although this follows the ICAO scheme, the number of AMCs concerned with fuel planning probably indicate that the two elements should remain split: one concerned with the planning; and the other that meets the operational take-off requirement.

The operational aspect might be covered by:

"Before commencing a take-off the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions."

The planning aspect (at least for CAT) could contain the following text:

"The operator shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation."

Pargraphs (e)

The alleviation from the fuel carriage rule was previously permitted for non-complex helicopters under specific operating conditions; this has not been carried across to OPS.GEN:

"on completion of the flight, or series of flights, the fuel remaining is not less than an amount of fuel sufficient for 30 minutes flying time at normal cruising (this may be reduced to 20 minutes when operating within an area providing continuous and suitable precautionary landing sites). Final reserve fuel must be specified in the operations manual."

comment *639* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.205(c): Reference to "normal cruising altitude" is not adequate.

(c) Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than:

(1) 30 minutes fuel at **normal cruising altitude** by day; or

(2) 45 minutes fuel at normal cruising speed by night.

Justification:

Cruising altitude varies enormously and also the fuel required for performing this operation. For consistency purposes, the reference should be made to the altitude specified in the ATS flight plan.

comment *640* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.205(d)(1):

This paragraph reinforces the comment made above (ref.: OPS GEN 155 (e)) This fuel requirement precludes that in 45 minutes after ETA, the required meteorological visual conditions shall be met.

comment *790* comment by: *KLM*

(d) (2)

There is 2x to fly stated in (i) and (ii).

This last one should be :

(ii) and land with 30 minutes holding fuel, to cover for a low fuel emergency, calculated at holding speed at 1500 ft above aerodrome elevation in standard conditions and with the estimated weight on arrival.

comment | *821* | comment by: *Reto Ruesch*

Before commencing a take-off the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment | *876* | comment by: *Condor Flugdienst GmbH - FRA HO/R*

Refering to OPS.GEN.205(d)(2)(ii):Change fuel for flight at normal cruising altitude to 30 minutes, instead of 45 minutes.

comment | *1054* | comment by: *AECA helicopteros.*

Following the ICAO scheme, two elements should remain split: one concerned with the planning; and the other that meets the operational take-off requirement.

The operational aspect might be covered by:

"Before commencing a take-off the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions."

The planning aspect (at least for CAT) could contain the following text:

"The operator shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation."

comment | *1123* | comment by: *Heli Gotthard*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1170* comment by: *Stefan Huber*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1241* comment by: *Air Zermatt*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1292* comment by: *Air-Glaciers (pf)*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1789* comment by: *Heli Gotthard AG Erstfeld*

Fuel and oil supply

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1839* comment by: *claire.amos*

There appears to be an overriding rule for 45 mins at cruising altitude is 30 min at 1500 ft in standard.

comment *1855* comment by: *SHA (AS)*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *1910* comment by: *Ingmar Hedblom*

Why is this specific reference to the basic regulation stated here? It is not so for other paragraphs.

comment *1911* comment by: *Ingmar Hedblom*

OPS.GEN.205(c)

There is no requirement for a fuel reserve stated for a local flight.

Corresponding U.S.FAR.91 requirement is:

(a) No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) During the day, to fly after that for at least 30 minutes; or

(2) At night, to fly after that for at least 45 minutes.

This U.S. definition means that a fuel reserve is also required for a local flight where the (first point of intended) landing is at the same place as the take-off.

Proposal: Introduce a requirement for a fuel reserve also for a local flight

comment *1912* comment by: *Ingmar Hedblom*

OPS.GEN.205(c)

Why 30 minutes at ...cruising **altitude** by day... and 45 minutes at cruising **speed** by night?

Change (1) to 30 minutes fuel at normal cruising **speed** by day

comment *1933* comment by: *Berner Oberländer Helikopter AG BOHAG*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2015* comment by: *Ulrich Baum*

OPS.GEN.205 (c) refers to (1) normal cruising altitude by day and (2) normal cruising speed by night.

This appears to be inconsistent. I think it should say "cruising speed" for both day and night. Please verify.

comment *2019* comment by: *Heliswiss AG, Belp*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2062* comment by: *Airbus S.A.S.*

Provisions for Aeroplanes are new.

Rationales for OPS.GEN.205 (c) and (d) would be appreciated.

comment *2090* comment by: *Dirk Hatebur*

Fuel and oil supply : Before commencing a take-off, the pilot in command

shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2120* comment by: *Heliswiss*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2128* comment by: *Heliswiss NV*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2263* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Fuel policy for helicopters

Comment / Proposal:

Modify text:

(e) Except for local commercial operations and non-commercial flights [...].

comment *2321* comment by: *heliswiss ag, belp*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and

oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment

2342 comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

AEROPLANES

(D) (2)(ii)

Should read 30 minutes for turbine engined aircraft. refer to EU-OPS 1.005(a)

comment

2415 comment by: *Jan Brühlmann*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment

2448 comment by: *Catherine Nussbaumer*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment

2547 comment by: *Walter Mayer, Heliswiss*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following

text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2650* comment by: *AOPA-Sweden*

(a):

Why a reference here to Annex 4, the only one in the whole NPA?

comment *2651* comment by: *AOPA-Sweden*

(c) (2):

AOPA-Sweden does not see the logic to use cruising altitude during day and cruising speed during night and also the reason for more fuel during night-time than day-time

comment *2834* comment by: *Philipp Peterhans*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *2925* comment by: *Pascal DREER*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *3038* comment by: *AEA*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *3039* comment by: *AEA*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *3146* comment by: *UK CAA*

Page No: 37

Paragraph No: OPS.GEN.205

Comment:

The rule title refers to fuel and oil supply but there is no supporting text concerning oil supply.

Justification:

Rule title must reflect content of the rule.

Proposed Text (if applicable):

Rename title

OPS.GEN.205 Fuel supply

comment *3410* comment by: *Peter SCHMAUTZER*

For Turbo Jet Aircraft the reserve fuel should be 30 minutes.

comment *3543* comment by: *IAOPA Europe*

OPS.GEN.205 c)

Why does the rule refer to "normal crusing altitude" by day and to "normal crusing speed" by night?

What applies if the flight changes from night to day during the flight? If anyting it must be the condition at the time of expected arrival at the destination that should be relevant.

comment *3544* comment by: *IAOPA Europe*

Ref OPS.GEN.205 d)

For turbine powered aircraft the rules for CAT allows operations with a 30 minutes fuel reserve. It should be possible for non-commercial operators to follow the same procedure.

It seems contrary to the whole philosophy of aviation regulation to impose more strict requirements on non-commercial operations.

comment *3628* comment by: *AUSTRIAN Airlines*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight

safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *3953* comment by: *HDM Luftrettung gGmbH*

Ops Gen 205: Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation

comment *4044* comment by: *Virgin Atlantic Airways*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *4107* comment by: *Benedikt SCHLEGEL*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *4176* comment by: *DGAC*

(b): *"BALLOONS …For flights conducted in accordance with VFR"*.

Are there balloon operations conducted in accordance with IFR?

comment *4177* comment by: *DGAC*

(c)(1) and (2) :

Why are the fuel reserves expressed differently for VFR flights by day and VFR flights by night?

Proposal : Amend the text as follows:

"(1) 30 minutes fuel at normal cruising altitude by day ; or

(2) 45 minutes fuel at normal cruising ~~speed~~ **altitude** by night."

comment *4270* comment by: *KLM*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *4271* comment by: *KLM*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial

operators

comment *4487* comment by: *TAP Portugal*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *4488* comment by: *TAP Portugal*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *4517* comment by: *Christophe Baumann*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *4878* comment by: *Deutsche Lufthansa AG*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *4879* comment by: *Deutsche Lufthansa AG*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *5281* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

AEROPLANES

(c) Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than:

(1) 30 minutes fuel at normal cruising altitude by day: or

(2) 45 minutes fuel at normal cruising speed by night

Comment:

1. Non-commercial flights with other than complex motor-powered aircraft should not be excluded. Reserve fuel should be used even when flying around an airport.

2. The paragraph is confusing and does not specify what the requirements are for operations with non complex motor-powered aircraft. Why use cruising ALTITUDE in (1), and cruising SPEED in (2)?

Proposal (including ***new text***):

AEROPLANES

(c) ~~Except for non-commercial flights with other than complex motor-powered aircraft~~ taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than:

(1) 30 minutes fuel at normal cruising ~~altitude~~ ***speed*** by day: or

(2) 45 minutes fuel at normal cruising speed by night

comment

5283 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

HELICOPTERS

(e) Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than 20 minutes fuel at best range speed.

Comment: There should be a minimum reserve also for non-commercial flights with non-complex aircraft.

Proposal: For non-commercial flights with other than complex motor-powered aircraft. State a minimum reserve fuel of at least 10 minutes for flights remaining within 50 nm of the operating site.

comment

5302 comment by: *Light Aircraft Association UK*

Paragraph a).

The reference to the basic regulation is confusing and should be deleted.

Paragraph c).

The LAA finds this rule to be too prescriptive for private flying. For non-commercial, private flights, the carriage of reserve fuel quantities should be at the commander's discretion. AMC guidelines could recommend 30 minutes fuel.

comment

5452 comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *5453* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *5797* comment by: *Ph.Walker*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *5846* comment by: *Fédération Française Aéronautique*

French FFA supports the proposed rule OPS.GEN.205 (c) for VFR flights in (1) by day, and in (2) by night.

FFA supports also the alleviation for "local" VFR flights as they are defined in the rule.

comment *6126* comment by: *Hans MESSERLI*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *6235* comment by: *Irish Aviation Authority*

Comment:

(a) & (f) -

The term "supply" is inappropriate

(a) there is no ref to "oil" in text applicable to OPS GEN 205

Justification:

Clarification

Proposed text:

Change heading to Fuel Policy

Remove ref to oil and/or provide a statement as the policy for oil requirements.

comment *6296* comment by: *Heliswiss International*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *6356* comment by: *Trans Héli (pf)*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following

text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *6501* comment by: *Thomas Cook Airlines Ltd*

AEROPLANES

(c) Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than:

(1) 30 minutes fuel at normal cruising altitude by day; or

(2) 45 minutes fuel at normal cruising speed by night.

(d) For flights conducted in accordance with IFR the amount of fuel to be carried shall be sufficient:

(1) to fly to the aerodrome/operating site of intended landing, and thereafter to fly 45 minutes at normal cruising altitude, when no alternate is required or no suitable alternate is available (i.e. the aerodrome/operating site is isolated and no suitable alternate is available); or

(2) when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter: (i) to fly to the specified alternate; and (ii) to fly at least 45 minutes at normal cruising altitude.

Current basic EU-Ops procedures (*EU-Ops 1.255)* require 30mins final reserve fuel to be carried on all flights. The above proposed rule defines an increase in this fuel to 45mins.

Thomas Cook would make the following observations with respect to the proposed rule:

1. We are unaware of safety related issues being raised in respect of the current 30 minute final reserve fuel proving insufficient.

2. If there is an increase required, we are not aware of a previously circulated, currently in process or proposed safety case that evidentially supports an increase in final reserve fuel from the current 30 minutes to 45 minutes.

3. On what analysis has 45 minutes final reserve fuel been selected if no safety case has been made?

4. Finally, if a safety related case exists to increase final reserve fuel, would this not have been implemented within EU-Ops at transition?

• The safety case for an increase in final reserve fuel is not supported by current commercial air transport operations and experience or evidence based analysis.

• There appears no material evidence that supports an increase to 45 minutes reserve fuel.

• Were there such a requirement, this would already have been proposed and implemented.

Recommendation:

We would strongly propose that the long term impact of such a change is detrimental to a commercial airline organisation. The increase proposed would not of itself materially enhance flight safety and safe aircraft operations. It is not supported by a robust safety case.

The existing 30 minutes final reserve fuel is sufficient and does not compromise safe commercial air transport operations in any way. Current EU-Ops 30 minutes reserve fuel should be retained and incorporated into proposed EASA Ops Implementing Rules.

comment *6727* comment by: *Greger Ahlbeck*

Paragraph text: Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than:

Comment: There is no requirement for a fuel reserve stated for a local flight. A flight can be delayed due to traffic or unforeseen rapid change in weather.

Proposal (including ***new text***):

Introduce a requirement for a fuel reserve also for a local flight

comment *6770* comment by: *Icelandair*

Comment:

Reading paragraph OPS.GEN.205 in conjunction with OPS.CAT.205 is confusing and unclear.

It outlines that the new rule structure is not user friendly and leads to many misunderstandings which could potentially reduce flight safety

Proposal:

Realign with EU-OPS

comment *6773* comment by: *Icelandair*

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same. EASA's proposal to have less stringent safety rules for non-commercial operators is unacceptable since it might put the life of EU citizens at risk in case of accidents involving non-commercial operators. Furthermore, if an airline performs both commercial and non-commercial flights, it would mean that he would have to follow two different set of requirements depending on the nature of the flight. This is not practical and could adversely impact flight safety.

Proposal:

Realign the rules for non-commercial operators with those for commercial operators

comment *6807* comment by: *EFLEVA*

Comment on OPS.GEN 205 a)

Page 37

The EFLEVA considers that the reference to the basic regulation is confusing. Suggest that this reference be deleted.

comment *6809* comment by: *EFLEVA*

Comment on OPS.GEN 205 c)

Page 37

The EFLEVA suggests that for non-commercial, private flights, the quantity of reserve fuel should be at the commander's discretion.

comment *6900* comment by: *Swiss Helicopter Group*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *6923* comment by: *Christian Hölzle*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *6961* comment by: *Eliticino SA*

Fuel and oil supply : Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

comment *7000* comment by: *IACA International Air Carrier Association*

AEROPLANES (d)

EASA should specify that the 45 minutes applies to piston engines, whereas 30 minutes should apply to turbine engines, refer to Appendix I to EU-OPS 1.005(a).

comment *7220* comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU agrees on the proposal made in OPS.GEN.205 (c) not to require formal reserves of fuel for VFR local flights operated by non commercial organisations on non complex aeroplanes.

comment *7312* comment by: *ADAC Luftrettung GmbH*

Fuel and oil supply :

Before commencing a take-off, the pilot in command shall be satisfied that aircraft carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions. The planning aspect (at least for CAT) could contain the following text:The operator shall establish a fuel policy for the purpose of flight planning and inflight replanning to ensure that every flight carries sufficient fuel for the

planned operation and reserves to cover deviations from the planned operation.

comment *7395* comment by: *Axel Schwarz*

No exemptions are required under (c). This requirement should be applicable to all operations and read: "Flights conducted in accordance with VFR shall ...."

comment *7399* comment by: *Axel Schwarz*

(d): Normally holding is required at 1500 ft above the destination aerodrome, not at normal cruising altitude.

Turbine powered aircraft only require 30 minutes as final reserve. See OPS.CAT.205.

The requirement should be adapted accordingly.

comment *7564* comment by: *AOPA UK*

Why a reference here to Annex 4, the only one in the whole NPA?

comment *7565* comment by: *AOPA UK*

AOPA UK does not see the logic in using cruising altitude during day and cruising speed during night.

What is the reason for more fuel to be carried during night-time than during day-time!

comment *7631* comment by: *Cirrus Design Corporation*

This rule implies that reserve fuel must be carried onboard at all times. However, the traditional approach to this has been that the flight must only be planned in accordance with these reserve fuel quantities. Typically, allowance has been made for reduced fuel reserves if the operator encounters non-forecast weather or other conditions that require alteration of the flight plan. Cirrus recommends the AMC for this requirement states that the reserve fuel minimum can be further reduced when in the best interest of flight safety.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking p. 38

comment *401* comment by: *EHOC*

General

1. The philosophy of numbering is not understood with the GEN and CAT rules. They share the same number but deal with different concepts (which is reflected in the respective titles). Would it not be advantageous to provide a different number for the CAT rule (as it was in the original rule)?

2. Missing from this rule is the prohibition from refuelling with Avgas or wide-cut fuels when passengers are embarking or disembarking; although this is contained in the CAT Section, it is important enough to be applied to GA as well. Annex 6 Part II Chapter 2.2.3.7 contains the note:

"Note 3.— Additional precautions are required when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used."

Appropriate text might be:

"(b) an aircraft shall not be re/defuelled with Avgas or wide-cut fuels when passengers are embarking, on board or disembarking."

Renumber existing (b) to (c).

Remove OPS.CAT.210.

Paragraph (b)(2)

This may not be possible (or even necessary) for helicopters (it could be possible if two-way communications does not imply radio communications).

comment *641* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.210(b): change as follows:

(b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless:

(1) it is attended by the pilot-in-command or other qualified personnel **under the authority of the pilot in command,** ready to initiate and direct an evacuation of the aircraft; and

(2) for commercial operations, two-way communication is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel required **and subject to the pilot-in-command's authority**.

Justification:

It is paramount to highlight that an evacuation should only be ordered by

the pilot-in-command or any other crew member under the authority of him/her. This is consistent with paragraph 7.c. of Annex IV to regulation (EC) No 216/2008.

comment *1050* comment by: *AECA helicopteros.*

add to paragraph (b) (1)Missing from this rule is the prohibition from refuelling with Avgas or wide-cut fuels when passengers are embarking or disembarking; although this is contained in the CAT Section, it is important enough to be applied to GA as well. Annex 6 Part II Chapter 2.2.3.7 contains the note:

"Note 3.— Additional precautions are required when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used."

Appropriate text might be:

"(b) an aircraft shall not be re/defuelled with Avgas or wide-cut fuels when passengers are embarking, on board or disembarking."

Renumber existing (b) to (c).

Remove OPS.CAT.210.

comment *1051* comment by: *AECA helicopteros.*

Paragraph 2.

It may not be possible (or even necessary) for helicopters (it could be possible if two-way communications does not imply radio communications). Suggest an AMC saying:

AMC OPS.GEN.210(b)(2)
TWO WAY COMMUNICATIONS

Two way communications could be achieved by means of pre-agreed hand signals, or via two-way radio or intercom communication.

comment *1402* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Fueling during embarkment.

Comment / Proposal:

evacuation during an embarkment is very difficult and needs special non standard procedures adequat to the situation. Such precautions shall be defined.

comment *3040* comment by: *AEA*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to AEA.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *3140* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

Refuelling will never be with passengers around, the only possibility will be to change complete closed lpg-cylinders.

There is no danger to do so.

The normal procedure is, to leave the inflation-cylinder at the ground before launch.

comment *3629* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained

between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to AUSTRIAN.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *4052* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified personnel ready to initiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which is different from 'maintained' (see EU-OPS).

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

In addition "*(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel required"*

should instead read:

*(2) For commercial operations, two-way communications **are** maintained between the personnel involved in the operation supervising the refuelling*

and the pilot-in-command or other other qualified personnel required

comment *4178* comment by: *DGAC*

(b)(2) :

This wording is different from the wording of EU-OPS in item 2 of Appendix 1 to OPS 1.305.

Amend the text as follows :

"(2) for commercial operations, two-way communication is ~~maintained~~ **established and remained available** between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel required"

comment *4272* comment by: *KLM*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to KLM.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *4489* comment by: *TAP Portugal*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are

embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to AEA.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *4880* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to Lufthansa.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *4909* comment by: *Virgin Atlantic Airways*

Relevant Text:

OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking

(a) A balloon shall not be refuelled with passengers embarking, on board or disembarking.

(b) All other aircraft shall not be refuelled when passengers are embarking, on board or

disembarking, unless:

(1) it is attended by the pilot-in-command or other qualified personnel ready to

initiate and direct an evacuation of the aircraft; and

(2) for commercial operations, two-way communication is maintained between the

personnel involved in the operation supervising the refuelling and the pilot-in-command

or other qualified personnel required.

Comment:

Suggest word "maintained" in point 2 is changed to "available" as maintained suggests a constant contact between the two sides.

Proposed Text:

(2) for commercial operations, two-way communication is ~~maintained between~~ available to the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel required.

comment *5124* comment by: *Ryanair*

Any requirement to 'maintain' two way communication during refuelling has no basis in safety. Refuelling aircraft with aviation jet fuel is a low risk activity. This proposal would create the requirement for a dedicated crew member whose sole function would be to monitor this routine function.

Proposal

Revert to EU-OPS wording [Appendix 1 to OPS 1.305, para 2]

"A two way communication is ~~maintained~~ shall be established....."

comment *5455* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are

embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to AEA.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *6237* comment by: *Irish Aviation Authority*

Comment:

(b) - Wording is inappropriate

Justification:

Clarification

Proposed text:

Ref to the text in JAR-OPS 3.305 i.e. include ref to Avgas or wide-cut type fuel and/or when a mixture of fuels is in use also wording on the evacuation process to be expanded.

comment *6775* comment by: *Icelandair*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified perssonel ready to inititiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which different from 'maintained' (see EU-OPS). This EASA proposal will therefore severely impact flight operations without clear safety justification and is unacceptable to AEA.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *7236* comment by: *AIR FRANCE*

Relevant Text:

b) All other aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless :

(1) It is attended by the pilot-in-command or other qualified personel ready to initiate and direct an evacuation of the aircraft and

(2) For commercial operations, two-way communications is maintained between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other other qualified personnel required

Comment:

For safety reasons, it is essential that ALL operators of complex motor-powered aircraft are subject to identical safety rules (commercial operators as well as non-commercial operators) since the safety risks are the same.

Moreover, this requirement is not in line with EU-OPS (Appendix 1 to EU-OPS 1.305) which states that a two-way communication system 'shall be established and remain available' which is different from 'maintained' (see EU-OPS) and would severely impact current flight operations.

Proposal:

Align the rules for non-commercial operators with those of commercial operators. Realign with Appendix 1 to EU-OPS 1.305.

comment *7529* comment by: *Pascal JOUBERT*

Please clarify (and replace) 'A balloon shall not be refuelled' by 'Fuel cylinders must not be refuelled'.

Justification: one cylinder is used to inflate the envelope and embark passengers. This empty bottle may be replaced by a filled one. This action may be interpreted as a refuelling action. Of course, only refuelling a

cylinder is dangerous for hot air balloons.

This CRD do not assume gas balloons (Hydrogen).

comment *7640* comment by: *European Balloon Corporation*

Please clarify (and replace) 'A balloon shall not be refuelled' by 'Fuel cylinders must not be refuelled'.

Justification: one cylinder is used to inflate the envelope and embark passengers. This empty bottle may be replaced by a filled one. This action may be interpreted as a refuelling action. Of course, only refuelling a cylinder is dangerous for hot air balloons.

This CRD do not assume gas balloons (Hydrogen).

comment *7655* comment by: *Asociación Española de Pilotos de Aerostación (AEPA)*

OPS GEN 210 (a): It would say "a fuel cylinder shall not be refuelled" instead of "a balloon shall not be refuelled

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.215 In-flight fuel checks p. 38

comment *24* comment by: *George Knight*

Should exclude sailplanes and powered sailplanes.

comment *1381* comment by: *Royal Danish Aeroclub*

It does not make sense to check fuel on electric driven aircrafts and sailplanes without engines.

The text should be changed to this:

"In-flight fuel checks shall be carried out on each flight at regular intervals, except in the cases of electric driven engines or sailpalnes without engine."

comment *1403* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Fuel and oil supply is abrogated by OPS CAT 205.

Comment / Proposal:

Part OPS.GEN shall be limited to general principles and not show any figures. Moreover, OPS.CAT 205 and following show different figures. The present project, thus, is contradictory, missleading and does not meet good rulemaking practice. Alternative solution: clearly state that the OPS.GEN.205 is valid for non commercial operations only.

comment *2652* comment by: *AOPA-Sweden*

This rule is almost impossible to comply with in some older GA airplanes, because a dip-stick is allowed to measure available fuel, and it is very impractical for a single pilot to creep out on the wing at regular interval to check the fuel during a flight.

comment *5284* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Sailplanes should be excluded.

comment *5321* comment by: *Norwegian Air Sports Federation*

This paragraph is not applicable for sailplanes.

comment *7455* comment by: *David ROBERTS*

It should be made clear that this paragraph is not applicable to sailplanes.

comment *7566* comment by: *AOPA UK*

This rule is almost impossible to comply with in some older GA airplanes, because a dip-stick is allowed to measure available fuel, and it is very impractical for a single pilot to creep out on the wing at regular interval to check the fuel during a flight.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.220.B Operational limitations - balloons p. 38

comment *7461* comment by: *David ROBERTS*

sub para (a) may restrict a small number of balloon operations, for example in more northerly latitidues in summer, and record attempts in conditions such as full moon.

Proposal: This proposed rule should be discussed with the balloning experts (from industry) to see whether it is unduly restrictive on the sport of ballooning. Maybe the draft rule could be limited to 'commercial' operations.

comment *7530* comment by: *Pascal JOUBERT*

Please exempt tethered balloons (as far as a tethered flight is considered as a flight).

Justification: Some commercial activities may require night tethered flights like night glow. Passengers may be on board during night glow, considering the tether mean safe.

comment *7641* comment by: *European Balloon Corporation*

Please exempt tethered balloons (as far as a tethered flight is considered as a flight).

Justification: Some commercial activities may require night tethered flights like night glow. Passengers may be on board during night glow, considering the tether mean safe.

B. I. Draft Opinion - Part-OPS - Subpart A - Section II - OPS.GEN.222 Ground proximity detection p. 38

comment *2393* comment by: *Denis Ferranti Meters*

OPs.Gen,435 (a) (2) Remove ELT(S) and substitute PLB for small private helicopters. Reasons based on cost and number of private hels flying in such conditions/routes.

comment *6032* comment by: *Irish Aviation Authority*

Comment:

This paragraph is far too vague and gives no guidance as to what is an acceptable method of detection or corrective action.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Text should be expanded or the paragraph deleted.

comment *7632* comment by: *Cirrus Design Corporation*

This rule needs clarification for the circumstances when the corrective action contradicts Air Traffic Control clearance or airspace requirements. The corrective action for a ground proximity warning may require the pilot to violate another operating rule. Cirrus recommends an AMC be included for this rule stating when this rule should take precedence over another rule.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III p. 39

comment *727* comment by: *ECA - European Cockpit Association*

Comment on Section III – Weighing / Mass and balance:

General comment on weighing and mass and balance :

The extensive transfer of OPS section 1 material into AMC or even GM material opens the field to many possibilities of unharmonized and potentially dangerous practices. In particular, standard masses assessment campaigns shall be very closely monitored, and the use of the results of such campaigns shall be strictly limited to the relevant types of operations and/or operator.

comment *2960* comment by: *Valair AG Switzerland*

Art 84 Flights over a hostile environment

Art.84 : Consultations with helicopter experts involved in the drafting of this provision showed that this was directed to certain types and that it would depend on the discretion of the state.The final decision shall remain with the National Authority.Operations over a hostile environment outside a congested area shall be conducted with a Class A or equivalent and Class B helicopters, if the flight time over this area does not exceed 50% of total flight time, and the flight time over areas not enabling a safe forced landing does not exceed 5 minutes.

comment *6924* comment by: *Christian Hölzle*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.300 Operating limitations p. 39

comment *402* comment by: *EHOC*

Paragraph (a)

It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include:

"(a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) **or the Operations Manual if more restrictive**.

comment *823* comment by: *Reto Ruesch*

It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1063* comment by: *AECA helicopteros.*

It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include:

"(a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1124* comment by: *Heli Gotthard*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1172* comment by: *Stefan Huber*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1242* comment by: *Air Zermatt*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1293* comment by: *Air-Glaciers (pf)*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1404* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

(a) new formulation: AFM must be respected.

Comment / Proposal:

AFM contains all relevant limitations.

comment *1610* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1790* comment by: *Heli Gotthard AG Erstfeld*

Operating limitations

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1856* comment by: *SHA (AS)*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *1934* comment by: *Berner Oberländer Helikopter AG BOHAG*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2091* comment by: *Dirk Hatebur*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2121* comment by: *Heliswiss*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2129* comment by: *Heliswiss NV*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2322* comment by: *heliswiss ag, belp*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM).

For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2407* comment by: *Denis Ferranti Meters*

Ops.Gen410 (b) (3) requires that a helicopter should have 2 means of displaying attitude should VFR not be maintained.

This for small helicopters is overkill. Pilots must be trusted to maintain sensible VFR. Once VFR is not possible then the ac should have landed or turned around. The chances of loss of VFR and the single AI at the same time are very small.

There are also problems with overcomplicating small helicopters and the weight penalty whilst small is cumulative. (2 ELTs, Flotation kit, second AI, mandated dinghy etc)

Cost also, at a time when the aim should be to keep flying at the GA level affordable not exclusive, is a factor

Recommendation: The requirement for the second AI/AH in small VFR helicopters should be dropped.

comment *2416* comment by: *Jan Brühlmann*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2449* comment by: *Catherine Nussbaumer*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2548* comment by: *Walter Mayer, Heliswiss*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2653* comment by: *AOPA-Sweden*

(a):

Very few GA-airplanes have an AFM, please also allow a Pilot Operating Handbook (POH).

comment *2836* comment by: *Philipp Peterhans*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *2926* comment by: *Pascal DREER*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *3147* comment by: *UK CAA*

Page No: 39

Paragraph No: OPS.GEN.300 (a)

Comment:

Addition of text on same topic from EU-OPS OPS 1.605 is required to ensure an equivalent level of safety.

Justification:

For a variety of operational safety reasons the Operations Manual may be more restrictive than the Aeroplane Flight Manual in terms of loading, mass and centre of gravity specifications.

Proposed Text (if applicable):

(a) During any phase of operation, the loading, the mass and, except for balloons, the centre of gravity (CG) of the aircraft shall comply with any limitation specified in the Aircraft Flight Manual (AFM) ***or the Operations Manual if more restrictive***.

comment *3766* comment by: *Civil Aviation Authority of Norway*

Comment: It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to amend the text as indicated.

Justification:

Best practice and clarification.

Proposed Text

(if applicable):

(a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) ***or the Operations Manual if more restrictive.***

comment *3954* comment by: *HDM Luftrettung gGmbH*

Ops Gen 300: Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *4108* comment by: *Benedikt SCHLEGEL*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *4179* comment by: *DGAC*

(a): An operational CG envelope has to be calculated by the operator (for complex aircraft and for commercial operations). The CG has to be within this envelope. Thus, the CG shall comply with any limitation specified in the AFM or in the operation manual.

Proposed text:

Add the following text at the end of (a) :

“and in the operations manual”

comment

4398 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment

4519 comment by: *Christophe Baumann*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment

5798 comment by: *Ph.Walker*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment

6039 comment by: *Irish Aviation Authority*

Comments:

In paragraph (b) helicopters have been excluded from the requirement to comply with noise certification standards.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Text should be expanded to include "and helicopters", .

comment *6127* comment by: *Hans MESSERLI*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *6297* comment by: *Heliswiss International*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *6357* comment by: *Trans Héli (pf)*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *6901* comment by: *Swiss Helicopter Group*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *6965* comment by: *Eliticino SA*

Operating limitations : It is not unusual for the CofG to be limited if, for example, using Standard Load Plans (which are not described in the AFM). For this reason it would be appropriate to include: (a) ...shall comply with any limitation specified in the Aircraft Flight Manual (AFM) or the Operations Manual if more restrictive.

comment *7567* comment by: *AOPA UK*

Very few GA-airplanes have an AFM, please also allow a Pilot Operating Handbook (POH).

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.305 Weighing p. 39

comment *1382* comment by: *Royal Danish Aeroclub*

Weighting should be able to be done by a qualified person - also without a Part-M or Part-145 approval.

Weighting i.e. a sailplane is not complicated and could be done by a normal person able to read the weighting instructions. A number of pilots are able to do this themselves.

To demand a approved organisation to make the weighting is just adding costs to the general aviation and air sports and should be avoid.

We suggest the text to read:

"(d) The weigthing shall be accomplished by the manufactor of the aircraft or by a maintenance organisation or person qualified for the task."

comment *1611* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1913* comment by: *Ingmar Hedblom*

The whole paragraph about weighing is related to airworthiness and defines maintenance tasks and should be transferred to Part M. The responsibility to plan all maintenance activities is now on the CAMO. M.A.708(b)10 requires: *ensure that the mass and balance statement reflects the current status of the aircraft* and this includes control of aircraft weight.

Make appropriate changes to Part M to cater for weighing

comment *2287* comment by: *Austro Control GmbH*

(c)

(1) at least every 4 years if individual aircraft masses are used; or

(2) at least once every 9 years if aeroplane fleet masses are used.

It ist suggested to extend

*(1) ... every **5** years....*

*(2) ... every **10** years....*

Justification:

there is no safety risk if this period extended and has a pratical reason.

(d)

The weighing shall be accomplished by the manufacturer of the aircraft or by a maintenance organisation approved in accordance with Part-M or Part-145 ***as appropriate.***

Justification:

The text gives the impression, that weighing can be done by either a Part M or part 145 maintenance organization, but for aircraft in CAT and for large aircraft maintenance has to be done by a part 145 organisation.

comment *2345* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Several operators use a specialised company that does not necessarily carry it's own Part-M or Part-145 approval. The addition "approved i.a.w. PAR-M or Part-145" is new. Can it be clarified that this can be accomplished by a company acting under an approved organisation i.e. " or working under the quality system of an approved organistion as permitted by 145.A.75(B)

This needs to be addressed .

Proposal:

Add at the end "... or working under the quality system of such approved organisation as permitted per 145.A.75(b)

comment *2353* comment by: *Dassault Aviation*

Technical comment :

Page 39 OPS.GEN.305 §(c) Periodicity of Weighing: Even if there is no change compared to JAR/EU-OPS1.605(b), we suggest to improve the text by replacing the 4 years of weighing periodicity by 4.5 years when individual aircraft masses are used, because it will allow easier planning at Operator level when transition to aeroplane fleet masses is envisaged, since this latest is 9 years of weighing periodicity. If this comment is not accepted, another solution to ease this transition would be to downgrade the weighing periodicity (4 years and 9 years) to an AMC, and add an tolerance of 6 months period in the weighing periodicity.

comment *2654* comment by: *AOPA-Sweden*

This paragraph should be transferred to Par M, AOPA-Sweden does not see this as an operative issue.

comment *2969* comment by: *REGA*

Remark: Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment *3560* comment by: *Walter Gessky*

OPS.GEN.305 Weighing

(d) The weighing shall be accomplished by the manufacturer of the aircraft or by a maintenance organisation approved in accordance with Part-M or Part-145 **as appropriate**

Justification:

The text give the impression, that weighing can be done by either a Part M or part 145 maintenance organisation, but for aircraft in CAT and for large aircraft maintenance has to be done by a part 145 organisation.

comment *3885* comment by: *FOM ANWB MAA*

OPS.GEN.305 Weighing

(d) The weighing shall be accomplished by the manufacturer of the aircraft or by a maintenance organisation approved in accordance with~~ Part-M or~~ Part-145.

Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment

3933 comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(d) Remark:Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment

4535 comment by: *ADAC Luftrettung GmbH*

Part M is not approving maintenance organisations

Remark:Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment

5207 comment by: *Graham HALLETT*

OPS.GEN.305(c):

With the wording '….and aircraft used in commercial operations….' this would appear to include balloons used in commercial ops. It is not clear if this is just badly worded and this is not intended to apply to balloons at all, or if it is a deliberate attempt to include balloons. If it is intended to include balloons, this is clearly nonsense and must be rejected. A balloon will undergo negligible changes to its weight during its lifetime unless it is modified or components change, which is addressed by para b above. It should be reworded with the addition of an 'except balloons' clause – eg at the start so it reads:

c) Except for balloons, the mass and……

comment

5303 comment by: *Light Aircraft Association UK*

This entire section should be deleted and moved to Part-21 and Part-M as it refers only to initial entry into service and maintenance tasks.

comment

5326 comment by: *Norwegian Air Sports Federation*

Weighting of sailplanes and simple aircrafts is an relatively easy task, and should be done by an competent person.

Proposal:

(d)The weighting shall be accomplished by the manufacturer of the aircraft or a person qualified for the task.

comment *5423* comment by: *ALFA-HELICOPTER*

(d) Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here.

comment *5769* comment by: *Norsk Luftambulanse*

Remark:Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment *5872* comment by: *Danish Powerflying Union*

We suggest weighing at least every 5 years, which are the limitation today.

comment *6565* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.305(c)

Wording in the NPA

(c) The mass and CG of complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations shall be re-established by actual weighing:

(1) at least every 4 years if individual aircraft masses are used; or

(2) at least once every 9 years if aeroplane fleet masses are used.

Our proposal

As discussed on Comment 6273 certain flights of non commercial organizations and persons should not be considered as commercial operation although payments for cost sharing are exchanged. So this requirement should not apply for these operations.

Issue with current wording

Non appropriate for flights of non commercial organizations and persons even if payments for cost sharing are exchanged

Rationale

As discussed in detail in comment 6273 several activities of private or club

operations can not be considered as commercial operations although a certain amount of compensation is paid to share costs.

comment *6597* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.305 Weighing

(d) The weighing shall be accomplished by the manufacturer of the aircraft or by a maintenance organisation approved in accordance with ~~Part-M or~~ Part-145.

Part M is not approved to perform Weight and balance measurements of aircraft and should therefore be removed here

comment *6655* comment by: *DGAC*

Proposal: Accept weighing by another organisation than Part M or Part 145 and which offers comparable standards.

Justification: Restricting to Part M and Part 145 organisations could be too heavy.

comment *6810* comment by: *EFLEVA*

The EFLEVA suggests that this paragraph should be deleted and moved to Part-21 and Part-M. This paragraph only refers to initial airworthiness and continued airworthiness tasks.

comment *7024* comment by: *IACA International Air Carrier Association*

(d)

Add at the end "…or working under the quality system of such approved organisation as permitted per 145.A.75(b). "

Is there an equivalent reference in Part-M ?

Several operators use a specialised company which does not necessarily carry its own Part-M or Part-145 approval.

comment *7369* comment by: *Europe Air Sports, VP*

Weighing of a non-complex aircraft s not a huge technical demand. Any person with a Part 66 qualification can do that. In addition, it is part of the pilot owner and Part M regulations. We recommend to delete "(d)" as this is a requirement which needs incorporation in Part M.

comment *7401* comment by: *Axel Schwarz*

This requirement should be part of Part-M.

comment *7568* comment by: *AOPA UK*

This paragraph should be transferred to Part M.

This is not an operational issue.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.310 Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 39

comment *66* comment by: *Air Southwest*

OPS.GEN.310 (b) uses the word 'replicable.' This is an adjective describing the noun 'replica.' One dictionary definition is "The ability to make repeated measurements on the same sample or component where there is no significant physical change to the measurand."

By the use of this word it is not clear as to the meaning of this paragraph. Does it mean: 'where M&B data is electronically calculated, the flight crew is to have a paper copy of the electronic calculations'?

comment *318* comment by: *Aero-Club of Switzerland*

Repetitive pleasure flights on the same day?

comment *404* comment by: *EHOC*

General

It is not clear that a complex rule should be established with bullet list of

points. Simplistically, the intent of the rule could just have been achieved with "(a) An operator shall establish a mass and balance system." - providing the list in an AMC. The original text set objectives for most of the elements contained in this list. An improvement to the rule could be achieved with the following which provides objectives for each element:

(a) An operator shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

(1) the mass of all operating items and crew members included in the aircraft dry operating mass by weighing or by using standard masses. The influence of their position on the helicopter centre of gravity shall be determined.

(2) the mass of the traffic load, including any ballast, by actual weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses.

(3) the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the Operations Manual.

(4) the principles and methods involved in the loading and in the mass and balance system. This system must cover all types of intended operations. These shall include:

(i) load distribution;

(ii) take-off mass, landing mass and zero fuel mass, if applicable;

(iii) CG positions, if applicable;

(5) preparation of the mass and balance documentation to enable the pilot-in-command to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded.

(6) preparation of the mass and balance documentation to enable the pilot-in-command to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded.

(b)...

(c) For commercial operations:

(1) Mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

(2) The person preparing the mass and balance documentation shall be named on the document.

(3) The person supervising the loading of the helicopter shall confirm by signature that the load and its distribution are in accordance with the mass and balance documentation.

(4) This completed document must be acceptable to the commander, his acceptance being indicated by countersignature or equivalent.

comment

1064 comment by: *AECA helicopteros.*

It is not clear that a complex rule should be established with just bullet list of points. Simplistically, the intent of the rule could just have been achieved with "(a) An operator shall establish a mass and balance system." and then providing the list in an AMC.

The original text set objectives for most of the elements contained in this list. An improvement to the rule could be achieved with the following text:

(a) An operator shall establish a mass and balance system specifying how the following items are accurately determined for each flight

(1)the mass of all operating items and crew members included in the aircraft dry operating mass by weighing or by using standard masses. The influence of their position on the helicopter centre of gravity shall be determined.

(2) the mass of the traffic load, including any ballast, by actual weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses.

(3) the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the Operations Manual.

(4) the principles and methods involved in the loading and in the mass and balance system. This system must cover all types of intended operations. The system shall address:

(i) load distribution;

(ii)take-off mass, landing mass and zero fuel mass, if applicable;

(iii) take-off mass, landing mass and zero fuel mass, if applicable;

(5) the mass and balance documentation to enable the pilot-in-command to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded.

(b) For commercial operations:

(1) Mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

(2) The person preparing the mass and balance documentation shall be named on the document.

(3) The person supervising the loading of the helicopter shall confirm by signature that the load and its distribution are in accordance with the mass and balance documentation.

(4) This completed document must be acceptable to the commander, his acceptance being indicated by countersignature or equivalent.

comment *1612* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *2655* comment by: *AOPA-Sweden*

When reading a paragraph like this, AOPA-Sweden gets a feeling that the agency doesn't want to take responsibility for the next generation of very light jets. It doesn't make any sense to have the same procedures for an individual operating a Piper PA-47 and a major airline operating an Airbus A380, i.e. who shall be the qualified person supervise the loading of a VLJ? Therefore AOPA-Sweden thinks that most of the VLJs will remain in the registers of third countries.

comment *3041* comment by: *AEA*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *3042* comment by: *AEA*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *3124* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

to C: Balance documentation and load-distribution cannot be made for balloons.

comment *3411* comment by: *Peter SCHMAUTZER*

Written Mass and Balance is required also if the correct mass and balance is obvious. If a Pilot Operator flies alone a Cheyenne it is obvious that the mass and balance is correct.

comment *3545* comment by: *IAOPA Europe*

Why does item 4) contain a reference to "under the supervison of qualified personnel"?

All other items in the list refers to data that must be calculated. The reference to personnel does not seem appropriate here.

comment *3630* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *3844* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *4054* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *4180* comment by: *DGAC*

(b): Clarify what "replicable" mean

comment *4273* comment by: *KLM*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *4274* comment by: *KLM*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *4490* comment by: *TAP Portugal*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *4491* comment by: *TAP Portugal*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *4881* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is a) unclear, and b) new compared to EU-OPS.

Proposal:

Delete the requirement.

comment *4882* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *5163* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *5245* comment by: *Graham HALLETT*

OPS.GEN.310.

With the wording '….and aircraft used in commercial operations….' this would appear to include balloons used in commercial ops. If so, the provisions of this paragraph seem unnecessarily onerous for balloon operations. Particularly so when the definition of commercial operations for some types of balloon flying is unclear (eg, sponsored operations, etc). In the majority of cases (except perhaps for 'public transport' with balloons), there is no difference between 'commercial' operations and private operations. All the requisite calculations for loading are done as part of the basic pre flight routine in accordance with the flight manual and are fairly trivial for balloons. Documenting it all in some form prior to each flight adds nothing but a bureaucratic burden to the operations. Again, an 'except balloons' in the opening line should be included. If balloons are to be included, this must only be balloons engaged in Commercial Air Transport, and the clause should be reworded to reflect that.

comment *5456* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *5457* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *6263* comment by: *Lufthansa CityLine GmbH*

Paragraph b) says that the computation shall be replicable by the crew.

- What is meant by this?
- To what tolerance will the computation be considered acceptable?

Computerised load sheets may be seat row based, while manual computation may use average compartment values. This will create differences in values calculated using these systems. Some manual systems use graphical means instead of mathematical. Calculating by hand an A380 passenger load using seat row location, could be lengthy.

comment *6272* comment by: *DAeC LV NRW e.V.*

OPS.GEN.310 Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations

COMPLEX MOTOR-POWERED AIRCRAFT USED IN NON-COMMERCIAL OPERATIONS AND AIRCRAFT USED IN COMMERCIAL OPERATIONS

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight: (1) aircraft dry operating mass and CG, if applicable; (2) mass of the traffic load; (3) mass of the fuel load; (4) aircraft loading under the supervision of qualified personnel; (5) load distribution; (6) take-off mass, landing mass and zero fuel mass, if applicable; (7) CG positions, if applicable; and (8) preparation and disposition of all documentation. (b) The mass and balance computation based on electronic calculations shall be replicable by the flight crew.

AIRCRAFT USED IN COMMERCIAL OPERATIONS

(c) For commercial operations, mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

OPS.GEN.310(c)

Wording in the NPA

AIRCRAFT USED IN COMMERCIAL OPERATIONS

(c) For commercial operations, mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

Our proposal

(c) For commercial operations except on non complex aircraft, mass and balance documentation shall be prepared prior to each flight specifying the

load and its distribution.

Issue with current wording

Not appropriate for Passenger rides on non complex aircraft like e.g. Sailplanes or non complex airplanes even if emunaration is taken typically to share costs.

Rationale

Passenger rides on non complex aircraft in most cases do not require complex weight and balance calculations especially in the case of 2 seaters. Documentation prior to each such flight is not an appropriate requirement.

comment *6522* comment by: *Egon Schmaus*

OPS.GEN.310 ... commercial operations

add para (d)

(d) Aircraft operation of non commercial organizations and persons will not be considered as commercial flight, as long as remuneration is only based on cost sharing of direct flight costs.

Reason:

Private pilots invite friends and other persons to accompany them. There, often passengers take over costs for fuel and fees, or the club hourly rates of this flight without the pilot earning extra money on that.

comment *6566* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.310(c)

Wording in the NPA

AIRCRAFT USED IN COMMERCIAL OPERATIONS

(c) For commercial operations, mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

Our proposal

As discussed on Comment 6273 certain flights of non commercial organizations and persons should not be considered as commercial operation although payments for cost sharing are exchanged. So this requirement should not apply. Never the less the exemption should be further extended:

(c) For commercial operations except on non complex aircraft, mass and balance documentation shall be prepared prior to each flight specifying the load and its distribution.

Issue with current wording

Not appropriate for Passenger rides on non complex aircraft like e.g.

Sailplanes or non complex airplanes even if emunaration is taken typically to share costs.

Rationale

Passenger rides on non complex aircraft in most cases do not require complex weight and balance calculations especially in the case of 2 seaters. Documentation prior to each such flight is not an appropriate requirement.

comment *6777* comment by: *Icelandair*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Delete the requirement.

comment *6779* comment by: *Icelandair*

Relevant Text:

(a) An operator of a complex motor-powered aircraft used in non-commercial operations or an aircraft used in commercial operations shall establish a mass and balance system specifying how the following items are accurately determined for each flight:

...

(4) aircraft loading under the supervision of qualified personnel;

...

(8) preparation and disposition of all documentation.

Comment:

It is not logical and confusing to have those requirements under this paragraph since the other items are items for which clear figures can be specified whereas this is not the case for items 4) and 8)

Proposal:

Realign with EU-OPS.

comment *6868* comment by: *M Wilson-NetJets*

Original text:

See NPA text

Suggested new text:

The following insertion is suggested:

AMC5 OPS.GEN.310 (a) (2) (5) (6) (7) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations

Aeroplanes

1. For aeroplanes with a maximum certified take-off mass of less than 45.360kg and a MPSC of 19 or less, the applicable mass and centre of gravity may be demonstrated to be in limits of those stated in Aeroplane Flight Manual by determining the most forward and most aft centre of gravity for both the lowest and highest expected traffic load and expected fuel mass.

2. Passenger mass may be taken from a passenger statement which may be used, afterwards, for a maximum of 5 years for adults and 2 years for children. Infants may be counted at a standard mass of 10kg. When a passenger has passed from one category of passenger (infant, child) to another category of passenger (child, adult) a new statement of the passenger's mass must be obtained.

3. Standard baggage mass may be determined as follows:

a. Small sized baggage piece (maximum volume 0.05m^3) – 5kg each

b. Medium sized baggage piece (maximum volume 0.1m^3) – 10kg each

c. Large sized baggage piece (maximum volume 0.2m^3) – 20kg each

d. Larger sized baggage pieces must be weighed prior loading

4. When determining any expectable traffic load mass for the purpose of determining the centre of gravity under this AMC ,each passenger mass should be decreased by 5kg for each passenger seated aft the DOM centre of gravity, and increased by 5kg for each passenger seated forward of the DOM centre of gravity.

5. When determining the most forward expectable centre of gravity

a. If more than one baggage compartment is available or more centre of gravity stations are available for one single baggage compartment the division of baggage in the baggage compartment(s) should be determined in advance and included in the mass and balance documentation or, if standard, in the operations manual.

b. the expected passenger seating configuration should be from the most forward passenger seat(s) backwards starting with the passenger with the highest mass and ending with the passenger with the lowest mass.

c. One expected mass and centre of gravity value should be used for fuel and oil supplies

6. When determining the most aft expectable centre of gravity

a. If more than one baggage compartment is available or more centre of

gravity stations are available for one single baggage compartment the division of baggage in the baggage compartment(s) should be determined in advance and included in the mass and balance documentation or, if standard, in the operations manual.

b. the expected passenger seating configuration should be from the most aft passenger seat(s) forward starting with the passenger with the highest mass and ending with the passenger with the lowest mass

c. One expected mass and centre of gravity value should be used for fuel and oil supplies

7. When the method described in point 5 or 6 above results in the centre of gravity being outside the limits, as stated in the Aeroplane Flight Manual, a fixed seating assignment may be produced that results in the centre of gravity being within the limits stated in the Aeroplane Flight Manual. This fixed seating assignment should be included in the mass and balance documentation and be checked prior to taxi by the Flight Crew or Cabin Crew (as applicable).

Comment / suggestion

On many aerodromes used by business aeroplane operators it is not possible to weigh passengers or baggage. Therefore, a reasonable solution should be available to proof the safe centre of gravity and traffic load.

comment *7238* comment by: *AIR FRANCE*

Relevant Text:

b) the mass and balance computation based on electronic calculations shall be replicable by the flight crew.

Comment:

This requirement is unclear.

Proposal:

Should be clarified.

comment *7323* comment by: *ANE (Air Nostrum) OPS QM*

Paragraph b) says that the computation shall be replicable by the crew.

What is meant by this?

To what tolerance will the computation be considered acceptable?

Computerised load sheets may be seat row based, while manual computation may use average compartment values. This will create differences in values calculated using these systems. Some manual systems use graphical means instead of mathematical. Calculating by hand an passenger load using seat row location, could be lengthy.

comment *7569* comment by: *AOPA UK*

When reading this paragraph, AOPA UK gets a feeling that the agency does not understand proportionate regulation. It does not make sense to have the same requirements for an individual operating a Piper PA-47 and an airline operating an Airbus A380, i.e. who shall be the qualified person supervise the loading of a VLJ?

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.315 Performance - general p. 40

comment *936* comment by: *EHOC*

Paragraph (b)

The requirement has been incorrectly transposed from JAR-OPS 0; occupants have been included in the text when, formerly (and in Annex II, Chapter 3.1.2), third parties only were protected.

comment *1420* comment by: *EUROCOPTER*

§ (b):

"Except when necessary for take-off or landing at an approved operating site, an aircraft shall only be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons, if it is able to make a landing without undue hazard **~~to the aircraft occupants or~~** to third parties, in the event of a power-unit failure."

Substantiation: the aim of the requirement, as applicable to all types of operations, should be to mitigate the risk to third parties, not to the aircraft occupants, taking into account that mitigation of the risks to the aircraft occupants is dealt by the other parts CAT, COM, and SPA.

comment *1613* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *3148* comment by: *UK CAA*

Page No: 40

Paragraph No: OPS.GEN.315 (b)

Comment:

The sub-paragraph is superfluous as the requirement is covered by sub-paragraph (a) in that flight over or into congested areas is covered by the relevant State Rules of the Air.

This sub-paragraph should be removed.

Justification:

Unnecessary text whose purpose is covered by State Rules of the Air.

Proposed Text (if applicable):

~~(b) Except when necessary for take-off or landing at an approved operating site, an aircraft shall only be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons, if it is able to make a landing without undue hazard to the aircraft occupants or to third parties, in the event of a power-unit failure.~~

comment *3765* comment by: *Civil Aviation Authority of Norway*

Comment: Need to define 'open air assembly of persons' in AMC material?

Justification:

The NCAA defines this to mean more than 1000 persons.

Proposed Text

(if applicable):

Except when necessary for take-off or landing at an approved operating site, an aircraft shall only be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons, notified or estimated to be more than 1000 persons, if it is able to make a landing without undue hazard to the aircraft occupants or to third parties, in the event of a power-unit failure.

comment *3862* comment by: *M Wilson-NetJets*

Original text:

An aircraft shall only be operated if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes/operating sites used, taking into account the charting accuracy of any charts/maps used.

Suggested new text:

No suggested text

Comment / suggestion:

This rule does not specify if during emergency situations (mainly loss of engine thrust/power) the provisions are also applicable or not. Clarification required.

comment *4181* comment by: *DGAC*

(b)

First of all the term "approved operating site" is not defined in OPS.GEN.010 (there is only a definition of "operating site"). What does it mean?

Second of all the aim of this paragraph should be to mitigate third party risk, not the risk for aircraft occupants.

Justification:

Refer to annex 6 vol 3:

"3.1.4 Where helicopters are operated to or from heliports in a congested hostile environment, the competent authority of the State in which the heliport is situated shall specify the requirements to enable these operations to be conducted in a manner that gives appropriate consideration for the risk associated with a power-unit failure."

Proposed Text:

Amend (b) as follows:

"Except when necessary for take-off or landing at an **aerodrome or an** ~~**approved**~~ operating site **as accepted by the authority**, an aircraft shall only be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons, if it is able to make a landing without undue hazard ~~**to the aircraft occupants or**~~ to third parties, in the event of a power-unit failure."

comment *5304* comment by: *Light Aircraft Association UK*

Paragraph b).

Although this requirement is slightly different from the UK Air Navigation Order, the LAA supports this proposal.

comment *6041* comment by: *Irish Aviation Authority*

Comment:

In paragraph (b) there is no mention of property on the ground.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Text should be expanded to include "and property",

comment *6813* comment by: *EFLEVA*

Comment on OPS.GEN 315 b)

Page 40

The EFLEVA supports the wording of this rule regarding flights over "open air" assemblies.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.320.A Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 40

comment *451* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.320.A: under OPS.GEN.320.A(a) add:

(a) When determining the maximum permitted take-off mass, the following shall be taken into account:

[...]

(5) The accelerate-stop distance shall not exceed the accelerate-stop distance available.

Justification:

See comment 448 on OPS.CAT.326.A. The original requirements from EU-OPS 1.490(b) are of equal importance and status and as such should be included in the rule under OPS.GEN.320.

comment *911* comment by: *CAA-NL*

Comment regarding:

(3) a single value of V1 shall be used for the rejected and continued take-off; and

Suggestion CAA-NL:

Add that this is not appl. Voor single engine aircraft.

comment *1405* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

(a) (4) ?????

Comment / Proposal:

Even after thoughtful discussion on international level we could not find any sensefull meaning of the rule . . . EASA shall explain what it might have wanted to say.

comment *1499* comment by: *Airbus*

Affected paragraphs:

- OPS.GEN.320.A(a)(1), p. 40
- OPS.CAT.326.A, p. 68
- AMC1 OPS.CAT.326.A § 1.b, p. 296

Comment:

These provisions as written are unclear. A consistency check is needed for provisions on take-off distance vs. TODA/clearway, in relation with categories of operations and aeroplane performance classes.

comment *1614* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1683* comment by: *Dassault Aviation*

Technical comment.

Page 40 OPS.GEN.320.A(a)(3): single V1 - it is Dassault proposal to make §(a)(3) only applicable to commercial operations so that there is no change compared to JAR/EU-OPS1.490 and 1.565. This will allow non-commercial operators to have a V_{STOP} different from V_{GO} as permitted by §6.2.2 to AMC25.1591.

comment *2288* comment by: *Austro Control GmbH*

Recommendation is to extend the headline of this pragraph with the wording

"...certificated under CS 25 conditions"

Justification:

For CS23 certified aircraft single value V1 are usually and wet or contaminated runway data are mostly not available.

comment *2382* comment by: *IDRF e.V. (association of regional airports)*

Airplanes certified in accordance with FAR/JAR/CS 23 "normal category" are not required to demonstrate and publish performance data for take-off and net climb with one engine inop.

Complex motor-powered airplanes with two or more turboprop engines and a MTOM of less than 5,7 tons and a passenger seating of 9 or less should be exempted from the requirement to consider an engine failure during take-off and climbout.

Remark: EU-OPS consider the fact of not-avialable datas and require correction factors to compensate for the missing one-engine-out data.

comment *2656* comment by: *AOPA-Sweden*

V1 does not exist for a single engine aircraft, there is no alternative than to apply brakes in case of engine failure whatever speed.

comment *3071* comment by: *AOPA Switzerland*

OPS.GEN.320.A should only be applicable to commercial operations, whether complex or non-complex aeroplanes.

comment *3150* comment by: *UK CAA*

Page No: 40

Paragraph No: OPS.GEN.320.A (a)(1)

Comment:

This rule should refer to the calculated take-off run/distance.

Justification:

Clarification.

Proposed Text (if applicable):

(a)(1) the ***calculated*** take-off distance shall not exceed the take-off distance available….

(a)(2) the ***calculated*** take-off run shall not exceed the take-off run available

comment *3261* comment by: *Aero-Club of Switzerland*

Definition of "clearway distance"?

comment *3546* comment by: *IAOPA Europe*

OPS.GEN.320.A

Since continuing a take-off is not an option for a single engine aircraft or for marginally powered multi-engine aircraft (typically FAR 23 aircraft) the calculation of a V1 is meaningless. There is no such speed where the take-off can be continued. Therefore a V1 does not exist.

In case of an engine failure on the ground the only option is to apply brakes and stop the aircraft. In most cases if the engine failure occurs just after take-off the procedure for such aircraft will also be to reland and apply brakes.

OPS.GEN.320.B

For the same reason as stated under OPS.GEN.320.A it does not make any sense to require a single engine aircraft to be able to stop within the runway available. A V1 is not defined since there is no speed where the aircraft can continue its takeoff.

The proposed wording presumes that any multi-engine aircraft can continue its take-off after a certain speed. That is not the case - and effectively the proposed wording would ground all complex multi-engine aircraft which are certified according to FAR 23 and which cannot continue a take-off after an engine failure.

Both rules should only apply to aircraft which are certified to continue a take-off after an engine failure - they are aerodynamically meaningless for all other aircraft. Whether the aircraft is complex or non-complex does not have anything to do with these characteristics.

comment *3561* comment by: *Walter Gessky*

OPS.GEN.320A(a)(3)

Comment:

It shall be noted that certain data according (a) (3) and (4) are not always available or adequately approved.

comment *3584* comment by: *PPL/IR Europe*

para (b) has the implication of imposing an unneccessary restriction on light mulit-engine turboprop aircraft. Currently, all aircraft over 5.7t and all jet aircraft have to comply with balanced field lenth for departure. All others do not. Under EASA OPS, (non-complex) piston aircraft and single-engine turborprops will not have to comply with para (b).

Therefore, the practical effect of para (b) for non-commercial flight is solely on light (under 5.7t) twin turboprops in private operations. We do not see any need for this restriction, and it may have the undesirable consequence of forcing private operators who require flexibility for short-field operations from turboprop twins into using less safe turboprop singles or piston twins. We do not believe this outcome is merited. We believe para (b) should be amended to exempt multi-engine turboprop aircraft under 5.7t.

The Type Certification regime has adequately dealt with departure performance requirements for private flight and we do not believe stakeholders interests are served by EASA imposing new rules that have not had a proper analysis and review, which is well beyond the scope of the rulemaking process at this point.

comment *4182* comment by: *DGAC*

(a)(3) – V1

Proposal:

- renumber text in (b) as (b)(1)

- move (a)(3) to a new paragraph (b)(2)

Justification:

This paragraph applies to complex motor-powered aeroplanes and aeroplanes used in CAT.

However for performance class B there concept of V1 does not make any sense as the rejected take-off is not formally taken into account for that class of performance.

The requirement in (a)(3) only applies when the rejected take-off is taken into account as per (b).

Note: The explanatory note states that IR OPS is designed to avoid duplication of text, however the text in (a)(3) is repeated in AMC1 OPS.CAT.326.A 1.d (p. 296).

comment *4183* comment by: *DGAC*

(b) - complex motor-powered aeroplanes :

The minimum width of a runway is a parameter which is determined during certification processes by testing the maximum lateral deviation with the

critical engine failure during take-off acceleration. In the Regulation (CE) 216/2008 annex iV Essential rules page 41, § 4.c (v) concerning performance criteria, is not limited to length criteria but "size" then the width of the runway has to be considered in addition to runway/TODA and ASDA lengths as a limitation. Certification rules should also require that these data figures in AFM in order.

Besides, the definition of a contaminated runway (OPS.GEN.010(13)) is based on a surface area which is defined by "required length and width being used" : then the required width must be available.

comment

5285 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a)(3) a single value of V1 shall be used for the rejected and continued take-off; and

Comment:

Non-complex motor-powered aircraft with piston engines should be excluded from paragraph (3).

comment

5887 comment by: *SWISS AERODROMES ASSOCIATION*

At least the complex motor-powered aircraft in non commercial operations should be exempted from these requirements

comment

6502 comment by: *UK CAA*

Page No: 40

Paragraph No:

OPS.GEN.320.A

Comment:

There should also be a clear requirement for all aeroplanes to comply with the WAT (climb) limitations for take-off.

Justification:

The purpose of WAT limits is to ensure that the aeroplane has acceptable minimum climb or acceleration capability to a reasonable height above the take-off and landing aerodrome. Thus, compliance with the WAT limitations should be a basic but important safety requirement for all types of operation. For those Class B aeroplanes which do not have WAT data in their AFMs/POHs, AMC material is also proposed.

Proposed Text (if applicable):

(i) Insert a new paragraph (a) as follows:-

(a) ALL AEROPLANES USED IN ALL OPERATIONS. The take-off mass must not exceed the maximum take-off mass specified in the Aeroplane Flight Manual for the pressure altitude and the ambient temperature at the aerodrome at which the take-off is to be made.

(ii) Add a new AMC OPS.GEN.320(a) as follows:-

CLASS B AEROPLANESIf the Aeroplane Flight Manual does not contain the necessary information to comply with OPS.GEN.320(a), the take–off mass at the altitude and the air temperature at the aerodrome at which the take-off is to be made must not exceed the mass at which the aeroplane is capable, in the en route configuration and with all engines operating within the specified maximum continuous power conditions, of a steady rate of climb of 700 feet per minute if it has retractable landing gear and of 500 feet per minute if it has fixed landing gear.

(iii) Renumber existing paragraphs.

comment *7405* comment by: *Axel Schwarz*

(a)(3): A decision speed V1 is not defined for all aeroplanes (e.g. Performance Class C, or single-engine turbojets). Add "if applicable".

comment *7570* comment by: *AOPA UK*

V1 does not exist for a single engine aircraft, there is no alternative than to apply brakes in case of engine failure whatever speed when the aircraft is still on the ground.

comment *7633* comment by: *Cirrus Design Corporation*

A speed should be specified at which a single-engine airplane must make a full stop within the remaining available runway. Typically, V1 would be the certified decision speed and would be assumed to be used for this requirement. However, the aircraft doesn't begin departing the ground until Vr, which could be interpreted as the required stopping speed. Since V1 is the speed used for published runway data, Cirrus recommends this requirement specify V1 for single-engine airplanes.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.325 En-route - Critical engine inoperative - complex motor-powered aircraft p. 40

comment *989* comment by: *REGA*

Helicopters are made for landings outside of aerodrome (infrastructure).

Proposal (OPS.GEN.325)

...shall be able to continue the flight to an aerodrome or for helicopters to a suitable landing site....

comment *1615* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *3151* comment by: *UK CAA*

Page No: 40

Paragraph No:

OPS.GEN.325 En-route - Critical engine inoperative - complex motor-powered aircraft

Comment:

There is a variety of terms used to refer to the height at which aircraft should fly to avoid obstacles.

This rule uses the phrase "minimum obstacle clearance altitude", which AMC.OPS.CAT 170 explains is one of three methods of calculating 'minimum flight altitudes'.

OPS.GEN.170 uses 'terrain clearance altitude' for IFR circumstances (which may not accurately cover over water flight).

Justification:

Clarity and accuracy for this safety-critical rule is essential.

Proposed Text (if applicable):

OPS.GEN.325 En-route - Critical engine inoperative - complex motor-powered aircraft

In the event of a critical engine becoming inoperative at any point along the route, a multi-engine complex motor-powered aircraft shall be able to continue the flight to an aerodrome without flying below the minimum ~~obstacle clearance~~ *flight* altitude at any point.

(Whatever term is chosen, this should be standard throughout.)

comment *3585* comment by: *PPL/IR Europe*

This is excessively restrictive for private flight in the planning and possible route limitations it imposes. We do no believe there is any evidence for this requirement, and we are not aware of any safety threat ever recorded to a private flight due to drift-down in the event of an engine failure in a multi-engine turbine aircraft.

This has the perverse outcome that a private opertor could be better off operating a single-engine turbine aircraft over terrain which might impose a route restriction on a twin turbine aircraft, which we believe is non-sensical.

The paragraph should be redrafted to apply only to Commercial operations.

comment *3887* comment by: *FOM ANWB MAA*

OPS.GEN.325 En-route - Critical engine inoperative - complex motor-powered aircraft

In the event of a critical engine becoming inoperative at any point along the route, a multi-engine complex motor-powered aircraft shall be able to continue the flight to an aerodrome, or suitable landing site for a helicopter ,without flying below the minimum obstacle clearance altitude at any point.

In the interest of safety continuation of the flight to sites that do not meet the definition of an aerofrome should be allowed as well.

comment *3934* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Add: ..or suitable landing site for a helicopter.

comment *4184* comment by: *DGAC*

Where is the definition of the minimum obstacle clearance altitude ?

comment *4399* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Definition of 'complex motor-powered aircraft' is missing and should be defined in OPS.GEN.010

comment *4545* comment by: *ADAC Luftrettung GmbH*

… or suitable landing site for a helicopter

Add: ....shall be able to continue the flight to an aeredrome, **or suitable landing site for a helicopter**, without flying below .....

comment *5425* comment by: *ALFA-HELICOPTER*

Add: ..or suitable landing site for a helicopter.

comment *5483* comment by: *Peter Moeller*

to an aerodrome or a suitable helicopter landing site

comment *5770* comment by: *Norsk Luftambulanse*

Add: ..or suitable landing site for a helicopter.

comment *5901* comment by: *HSD Hubschrauber Sonder Dienst*

Add text to read:"....to continue the flight to an aerodrome or a suitable landing site for a helicopter without flying.....

comment *6600* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.325 En-route - Critical engine inoperative - complex motor-powered aircraft

In the event of a critical engine becoming inoperative at any point along the route, a multi-engine complex motor-powered aircraft shall be able to continue the flight to an aerodrome, or suitable landing site for a helicopter ,without flying below the minimum obstacle clearance altitude at any point.

In the interest of safety continuation of the flight to sites that do not meet the definition of an aerofrome should be allowed as well.

B. I. Draft Opinion - Part-OPS - Subpart A - Section III - OPS.GEN.330.A Landing - complex motor-powered aeroplanes p. 40

comment *879* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Change „At any aerodrome" to „At an adequate aerodrome..".

comment *1616* comment by: *Luftfahrt-Bundesamt*

Structure not acceptable. In addition, the entire rule/AMC combination does not properly separate rule and non-rule material. The LBA requests to re-establish requirements of EU-OPS / JAR-OPS 3.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1684* comment by: *Dassault Aviation*

Technical comment.

Page 40 OPS.GEN.330A: Landing CMPA: Dassault Aviation interpretation of this text is that it means that landing factor is equal to 1 (one) for this kind of aerplane in non-commercial operations. EASA to confirm.

comment *2370* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Replace: "At any aerodrome.." with "At any adequate aerodrome

comment *2398* comment by: *IDRF e.V. (association of regional airports)*

Unlike the corresponding AMC for CAT, the non-CAT operations have not to comply with concrete margins. We agree to let this specific item up to the operator. However, in order to compensate variations in the approach and landing technique, we suggest to add guidance material how to consider:

Any excess height and/or speed when passing the treshold

Any temperature deviation from ISA

Any braking action other than "maximum"

Any slope of runway

Any non-standard flare technique

Any allowance for gusts and crosswinds

Any pilot errors

Unpaved runway

Wet or contaminated runway

etc.

comment | *3072* | comment by: *AOPA Switzerland*

It should be in the responsibility of the PIC whether the chosen landing aerodrome is suitable or not for a safe operation. Therefore withdraw OPS.GEN.330.A.

comment | *3099* | comment by: *Michael Hoeck*

First time I have to say good. No additional factor is required as the AOC lobby tried to put on us. Lets just use the guidance material we have on the airplane and we are good to go.

comment | *3280* | comment by: *Aero-Club of Switzerland*

We think, this paragraph is not necessary.

Justification: Any adequately trained pilot will automatically behave according to the rules of good airmanship. The text of the paragraph questions this.

comment | *4185* | comment by: *DGAC*

"At any aerodrome, after clearing all obstacles in the approach path **by a safe margin**". This is a new requirement, not included in previous performance codes. How can an operator ensure compliance with this requirement?

comment | *4186* | comment by: *DGAC*

The text is not adapted to seaplanes landing.

comment | *4187* | comment by: *DGAC*

The notion of landing distance needs to refer to a screen height (when crossing the runway threshold or equivalent).

Justification:

Existing performance codes take into account a screen height above the runway threshold, but no "safe margin" in the approach path.

Proposed Text:

Amend text as follows:

"At any aerodrome **or landing site**, ~~after clearing all obstacles in the approach path by a safe margin,~~ the aeroplane shall be able to land and stop, a seaplane come to a satisfactorily low speed, **from an appropriate screen height,** within the landing distance available.

Allowance ~~may~~ **shall** be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data."

comment *5888* comment by: *SWISS AERODROMES ASSOCIATION*

At least the complex motor-powered aircraft in non commercial operations should be exempted from these requirements.

comment *6503* comment by: *UK CAA*

Page No: 40 of 464

Paragraph No: OPS.GEN.330.A

Comment:

There should be a clear requirement for all aeroplanes to comply with the WAT (climb) limitations for landing.

Justification:

The purpose of WAT limits is to ensure that the aeroplane has acceptable minimum climb or acceleration capability to a reasonable height above the take-off and landing aerodrome. Thus, compliance with the WAT limitations should be a basic but important safety requirement for all types of operation. For those Class B aeroplanes which do not have WAT data in their AFMs/POHs, AMC material is also proposed.

Proposed Text (if applicable):

(i) Insert a new paragraph (a) as follows:-

(a) ALL AEROPLANES USED IN ALL OPERATIONS. The take-off mass must not exceed the maximum landing mass specified in the Aeroplane Flight Manual for the pressure altitude and the ambient temperature at the aerodrome at which the landing is to be made.

(ii) Add a new AMC OPS.GEN.330(a) as follows:-

CLASS B AEROPLANESIf the Aeroplane Flight Manual does not contain the necessary information to comply with OPS.GEN.330(a), the landing mass at the altitude and the air temperature at the aerodrome at which the landing is to be made must not exceed the mass at which the aeroplane is capable, in the en route configuration and with all engines operating within the specified maximum continuous power conditions, of a steady rate of climb of 700 feet per minute if it has retractable landing gear and of 500 feet per

minute if it has fixed landing gear.

(iii) Renumber existing paragraph.

comment *6504* comment by: *UK CAA*

Page No: 40 of 464

Paragraph No:

OPS.GEN.330.A

Comment:

The proposed text only requires the aeroplane to stop within the landing distance available and not within a safe margin of the landing distance available. Although the requirement "Allowance may be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data." could be regarded as providing the necessary safeguards, the use of the word 'may' is inappropriate – it implies that compliance is optional. Furthermore, how are operators expected to know the extent to which allowances, if any, have been made "for expected variations in the approach and landing techniques" in the scheduling of performance data? This information is not generally available in the scheduled performance data and therefore compliance will not be possible.

Justification:

For complex aeroplane operations, it is appropriate to require clearly that a full-stop landing can be made within a safe margin of the landing distance available. For standardisation purposes the value of the safe margin needs to be specified, and for non-commercial operations, advisory material should be sufficient. The second sentence of the paragraph could be deleted without any loss stringency, since the provision of a safe margin would achieve the same result.

Proposed Text (if applicable):

At any aerodrome, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop ***within a safe margin****, a seaplane come to a satisfactorily low speed, within the landing distance available.* ~~*Allowance may be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.*~~

comment *7037* comment by: *IACA International Air Carrier Association*

Replace "At any aerodrome…" by "At any adequate aerodrome…"

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV p. 41

comment *3043* comment by: *AEA*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *3056* comment by: *Richard Dawson*

My comments are provided as a helicopter pilot of ten years in the UK and an owner of a Robinson R44 which is used for private flights within the UK mainland and its outlying islands and mainland Europe and its islands.

The basis of my comments is that non-complex helicopters being used privately should not be subject to the same regulation as commercial helicopter flights. These proposals do not differentiate between these two types of aviation (whereas they do for fixed wing).

As an owner, the proposed regulation would be in several instances impossible to comply with (retrofitting floats and steerable lighting). Where it was possible, it would be very expensive to comply with (source of static pressure,prevention of condensation/icing on speed measuring devices, ELT) and would provide little improvement in safety.

These proposals would therefore prevent me from freely circulating within the European Union in my helicopter. Indeed, they would curtail my ability to fly within the UK with rivers and estuaries becoming barriers to overflight. As a pilot, I believe that it should be at my discretion as to whether to carry a life raft and to mitigate for overwater flight I propose thw wearing of lifejackets and PLBs when further than 10 minutes from land.

comment *3632* comment by: *AUSTRIAN Airlines*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and

was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *3782* comment by: *KLM Cityhopper*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally copy the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically high-lighted in a RIA

comment *4188* comment by: *DGAC*

As such most of the provisions of Section IV will be applicable to all aircraft, whatever the date of issuance of the first individual certificate of airworthiness might be. This is a huge difference compared to ICAO Annex 6 provisions and to EU/JAR-OPS 1/3 as well as to national rules (e.g. harnesses, TAWS, …). There are cases where imposing the retrofit of aircraft with certain instruments/equipments is feasible and worth the cost of it, because of safety imperatives. In some other cases, the question of cost/benefit of the retrofit must be studied carefully, especially in the case of general aviation or aerial work where situations can be different according to the member states rules, as the only common basis (ICAO annex 6-2) may either be a simple recommendation or a standard that takes into account the date of issuance of the first individual certificate of airworthiness.

comment *4189* comment by: *DGAC*

·In JAR OPS 3, there used to be one section dealing with the equipment needed and another section dealing with operational procedures. In IR OPS everything is mixed and makes things difficult to understand (ex: oxygen, CVR and FDR- see OPS.GEN.510).

comment *4190* comment by: *DGAC*

Besides there are numerous other instruments required by our national safety requirements for general aviation which are missing in this NPA. Drawing the comparison has been really time-consuming. We are not in a position, though, to make deeper comment in such a short time, all the more as the lay out of the provisions contained in the NPA regarding to equipments and instruments is sometime very confusing. This is in favour of our general comment asking that the NPA be converted into an A-NPA to enable stakeholders to give more accurate and in-depth comments

comment *4275* comment by: *KLM*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *4492* comment by: *TAP Portugal*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *4883* comment by: *Deutsche Lufthansa AG*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a **high risk** of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should **literally** transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements require to be specifically highlighted in a RIA

comment *5167* comment by: *Virgin Atlantic Airways*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *5332* comment by: *European Private Helicopter Alliance*

Reference GM OPS.GEN.400(b)

The European Private Helicopter Alliance (EPHA)

This response is from the above named pan European organisation of non

commercial, helicopter clubs and private operators of helicopters, and presents these agreed comments as coming from all EPHA members

The European Private Helicopter Alliance membership is as follows:

Germany

Deutscher Hubschrauber Club

Contact: - Konrad Geissler, Chairman, DHC D-86916 Kaufering.Germany

Deutscher Aero Club e.V.-Section Helicopter

Contact: - Konrad Geissler, Chairman D-38108 Braunschweig Germany

Tel 49 81 91 6 42 30 email geissler-kaufering@t-online.de

France

Federation Francaise de Giration

Contact: - Jaques Escaffe, President, rue Launay Jacquet, 91640 Fontenay les Briis France.

Tel 33 1 66 32 36 365 email j.e.la-ronciere@wanadoo.fr

Austria

Helikopters im Osterreichischer Aero Club

Contact: - Wolfgang Tesar, Chairman, 3400 Klostermeuburg, Kaferkreuzgasse 1/7 Austria

Tel 43 676 3077644 email tesar@netway.at

Switzerland

Swiss Helicopter Federation

Contact: - Peter Kune, President, Kasereiweg 15, CH 3627 Heimberg Switzerland

Tel 41 79404-7775 email pk@drfconsulting.ch

United Kingdom

Helicopter Club of Great Britain

Contact: - John Matchett, Chairman, Ryelands House, Aynho, Banbury, Oxon.

OX17 3AT United Kingdom

Tel: 44 1869 810646 email j.james@ryelands.net

The European Private Helicopter Alliance represents many thousands of pilots and private helicopter owners and operators in the above countries.

Our following objections are primarily based on the fact that the proposals do not distinguish between private and commercial helicopter operations. In these proposals all helicopters are treated the same, whether it be a private 2 seat Robinson R22 or a large commercial Sikorsky S92.

This is in direct conflict with the principles established by the European

Commission's Communication "Agenda for Sustainable Future in General and Business (COM(2007) 869 final) and its endorsement by the European Parliament (2008/2134(INI)) and the Council of Ministers. In particular this NPA does not comply with the "application of the principles of subsidiarity and proportionality"1[1]. Furthermore, it ignores the European Parliament's specific demand that the implementing rules must be *"proportionate and commensurate to the complexity of the respective category of aircraft and operation"* 1[2].

Private, non-commercial helicopter operations should be regulated with a lighter touch than CAT as is the case with the proposals for private fixed wing aircraft. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them. Private helicopters have a similar equipment related accident rate to private fixed wing.

The proposals referred to in our following comments to the consultation would severely and detrimentally affect the majority of European helicopter owners and pilots, by both severely restricting their use of helicopters over water and at night, or increasing costs, for no perceptible benefit. Matters that EASA should consider are:

The proportionality of the proposals as regards private helicopter use

The lack of legal necessity of ICAO compliance

The unreasonableness of ICAO helicopter standards as applied to private operations.

The safety benefit of the proposals, if any

The practicality of the equipment which is proposed to become mandatory

The cost of the equipment which is proposed to become mandatory

The need as perceived by a substantial majority of European private helicopter pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to private helicopters (but not to private aeroplanes)

EPHA Comment

The imposition of the Floatation, Life Raft and ELT proposals would adversely affect private, non complex helicopter activities through their cost, weight and practicality. Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, and offshore isands would clearly be in breach of this policy, and would be grossly disproportionate. Accident data does not support a safety case for the flotation proposal for helicopters.

ICAO Compliance.

EASA perceives the need to comply fully with ICAO standards. However, Article 37 of the Chicago Convention states "Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards and procedures...." and Article 38 of the Chicago Convention states "Any State which finds it impracticable to comply in all respects with any such international standard or procedure (.....) shall

give immediate notification to the International Civil Aviation organisation of the differences between its own practice and that established by the international standard". The emphasis being what is practicable.

There is no suggestion that ICAO standards are in some way superior to current member state law, or safer. Member state the UK, for example, enjoys one of the safest aviation environments anywhere in the world, but does not mandate the equipment we object to.

Whilst ICAO Contracting States are obliged to notify differences to International Standards under Article 38 of the Convention, they are only invited to 'extend such notification to any differences from the Recommended Practices….when the notification of such differences is important for the safety of air navigation.

ICAO annex 6 part 111 Chapter 2 - Applicability shows that the SARPs in the Annex do not apply to helicopters engaged in aerial work operations. This therefore calls into question the applicability to private operations.

Thus the picture emerges that there is no necessity for total ICAO compliance. The actual safety case does not support the proposed equipment fit changes for private helicopters.

Small and Medium Enterprises

Many helicopters are operated by small businesses, and would be severely disadvantaged by the cost and practicality of the proposals. They would be forced to spend tens of thousands of Euros in compliance costs, or stop using their helicopters for over water and night time travel.

The unreasonableness of ICAO standards as regards private helicopter operations.

Private non-commercial helicopter operations did not exist when the ICAO standards and recommended practices were written, and ICAO make no provision for such operations to be more lightly regulated. In contrast, however, fixed wing private operations are more lightly regulated.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for helicopters. Indeed the proposals for private helicopters in this NPA are the same as for CAT.

This is clearly unreasonable and disproportionate. Proper, less stringent, provision for private helicopter flight has not been made in the ICAO standards. The ICAO standards for helicopters are out of date, and do not take into account present day helicopter demonstrated mechanical reliability.

In the overwater flight case for example, it is not proposed that a private fixed wing aircraft should have a means of flotation, whereas private helicopters would be required to have floats installed. This is not either reasonable or proportionate.

In the ELT case, a private fixed wing with a C of A issued before 1 July 2008 can have any type of ELT, whereas it is proposed that private helicopters should be fitted with a fixed, automatic ELT, as well as an ELT(S). This is not either reasonable or proportionate.

There is no evidence that such private helicopter flights are less safe than fixed wing, indeed the UK CAA's records show that privately operated helicopters have a zero fatality and injury record over water, which is considerably better than fixed wing.

The NPA proposes that private single engine fixed wing aircraft be allowed to fly up to 100nm, or 30 minute's distance at cruising speed, from land without the carriage of flotation devices, but proposes to limit private single engine helicopters to flight within autorotational distance of land. This despite the demonstrated poorer safety record of single engined fixed wing aircraft. This is neither proportionate nor reasonable for private flight in non complex helicopters.

EASA should seek to have ICAO standards changed so as to bring the SARP's for private helicopter operations into line with those existing for private fixed wing. Statistics indicate that overwater, private helicopter operations are safer than those of private fixed wing.

The safety benefit of the proposals (if any)

EASA does not suggest anywhere in the consultation letter that the safety of the current member state regulations is in any way deficient. Indeed there have been very few recorded incidents of private helicopters ditching in water, with crew and passenger escapes at the same or better level as fixed wing aircraft.

These very few incidents do not represent a safety problem, and indeed show that private helicopters are operating with a high level of safety over water, that could hardly be improved. In the UK where floatation devices are not required on private helicopters, there have been no fatalities caused by private helicopters ditching.

This clearly shows that there is no ongoing safety problem with private helicopters flying over water without floatation devices, and that in fact the private helicopter record is considerably better than that of fixed wing.

The need as perceived by a substantial majority of helicopter pilots

There is no perceived need for these additional equipment requirements as proposed

There is overwhelming opposition amongst the members of the European Private Helicopter Alliance to these proposals. Private helicopter pilots are usually high achieving and intelligent people, well used to evaluating risk. Where there is no risk to third parties, they are content to make their own informed choices regarding their own flight safety. They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

EASA should not try to protect the private pilot from himself. They should be free to make their own decisions, as in other activities, e.g. boating, rock climbing etc.

Summary

The European Private Helicopter Alliance is strongly opposed to the proposed regulations commented upon herein. It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists. We

thus urge EASA to either withdraw these proposals entirely, amend them as suggested, define a MTOM weight limit below which they would not apply (e.g. 3175Kg or 2000Kg), or simply apply the fixed wing proposals to helicopters. Other practical mitigation measures could be exemptions for helicopters under 2000kg MTOM, for non-complex helicopters, or for helicopters in private flight.

Our preferred solution is that EASA adopt option 4C as defined in paragraph 2.9 of NOTICE OF PROPOSED AMENDMENT (NPA) NO 2009-02G

Should EASA mandate equipment that is not currently required under a member state's present regulations, it is essential that a practical time period of exemption is allowed for equipage to occur. We would suggest that a major item such a floats should have a 25 year compliance period (this being a reasonable life for the current helicopter fleet). ELTs could have a 10 year compliance period. It would be completely unreasonable and disproportionate to demand immediate compliance, especially when there is no immediate perceived safety need.

Helicopters owners would be asked to comply with these costly proposals merely because of outdated ICAO standards, whereas light fixed wing aircraft operating in the same manner will have almost no changes, or the resulting costs imposed on them.

EASA's policy should be "regulation at a sensible minimum", and "safety in a cost effective manner", as stated by Peter Hunt, Head of Operating Standards Division of the UK CAA in December 1998.

1[1] (COM(2007) 869 final), Point 34.

1[2] European Parliament resolution of 3 February 2009 on an Agenda for Sustainable Future in General and Business Aviation (2008/2134(INI), Point 4.

comment *5458* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *5667* comment by: *ERA*

European Regions Airline Association Comment

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Therefore, this NPA should literally copy the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically high-lighted in a RIA.

comment *6781* comment by: *Icelandair*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA

comment *7239* comment by: *AIR FRANCE*

Comment:

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations. The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Proposal:

This NPA should literally transpose the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU - OPS subpart K and L requirements should be specifically highlighted in a RIA.

comment *7261* comment by: *ANE (Air Nostrum) OPS QM*

The content of JAR / EU -OPS 1 Subpart K and L has been re-written and was merged into this NPA. In this process there is a risk of unintentionally changing requirements because revised wording will lead to new interpretations.

The cross reference listed in NPA 2009f does not provide assurance that the content and intention of Subpart K and L is transferred "as is". Since these JAR / EU Subparts directly affect aircraft configuration and capabilities, any discrepancy introduced by this NPA has substantial economic impact.

Therefore, this NPA should literally copy the content of JAR / EU - OPS 1. Any deviations to the existing JAR / EU -OPS subpart K and L requirements should be specifically high-lighted in a RIA.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.400 Instruments and equipment – General p. 41

comment *25* comment by: *George Knight*

-(c) (1) This rule seems to have the (unintended?) consequence of prohibiting the use of GPS devices not approved under Part-21 from being used for navigational purposes. In gliding competitions the routes are defined by reference to waypoints that these days are lat/long coordinates. The pilot's achievement is determined by whether he rounded the turning points correctly as determined by GPS derived evidence. For that reason glider pilots use unapproved GPS devices to determine their flight path and whether or not they have reached/rounded a turn-point. Visual navigation using a chart, compass and eyeball is not capable of providing the necessary level of accuracy.

In addition a majority of cross-country glider pilots now carry moving maps showing the locations of controlled airspace and danger areas. They use the data from these unapproved devices to change their flight path to avoid illegal penetration of controlled airspace and restricted areas etc.. One of the benefits of this technology is that glider pilots record a very small number of airspace violations as compared to other GA traffic. The proposed rule stating that pilots "shall not be used by the flight crew to comply with (a);" is perverse.

The rule should be changed to state that the safe navigation of the aircraft must not be dependant on the use of unapproved instruments.

comment *414* comment by: *EHOC*

Paragraph (d)

The original intent of the rules was to ensure that equipment could be operated by a crew member from his station; in addition, for a single piece of equipment that has to be used by more than one crew member, it has to be operable from each station. This paragraph would be improved by making the intent clearer:

"(d) If equipment is to be used by one flight crew member at his station during flight, it must be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it must be installed so that the equipment is readily operable from any station at which the equipment is required to be operated."

Paragraph (d)

The orginal intent of this rule was to ensure that: (a) an instrument dedicated to one of the flight crew members is placed where it might be seen without adjusting the normal field of view; and (b) a single instrument that has to be used by both crew members is placed within the field of view of both pilots. This paragraph would be improved by making the intent clearer:

"(e) Those instruments that are used by any one flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his station, with the minimum practicable deviation from the position and line of vision which he normally assumes when looking forward along the flight path. Whenever a single instrument is required in a helicopter operated by more than 1 flight crew member it must be installed so that the instrument is visible from each applicable flight crew station."

comment *1020* comment by: *CAA-NL*

Comment CAA-NL Regarding requirement c.

"Instruments and equipment required by Part-OPS which do not need to be approved in accordance with Part-21, as well as any additional equipment which is not required by Part-OPS, but is carried on a flight, shall comply with the following:

(1) The information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with (a);

(2) The instruments and equipment shall not affect the airworthiness of the aircraft, even in the case of failures or malfunction.

Comment CAA-NL:

All insruments and equipment on board of an aircraft should be approved according to part 21.

Reason:

Airlines must demonstrate in accordance with part 21 that all instruments

and equipment shall not affect the airworthiness of the aircraft, even in the case of failures or malfunction.

comment *1356* comment by: *Helicopter Club of Great Britain*

Reference GM OPS.GEN.400(b)

The Helicopter Club of Great Britain represents the owners of approximately 33% of UK and Irish registered helicopters, as well as several hundred UK & Irish helicopter pilots.

Our following objections are primarily based on the fact that the proposals do not distinguish between private and commercial helicopter operations. All helicopters are treated the same, whether it be a private 2 seat Robinson R22 or a large Sikorsky S92.

This is in direct conflict with the principles established by the European Commission's Communication "Agenda for Sustainable Future in General and Business (COM(2007) 869 final) and its endorsement by the European Parliament (2008/2134(INI)) and the Council of Ministers. In particular this NPA does not comply with the "application of the principles of subsidiarity and proportionality"1[1]. Furthermore, it ignores the European Parliament's specific demand that the implementing rules must be *"proportionate and commensurate to the complexity of the respective category of aircraft and operation"* 1[2].

Private, non-commercial helicopter operations should be regulated with a lighter touch than CAT as is the case with the proposals for private fixed wing aircraft. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them. Private helicopters have a similar equipment related accident rate to private fixed wing.

The proposals referred to in our following comments to the consultation would severely and detrimentally affect the majority of UK and Irish helicopter owners and pilots, by both severely restricting their use of helicopters over water and at night, or increasing costs, for no perceptible benefit. Matters that EASA should consider are:

The proportionality of the proposals as regards private helicopter use

The lack of legal necessity of ICAO compliance

The unreasonableness of ICAO helicopter standards as applied to private operations.

The safety benefit of the proposals, if any

The practicality of the equipment which is proposed to become mandatory

The cost of the equipment which is proposed to become mandatory

The need as perceived by a substantial majority of helicopter pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to private helicopters (but not to private aeroplanes)

HCGB Comment

Clearly the imposition of the Floatation, Life Raft and ELT proposals would adversely affect such activities through their cost, weight and practicality. Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, or to cross to the Isle of Wight and the many Scottish islands would clearly be in breach of this policy, and would be grossly disproportionate. Accident data does not support a safety case for the flotation proposal for helicopters.

(v)

ICAO Compliance.

EASA perceives the need to comply fully with ICAO standards. However, Article 37 of the Chicago Convention states " Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards and procedures...." and Article 38 of the Chicago Convention states "Any State which finds it impracticable to comply in all respects with any such international standard or procedure (.....) shall give immediate notification to the International Civil Aviation organisation of the differences between its own practice and that established by the international standard". The emphasis being what is practicable.

There is no suggestion that ICAO standards are in some way superior to current member state law, or safer. The UK, for example, enjoys one of the safest aviation environments anywhere in the world, but does not mandate the equipment we object to.

Whilst ICAO Contracting States are obliged to notify differences to International Standards under Article 38 of the Convention, they are only invited to 'extend such notification to any differences from the Recommended Practices….when the notification of such differences is important for the safety of air navigation.

ICAO annex 6 part 111 Chapter 2 - Applicability shows that the SARPs in the Annex do not apply to helicopters engaged in aerial work operations. This therefore calls into question the applicability to private operations.

Thus the picture emerges that there is no necessity for total ICAO compliance. The actual safety case does not support the proposed equipment fit changes for private helicopters.

Small and Medium Enterprises

Many helicopters are operated by small businesses, and would be severely disadvantaged by the cost and practicality of the proposals. They would be forced to spend tens of thousands of Euros in compliance costs, or stop using their helicopters for over water and night time travel.

(vi)

The unreasonableness of ICAO standards as regards private helicopter operations.

Private non-commercial helicopter operations did not exist when the ICAO standards and recommended practices were written, and ICAO make no provision for such operations to be more lightly regulated. In contrast,

however, fixed wing private operations are more lightly regulated.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for helicopters. Indeed the proposals for private helicopters in this NPA are the same as for CAT.

This is clearly unreasonable and disproportionate. Proper, less stringent, provision for private helicopter flight has not been made in the ICAO standards. The ICAO standards for helicopters are out of date, and do not take into account present day helicopter demonstrated mechanical reliability.

In the overwater flight case for example, it is not proposed that a private fixed wing aircraft should have a means of flotation, whereas private helicopters would be required to have floats installed. This is not either reasonable or proportionate.

In the ELT case, a private fixed wing with a C of A issued before 1 July 2008 can have any type of ELT, whereas it is proposed that private helicopters should be fitted with a fixed, automatic ELT, as well as an ELT(S). This is not either reasonable or proportionate.

There is no evidence that such private helicopter flights are less safe than fixed wing, indeed the UK CAA's records show that privately operated helicopters have a zero fatality and injury record over water, which is considerably better than fixed wing.

The NPA proposes that private single engine fixed wing aircraft be allowed to fly up to 100nm, or 30 minutes's distance at cruising speed, from land without the carriage of flotation devices, but proposes to limit private single engine helicopters to flight within autorotational distance of land. This despite the demonstrated poorer safety record of single engined fixed wing aircraft. This is neither proportionate nor reasonable for private flight in non complex helicopters.

EASA should seek to have ICAO standards changed so as to bring the SARP's for private helicopter operations into line with those existing for private fixed wing. Statistics indicate that overwater, private helicopter operations are safer than those of private fixed wing.

(vii)

The safety benefit of the proposals (if any)

EASA does not suggest anywhere in the consultation letter that the safety of the current UK regulations is in any way deficient. Indeed there have been only 4 recorded incidents of private helicopters ditching in water, and no fatalities or injuries at all. Of these, an Enstrom encountered handling difficulties whilst hovering over a lake in Wales, a Bell 206 suffered alleged engine failure off the Isle of Mann, a Bell 206 suffered a gearbox failure near Jersey, and an R22 suffered carburettor icing off the west coast of Ireland, with no confirmed engine failure. These very few incidents do not represent a safety problem, and indeed show that private helicopters are operating with a high level of safety over water, that could hardly be improved. We have excluded the R44 ditching near Antarctica, as this was an unrepresentative adventure/exploration/record flight, which may have run

out of fuel.

In contrast fixed wing aircraft have suffered 24 accidents, 5 fatalities, 13 injuries over water during the same period.

This clearly shows that there is no ongoing safety problem with private helicopters flying over water without floatation devices, and that in fact the private helicopter record is considerably better than that of fixed wing.

(viii)

The need as perceived by a substantial majority of helicopter pilots

There is no perceived need for these additional equipment requirements as proposed

There is overwhelming opposition amongst the members of the Helicopter Club of Great Britain to these proposals. Our typical member is a high achieving and intelligent person, well used to evaluating risk. Where there is no risk to third parties, they are content to make their own informed choices regarding their own flight safety. They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

The UK CAA has never seen its role as being to protect the private pilot from himself. We trust EASA will follow this example.

(ix)

Summary

The Helicopter Club of Great Britain is strongly opposed to the proposed regulations commented upon herein. It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists. We thus urge EASA to either withdraw these proposals entirely, amend them as suggested, define a MTOM weight limit below which they would not apply (e.g. 3175Kg or 2000Kg), or simply apply the fixed wing proposals to helicopters. Other practical mitigation measures could be exemptions for helicopters under 2000kg MTOM, for non-complex helicopters, or for helicopters in private flight.

Our preferred solution is that EASA adopt option 4C as defined in paragraph 2.9 of NOTICE OF PROPOSED AMENDMENT (NPA) NO 2009-02G

Should EASA mandate equipment that is not currently required under a member state's present regulations, it is essential that a practical time period of exemption is allowed for equipage to occur. We would suggest that a major item such a floats should have a 25 year compliance period (this being a reasonable life for the current helicopter fleet). ELTs could have a 10 year compliance period. It would be completely unreasonable and disproportionate to demand immediate compliance, especially when there is no immediate perceived safety need.

Helicopters owners would be asked to comply with these costly proposals merely because of outdated ICAO standards, whereas light fixed wing aircraft operating in the same manner will have almost no changes, or the resulting costs imposed on them.

It is worth repeating the public remarks made by Peter Hunt, then the Head

of Operating Standards Division of the UK CAA in December 1998. He stated that the UK CAA's policy was "regulation at a sensible minimum", and "safety in a cost effective manner" These principals should also be followed by EASA.

1[1] (COM(2007) 869 final), Point 34.

1[2] European Parliament resolution of 3 February 2009 on an Agenda for Sustainable Future in General and Business Aviation (2008/2134(INI), Point 4.

comment *1383* comment by: *Royal Danish Aeroclub*

To determine the flight path or to navigate under VFR conditions do not need approved equipment. Modern GPS-equipment together with a map of the area are sufficient for safe navigation.

We suggest the text in (a) (1) to read:

(1) control or, in the case of non-commercial VFR-flight with non-complex aircraft, determine the flight path.

comment *1435* comment by: *Mike Pascall*

Reference GM OPS.GEN.400(b)

I am both a private helicopter pilot and owner of a Robinson R44 ClipperII.

The following objections are primarily based on the fact that the proposals do not distinguish between private and commercial helicopter operations. All helicopters are treated the same, whether it be a private 2 seat Robinson R22 or a large Sikorsky S92.

This is in direct conflict with the principles established by the European Commission's Communication "Agenda for Sustainable Future in General and Business (COM(2007) 869 final) and its endorsement by the European Parliament (2008/2134(INI)) and the Council of Ministers. In particular this NPA does not comply with the "application of the principles of subsidiarity and proportionality"[1]. Furthermore, it ignores the European Parliament's specific demand that the implementing rules must be *"proportionate and commensurate to the complexity of the respective category of aircraft and operation"* [2].

Private, non-commercial helicopter operations should be regulated with a lighter touch than CAT as is the case with the proposals for private fixed wing aircraft. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them. Private helicopters have a similar equipment related accident rate to private fixed wing.

The proposals referred to in my following comments to the consultation

would severely and detrimentally affect the majority of UK and Irish helicopter owners and pilots, by both severely restricting their use of helicopters over water and at night, or increasing costs, for no perceptible benefit. Matters that EASA should consider are:

The proportionality of the proposals as regards private helicopter use

The lack of legal necessity of ICAO compliance

The unreasonableness of ICAO helicopter standards as applied to private operations.

The safety benefit of the proposals, if any

The practicality of the equipment which is proposed to become mandatory

The cost of the equipment which is proposed to become mandatory

The need as perceived by a substantial majority of helicopter pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to private helicopters (but not to private aeroplanes)

My Comment

Clearly the imposition of the Floatation, Life Raft and ELT proposals would adversely affect such activities through their cost, weight and practicality. Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, or to cross to the Isle of Wight and the many Scottish islands would clearly be in breach of this policy, and would be grossly disproportionate. Accident data does not support a safety case for the flotation proposal for helicopters.

(v)

ICAO Compliance.

EASA perceives the need to comply fully with ICAO standards. However, Article 37 of the Chicago Convention states " Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards and procedures...." and Article 38 of the Chicago Convention states "Any State which finds it impracticable to comply in all respects with any such international standard or procedure (.....) shall give immediate notification to the International Civil Aviation organisation of the differences between its own practice and that established by the international standard". The emphasis being what is practicable.

There is no suggestion that ICAO standards are in some way superior to current member state law, or safer. The UK , for example, enjoys one of the safest aviation environments anywhere in the world, but does not mandate the equipment we object to.

Whilst ICAO Contracting States are obliged to notify differences to International Standards under Article 38 of the Convention, they are only invited to 'extend such notification to any differences from the Recommended Practices….when the notification of such differences is important for the safety of air navigation.

ICAO annex 6 part 111 Chapter 2 - Applicability shows that the SARPs in the Annex do not apply to helicopters engaged in aerial work operations. This

therefore calls into question the applicability to private operations.

Thus the picture emerges that there is no necessity for total ICAO compliance. The actual safety case does not support the proposed equipment fit changes for private helicopters.

Small and Medium Enterprises

Many helicopters are operated by small businesses, and would be severely disadvantaged by the cost and practicality of the proposals. They would be forced to spend tens of thousands of Euros in compliance costs, or stop using their helicopters for over water and night time travel.

(vi)

The unreasonableness of ICAO standards as regards private helicopter operations.

Private non-commercial helicopter operations did not exist when the ICAO standards and recommended practices were written, and ICAO make no provision for such operations to be more lightly regulated. In contrast, however, fixed wing private operations are more lightly regulated.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for helicopters. Indeed the proposals for private helicopters in this NPA are the same as for CAT.

This is clearly unreasonable and disproportionate. Proper, less stringent, provision for private helicopter flight has not been made in the ICAO standards. The ICAO standards for helicopters are out of date, and do not take into account present day helicopter demonstrated mechanical reliability.

In the overwater flight case for example, it is not proposed that a private fixed wing aircraft should have a means of flotation, whereas private helicopters would be required to have floats installed. This is not either reasonable or proportionate.

In the ELT case, a private fixed wing with a C of A issued before 1 July 2008 can have any type of ELT, whereas it is proposed that private helicopters should be fitted with a fixed, automatic ELT, as well as an ELT(S). This is not either reasonable or proportionate.

There is no evidence that such private helicopter flights are less safe than fixed wing, indeed the UK CAA's records show that privately operated helicopters have a zero fatality and injury record over water, which is considerably better than fixed wing.

The NPA proposes that private single engine fixed wing aircraft be allowed to fly up to 100nm, or 30 minutes's distance at cruising speed, from land without the carriage of flotation devices, but proposes to limit private single engine helicopters to flight within autorotational distance of land. This despite the demonstrated poorer safety record of single engined fixed wing aircraft. This is neither proportionate nor reasonable for private flight in non complex helicopters.

EASA should seek to have ICAO standards changed so as to bring the SARP's for private helicopter operations into line with those existing for private fixed

wing. Statistics indicate that overwater, private helicopter operations are safer than those of private fixed wing.

(vii)

The safety benefit of the proposals (if any)

EASA does not suggest anywhere in the consultation letter that the safety of the current UK regulations is in any way deficient. Indeed there have been only 4 recorded incidents of private helicopters ditching in water, and no fatalities or injuries at all. Of these, an Enstrom encountered handling difficulties whilst hovering over a lake in Wales , a Bell 206 suffered alleged engine failure off the Isle of Mann, a Bell 206 suffered a gearbox failure near Jersey, and an R22 suffered carburettor icing off the west coast of Ireland , with no confirmed engine failure. These very few incidents do not represent a safety problem, and indeed show that private helicopters are operating with a high level of safety over water, that could hardly be improved. I have excluded the R44 ditching near Antarctica , as this was an unrepresentative adventure/exploration/record flight, which may have run out of fuel.

In contrast fixed wing aircraft have suffered 24 accidents, 5 fatalities, 13 injuries over water during the same period.

This clearly shows that there is no ongoing safety problem with private helicopters flying over water without floatation devices, and that in fact the private helicopter record is considerably better than that of fixed wing.

(viii)

The need as perceived by a substantial majority of helicopter pilots

There is no perceived need for these additional equipment requirements as proposed

There is overwhelming opposition amongst the members of the Helicopter Club of Great Britain to these proposals. The typical member is a high achieving and intelligent person, well used to evaluating risk. Where there is no risk to third parties, they are content to make their own informed choices regarding their own flight safety. They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

The UK CAA has never seen its role as being to protect the private pilot from himself. We trust EASA will follow this example.

(ix)

Summary

I am strongly opposed to the proposed regulations commented upon herein. It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists. I thus urge EASA to either withdraw these proposals entirely, amend them as suggested, define a MTOM weight limit below which they would not apply (e.g. 3175Kg or 2000Kg), or simply apply the fixed wing proposals to helicopters. Other practical mitigation measures could be exemptions for helicopters under 2000kg MTOM, for non-complex helicopters, or for helicopters in private flight.

My preferred solution is that EASA adopt option 4C as defined in paragraph

2.9 of NOTICE OF PROPOSED AMENDMENT (NPA) NO 2009-02G

Should EASA mandate equipment that is not currently required under a member state's present regulations, it is essential that a practical time period of exemption is allowed for equipage to occur. We would suggest that a major item such a floats should have a 25 year compliance period (this being a reasonable life for the current helicopter fleet). ELTs could have a 10 year compliance period. It would be completely unreasonable and disproportionate to demand immediate compliance, especially when there is no immediate perceived safety need.

Helicopters owners would be asked to comply with these costly proposals merely because of outdated ICAO standards, whereas light fixed wing aircraft operating in the same manner will have almost no changes, or the resulting costs imposed on them.

It is worth repeating the public remarks made by Peter Hunt, then the Head of Operating Standards Division of the UK CAA in December 1998. He stated that the UK CAA's policy was "regulation at a sensible minimum", and "safety in a cost effective manner" These principals should also be followed by EASA.

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[1] (COM(2007) 869 final), Point 34.

[2] European Parliament resolution of 3 February 2009 on an Agenda for Sustainable Future in General and Business Aviation (2008/2134(INI), Point 4.

comment *1480* comment by: *Des Russell*

Reference GM OPS.Gen.400(b)

I am a privater helicopter pilot and own a privately registered helicopter and provided I comply with the Rules of the Air and my helicopter has a current certificate of airworthiness,I have the right to fly over water, mountains, or inhospitable terrain at my own risk.Any passengers that wish to fly with me also have the right to do so at their own risk.

No one has the right to dictate what an individual should do to minimise the risks to themselves,either in the above senario or indeed if they wish to bungi jump,parachute,climb mountains,row across the atlantic,or even go skiing.

If the risk is only applicable to the individual and does not effect anyone else every person has the human right to make that decision.

Trying to enforce conditions on an individual for his/her sake is a violation of human rights.

It has nothing to do with aviation authorities whether I fly across water in my private helicopter or with a jet pod strapped on my back.

Even if this was not the case the risk involved of a helicopter ditching in the

approx 0.5% of its total flying time over water is extremely small (it runs in to trillions to one).

comment *1487* comment by: *Lee Carroll*

My following objections are primarily based on the fact that the proposals do not distinguish between private and commercial helicopter operations. All helicopters are treated the same, whether it be a private 2 seater or a large helicopter Private, non-commercial helicopter operations should be regulated with a lighter touch than CAT as is the case with the proposals for private fixed wing aircraft. Consequently we consider that some of the EASA proposals are unnecessary, disproportionate, burdensome and costly and have no basis in accident history. There is no safety case for them. Private helicopters have a similar equipment related accident rate to private fixed wing. The proposals referred to in our following comments to the consultation would severely and detrimentally affect the majority of UK and Irish helicopter owners and pilots, by both severely restricting their use of helicopters over water and at night, or increasing costs, for no perceptible benefit. Matters that EASA should consider are:

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operations.

The safety benefit of the proposals, if any

The practicality of the equipment which is proposed to become mandatory

The cost of the equipment which is proposed to become mandatory

The need as perceived by a substantial majority of helicopter pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to

private helicopters (but not to private aeroplanes)

European Parliament resolution of 3 February 2009 on an Agenda for Sustainable

Future in General and Business Aviation (2008/2134(INI)

Proportionate regulation and subsidiarity

2. Stresses the need to take into account the interests and specificities of

general and business aviation in the development of future air transport policy initiatives, with a view to strengthening its competitiveness; in this respect calls on the Commission to ensure the application of the proportionality and subsidiarity principles in the design and implementation of both existing and future aviation legislation;

3. Reminds the Commission of the need to carry out, on a systematic basis, segmented impact assessments to provide for differentiation of regulations affecting different categories of undertakings and airspace users, if

necessary and in so far as this does not compromise safety;

4. Calls on the Commission when adopting implementing rules on aviation safety, to ensure that they are proportionate and commensurate to the complexity of the respective category of aircraft and operation;

32 Considers as essential the promotion of recreational and sport aviation, as well as of European aero clubs, which constitute an important source of professional skills for the entire aviation sector

33 Calls on the Commission to take account of the important role that this aviation sector plays and can continue to play in the development of vocational training for pilots.

31. Many General and Business aviation stakeholders have expressed concerns related to the proportionality of regulations affecting them.32. Diversification of General and Business aviation as well as high proportion of SMEs and not-for-profit organisations in this sector calls for special vigilance in proper application of proportionality and subsidiarity.

33. The basic EASA Regulation16 and Commission's proposal for its amendment are good examples of the new proportionate rulemaking approach. Only the essential requirements are applicable to all operators while more stringent standards are added subsequently, if justified on the basis of the relevant criteria. This approach should be used in future rulemaking initiatives like aerodrome safety or air traffic management.

34. The Commission will monitor the application of the principles of subsidiarity and proportionality, to ensure that not only the policy and rulemaking processes but also the actual interpretation and implementation of the Community law has due respect for these principles. This monitoring will cover also technical mandates given by the Commission to specialised agencies, such as Eurocontrol Clearly the imposition of the Floatation, Life Raft and ELT proposals would adversely affect such activities through their cost, weight and practicality. Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, or to cross to the Isle of Wight and the many Scottish islands would clearly be in breach of this policy, and would be grossly disproportionate. Accident data does not support a safety case for the flotation proposal for helicopters.

Many helicopters are operated by small businesses, and would be severely disadvantaged by the cost and practicality of the proposals. They would be forced to spend tens of thousands of Euros in compliance costs, or stop using their helicopters for over water and night time travel.

Private non-commercial helicopter operations did not exist when the ICAO standards and recommended practices were written, and ICAO make no provision for such operations to be more lightly regulated. In contrast, however, fixed wing private operations are more lightly regulated.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for helicopters. Indeed the proposals for private helicopters in this NPA are the same as for CAT.

This is clearly unreasonable and disproportionate. Proper, less stringent,

provision for private helicopter flight has not been made in the ICAO standards. The ICAO standards for helicopters are out of date, and do not take into account present day helicopter demonstrated mechanical reliability.

In the overwater flight case for example, it is not proposed that a private fixed wing aircraft should have a means of flotation, whereas private helicopters would be required to have floats installed. This is not either reasonable or proportionate.

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They recognise that the proposals in NPA 2009 2b are not based on any safety case, and are not made in response to an existing problem.

The UK CAA has never seen its role as being to protect the private pilot from himself.

We trust EASA will follow this example.

comment *1516* comment by: *Chris Fox*

Overall, these requirements are disproportionate for for light helicopters operated privately.

Unlike the proposals for fixed wing aircraft, there is no distinction made between large helicopters operating commercially and a simple light helicopter operated privately - and the standards and equipment required for all helicopters are those appropriate for CAT.

This results in many requirements that

- Are technically difficult or impossible to comply with (for example, the fitment of two AI's in all helicopters),
- Effectively prohibit operations that are presently conducted legally and safely (for example, no Robinson R22 helicopter can be retro-fitted with floats, which would make any significant water crossing impossible)
- Can only be complied with at grossly excessive cost (for example, fitment of steerable landing lights, retro-fitment of floats to light helicopters)

There is no safety case offered to justify these proposals, and the Regulatory Impact Assessment is wrong to claim that they will result in little additional cost.

I am strongly opposed to these proposals as they stand. They are also in contravention of a resolution adopted by the European Parliament on 3rd February 2009, which stated that rules should be "*proportionate and commensurate to the complexity of the respective category of aircraft and operation"*

comment *1605* comment by: *JSLEE*

Response to the EASA proposed compulsory equipment

comment *1664* comment by: *JSLEE*

Response to the EASA proposed compulsory equipment changes for Private Helicopters.

(a) General

Reference GM OPS.GEN.400(b)

I am John Lee 69 years old; I own an Augusta Bell206 and a Cessna310. And have held a private pilots licence for nearly30 years both fixed wing and rotary with 3000 combined hours.

A few years ago the UK CAA put forward for discussion similar proposals as these, nothing in aviation safety in the meantime has changed. Their proposals were ill-conceived and impractical then as these are now.

I can only assume that these present proposals have been put forward by non-helicopter pilots and never even taken the trouble to look into a light helicopter.

The proposals are draconian and disproportionate in cost to any safety benefits; they discriminate against private helicopter owners/pilots when compared to private fixed wing owners/pilots.

Private helicopters have a far greater safety record than that of fixed wing aircraft, not a single life has been lost as a result of a private helicopter having to make a force landing on water.

The idea that it is necessary to have floatation equipment, carry a life raft and the installation of a fixed ELT to cross rivers, estuaries, lakes and narrow stretches of sea is ridiculous the safety record clearly shows this.

It appears no serious consideration has been given to the capital cost and maintenance cost involved in implementing these proposals, many of which are physically impractical in light helicopters.

The costs involved are not confined to equipment and labour costs, some of the proposals will involve changes to the Pilot Operators Handbook which can only done by the aircraft manufacturer, this will be a major problem who will bear the cost?

Summary: There is not a safety issue in the UK with private helicopters operating within UK regulations; these proposals will place an unreasonable financial burden on UK helicopter owners/pilots which in some cases will cost more than their helicopter are worth, if they choose not to comply it will severely restrict there use. The UK is an island and occasionally private helicopter pilots find it necessary to cross water in pursuit of business or pleasure. I believe these proposals are prejudicial against the UK. Main land European helicopter pilots will be far less affected by these proposals.

comment *1902* comment by: *Helifly (UK) Ltd*

Before detailing our objection to many of the proposals related to the operation of light helicopters, it is worth explaining how Helifly (UK) Ltd operates and (hopefully) makes money.

Helifly owns a single Robinson R44 helicopter and employs one commercial pilot (JAA CPL(H)) who is also the owner of the business. Helifly works within the AOC of a larger helicopter providing charter flights and aerial work as well as providing its machine on a lease back basis.

Operating a single engined light helicopter Helifly clearly is unable to provide CAT services at night or over water, so it may seem that the proposed equipment regulations should have little effect on us. However, this is not the case.

It is common place in winter months for the pilot to reposition a helicopter back to base following a charter after official night. Just as it is for them to cross and estuary or lake when the only occupant of the aircraft. These periods of flight are conducted with the full knowledge of the limitations of the aircraft and the consequences should their be problems. They are conducted as private flights, but they form part of a commercial operation.

They are also undertaken in the knowledge that, when flown within the limitations set out in the POH, there is negligible risk to the aircraft or pilot.

Estimates for the compliance costs for an R44 Raven II to meet the proposals in this document are in the region of £50,000. It would be unecconomical for Helifly to met the equipment proposals meaning the company would lose revenue.

This would also be the case for the revenues raised through leasing back Helifly's machine to PPL self fly hirers. They would not be able to use the machine to cross to Europe, or even to the Isle of Wight without floats! This will severely restrict their flying and, as a consequence, Helifly's revenue.

The proposals are also dispropotionate and discriminate against owners of light helicopters as opposed to fixed wing owners who will not have to comply due to their machines being regarded differently within ICAO standards. This might be understandable if accident statistics were also different, but they are not. Equipment related accident rates in light helicopters are no different to those of light aircraft, so why should helicopters be subject to further regulation?

comment *1922* comment by: *Tony Castro*

Generally speaking you should make an effort to distinguish between the various sizes of Helicopters, private or comercial. Rules must be proportionate for the purpose, type and use of helicopter surely ?? I have a small Hughes 500 and whislt I am very concious of safety what you propose in these various documents is completely over the top and shows you don't really understand what the helicopter world really needs.

comment *1927* comment by: *Stevens Construction Ltd*

We are very concerned with your proposal to fit floats etc to Helicopters.

Floats on Helicopters that travel for mostly for a very short time over water will not improve safety at all.

Light Helicopters on past statistics do not have a bad safety record, in fact compared to light fixed wing aircraft they have an excellant safety record.

We as a construction company run a helicopter on our business, fitting floats will obviously cost a lot of money and increase our hourly running costs considerably.

The fitment of floats will reduce our airspeed increasing flight hours and fuel costs, and increase maintainance bills.

Safety will not be improved so it will be a complete waste of money and time.

We urge you to re-consider implementing this regulation as it is yet another unnecessary expense on private flying.

comment *2536* comment by: *James Leavesley*

AS a PPL pilot with my own helicopter I feel as if I am being persicuted by this proposed legislation.

I am not allowed to offset the cost of flying and most if not all of these proposals will add weight to my helicopter cost a large amount of money and bring little or no benefit to my safety or that of any passengers I carry.

Some of the suggestions make sense to the commercial operators, none make sense to the privately owned machines.

comment *2615* comment by: *John Matchett*

The requirement for floats, Life Raft and ELT equipment will severely limit the practicality of using small helicopters in terms of weight, deployment and cost, when many flights undertaken in Europe cross rivers, lakes or estuaries. The number of incidents of helicopters crashing over water do not justify the enormous cost of fitting these additions . Pilots are trained to use life vests and other suitable safety equipment appropriate for the occasion and prepare themselves accordingly.

comment *2802* comment by: *Ed Sturmer*

The proposal for small helicopters in VFR to have floats, life raft,ELT, steerable landing light, dual AIs, heated pitot, alternate static, and mandatory knot-calibrated ASI are -

- unnecessary,

- vastly expensive

- of no safety benefit.

No safety benefit can be shown by statistics or experience.

Does EASA want to kill off private helicopter flying? The cost of these in a light helicopter would total approx £50,000 PLUS annual checks and maintenance costs.

comment *3029* comment by: *AOPA Switzerland*

To be added: The natoinal authority may allow exemptions for all instruments and equipment requirement.

Especially older aircraft may have difficulties or are unable to satisfy the proposed requirements.

comment *3044* comment by: *AEA*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *3149* comment by: *UK CAA*

Page No: 40 of 464

Paragraph No: OPS.GEN.320.A

Comment:

In this GEN section the words in the sub-title 'used in non-commercial operations' are not necessary because GEN requirements should be automatically applicable to non-commercial operations. The sub-title text should be amended to clarify the applicability.

Justification:

Clarification of the applicability of the paragraph.

Proposed Text (if applicable):

COMPLEX MOTOR-POWERED AEROPLANES ~~**USED IN NON-COMMERCIAL OPERATIONS**~~ AND **ALL** AEROPLANES USED IN COMMERCIAL OPERATIONS

comment *3539* comment by: *Boeing*

NPA 2009-02b, Part Ops

OPS.GEN.400, Instruments and equipment – general

Para (d), Accessibility and Positioning of Instruments and Equipment

Page 41 of 464

BOEING COMMENT:

Paragraph (d) states: "*Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated."*

We recommend that this paragraph be reworded or eliminated. The location of equipment needing to be readily operable or accessible might require redesign and recertification of existing and approved locations of the emergency equipment.

JUSTIFICATION: Paragraph (d) appears to be specifying design requirements for airplanes, which is inappropriate for an operational rule. It should be removed from this NPA.

comment *3583* comment by: *Aero-Club of Switzerland*

Please add:

GENERAL OBJECTIVES

(a) (4) The NAA may allow exemptions from the following dispostions regarding instruments and equipment requirements.

Justification: On many aircraft of older design, not only on "Annex II" aircraft, it may often be very difficult to follow the stringent proposal of the Agency.

comment *3633* comment by: *AUSTRIAN Airlines*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS

1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *4007* comment by: *MARMONT Tony*

I would like to make a general comment about the equipment proposal. Either make the proposal for Life Rafts , Jackets,ELT;'s and PLB's commom to both fixed and rotary wing aircraft or else leave it to the discretion of the captain in light GA aircraft. some rotary wing cant fit floats or have enough room for life rafts, No fixed wing aircraft can fit floats. All pilots who fly beyond the gliding range of land in a rotary or fixed wing aircraft, should carry all the saftey kit, if they elect not to there is a case for passing on the cost to the general society for the rescue services. If that was to be the case then self inflicted injury caused by smoking , drinking or dangerous drivng shoild also pass back these costs , we have to be even handed. I fly a twin engined helicopter and also twin engine fixed wing and I feel quite safe in either, but I still carry all these things , and I beleive this is the correct thing to do, but it cant be carried out in a mandatory fashion. I hope this is helpfull? Tony Marmont

comment *4191* comment by: *DGAC*

APPROVED AND NON-APPROVED EQUIPMENT:

Add a "grand-fathering" provision as laid-down in EU/JAR-OPS 1/3.630(b):

"OPS 1.630 (b)

Instruments and equipment complying with design and performance specifications other than ETSO on the date of OPS implementation may remain in service, or be installed, unless additional requirements are prescribed in this Subpart. Instruments and equipment that have already been approved do not need to comply with a revised ETSO or a revised specification, other than ETSO, unless a retroactive requirement is prescribed."

comment *4192* comment by: *DGAC*

ACCESSIBILITY AND POSITIONING OF INSTRUMENTS AND EQUIPMENT:

(d) « seated » is not applicable to balloons.

Rewrite (d) as follows : "Instruments and equipment shall be readily

operable **by** or accessible **to** ~~from the station where~~ the flight crew member that needs to use it ~~is seated~~."

comment *4278* comment by: *KLM*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *4493* comment by: *TAP Portugal*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *4884* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of

EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *5065* comment by: *Austro Control GmbH*

General Comment to (c):

The provision for installation of equipment, which do not need to be approved in accordance with Part 21 is new and currently not covered by Part 21.

This is a wellcome change, but adoption of Part 21 with entering into force of this IR has to be done.

comment *5169* comment by: *Virgin Atlantic Airways*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *5214* comment by: *DGAC*

Proposal : Replace § OPS.GEN.400 (b) and add a (d) as follows :

"(b) Equipment and instrument required by Part-OPS **or used to perform a function required by Part-OPS** shall be approved, except as specified in (c) **or if deemed not practical,** and installed in accordance with Part-21.

(c) Instruments and equipment required by Part-OPS which do not need to be approved in accordance with Part-21, ~~as well as any additional equipment which is not required by Part-OPS, but is carried on a flight,~~ shall comply with the following:

(1) The information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with (a);

(2) The instruments and equipment shall not affect the airworthiness of the aircraft, even in the case of failures or malfunction.

(3) The instruments/equipment shall not be installed.

(d) Instruments and equipment not required by Part-OPS or not used to perform a required function, shall comply with the following:

1) if installed, the instrument/equipment shall comply with Part-21.

2) if not installed, the instrument/equipment shall comply with (c)(1) and (c)(2).”

Justification :

® To actually comply with OPS.GEN.400 (a)(1)(2)(3), it is not required that ***any*** equipment shall be approved. This would be inconsistent with GM2 OPS.GEN.400 (c).

® Furthermore, some of the equipment in GM2 OPS.GEN.400 (c) do not meet the criteria of OPS.GEN.400 (a)(1).

comment

5287 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(c) Instruments and equipment required by Part-OPS which do not need to be approved in accordance with Part-21, as well as any additional equipment which is not required by Part-OPS, but is carried on a flight, shall comply with the following:

Comment:

‘carried on a flight,’ should be replaced by ‘installed’

Proposal (including ***new text***):

(c) Instruments and equipment required by Part-OPS which do not need to be approved in accordance with Part-21, as well as any additional equipment which is not required by Part-OPS, but is ~~carried on a flight~~ ***installed in an aircraft***, shall comply with the following

comment

5292 comment by: *Department for Transport UK*

Comment: Sub paragraph (b) begins "equipment and instrument required….” whereas the following sub paragraphs start "Instruments and equipment required…". All sub paragraphs should be consitently worded.

Proposed text: OPS.GEN.400(b) Instruments and equipment required.....

comment *5336* comment by: *Norwegian Air Sports Federation*

Sailplanes usually fly the path where the weather conditions are best.

our proposal:

(1) control or, in the case of non-commercial VFR-flight with non-complex aircraft, determine the flight path.

comment *5459* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *5670* comment by: *ERA*

European Regions Airline Association Comment

Approved and Non-Approved Equipment

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Therefore please re-align with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *5864* comment by: *Ian Casselden*

Reference GM OPS.GEN.400(b)

I am a private operator, I use my helicopter for private flights the propsal appears to treat all helicopters the same, there is a differance between an R22 and a multi seat commercial machine the prosals appear to be on conflict with the principles established by the European Commission's Communication "Agenda for Sustainable Future in General and Business

(COM(2007) 869 final) and its endorsement by the European Parliament (2008/2134(INI)) and the Council of Ministers.

An particularly this NPA does not comply with the "application of the principles of subsidiarity and proportionality"[1]. it ignores the European Parliament's specific demand that the implementing rules must be "proportionate and commensurate to the complexity of the respective category of aircraft and operation" [2].

Surely private non commercial helicopter operations need only light touch regulation (as applied elsewhere and also when appleid to fixed wing aircraft. The EASA proposals appear unnecessary, disproportionate, burdensome and costly and are not based on prevous regulations.

The safety case for them is doubtful

the UK safety record for Private helicopters have a similar equipment related accident rate to private fixed wing.

The proposals would severely and detrimentally affect the majority of UK and Irish helicopter owners and pilots, by both severely restricting their use of helicopters over water and at night, or increasing costs, for no perceptible benefit.

EASA should consider:-

The proportionality of the proposals as regards private helicopter use

The lack of legal necessity of ICAO compliance

The unreasonableness of ICAO helicopter standards as applied to private operations.

The safety benefit

The practicality of the equipment

The cost of the equipment

The need as perceived by a substantial majority of helicopter pilots

The arbitrary and discriminatory nature of parts of the NPA as applied to private helicopters (but not to private aeroplanes)

The imposition of the Floatation, Life Raft and ELT proposals would adversely affect such activities through their cost, weight and practicality. An R22 with floats would not be able to carry two pilots !

Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, or to cross to the Isle of Wight and the many Scottish islands would clearly be in breach of this policy, and would be grossly disproportionate.

Accident data does not support a safety case for the flotation proposal for helicopters.

ICAO Compliance.

There is no automativ requirement for EASA to meet all ICAO standards Article 37 & 38 allows for each contracting state to apply the standards in a practical fashion.

There is little evidence that safety will improve, UK helicopter safety is already the best in the world !

ICAO annex 6 part 111 Chapter 2 - Applicability shows that the SARPs in the Annex do not apply to helicopters engaged in aerial work operations. This therefore calls into question the applicability to private operations.

the safety case is not proven by these changes

Small and Medium Enterprises

Many helicopters are operated by individuals, groups and small businesses, The cost will be considerable but the benefits are doubtful.

(vi)The unreasonableness of ICAO standards as regards private helicopter operations.

Fixed wing aircraft were in private operation when the ICAO rules were established, not so for Helicopters, so Fixed wing is lightly regulated, helicopters were seen as commercial ony.

Whilst there is a clear and large distinction between the ICAO standards applicable to the public transport and non public transport operations of fixed wing aircraft, there is no such clear and large distinction for helicopters. Indeed the proposals for private helicopters in this NPA are the same as for CAT.

it is disproportionate and unreasonable . Proper, less stringent, provision for private helicopter flight has not been made in the ICAO standards.

The ICAO standards for helicopters are out of date, and do not take into account present day helicopter demonstrated mechanical reliability.

Overwater flight in a fixed wing does not require floats, why so for helicopters ?

ELTS for fixed wing before 1/7/8 can have any type of ELT, why are Helicopters different ?, in any case fixed ELT's sink with the aircraft where personal or handheld ELTs can saty with the personel.

Helicopter flight in the UK is as safe as fixed wing flight, so why are helicopters being treated differently then fixed wings. ther have been no fatalities or injury in over water flight in the UK, which is better then Fixed wing.

fixed wing can fly beyond gluiding distance (100nm or 30 mins), why are helicopters to be forced to be within guilde distance ?

Statistics indicate that overwater, private helicopter operations are safer than those of private fixed wing so why are EASA seeking to have ICAO

standards changed so as to bring the SARP's for private helicopter operations into line with those existing for private fixed wing. (vii)

The safety benefit of the proposals (if any)

Easa has not shown the saefty benefits to delivered from the changes proposed, only four incidents over water have ocured in the UK, non were fatal or caused injury.

In contrast fixed wing aircraft have suffered 24 accidents, 5 fatalities, 13 injuries over water during the same period.

Thre is no safety issue to be addressed, helicopter flight over water is considerably safer than fixed wing. FLoatation gear is no answer to a problem that does not exist.

the Helicopter does not know its above water, the % time spent over water by most private aircraft willbe less than 1%, but the floatation gear will have to be fitted permenantly !

(viii)

I doubt there is any competent helicopter pilot or operator that would supprt the proposal

There is no perceived need for these additional equipment requirements as proposed

Most, if not all, helicopter pilots a cautious and care individuals, if the risks were real and the benefits obtained (tiny) outweighed the disabvantages (considerable) some private helicopters would have floats. I know of no private helicoters with floats fitted except those that are occasionally rented out for commercial flights

as private helicopters are not used to carry paying public the flyer is often the owner and he can make the decission to fit the extra equipment (or not)

The UK CAA has not seen the case to mandate these items, they have not seen an issue, there is no issue, why does EASA think things have changed?

Summary

it is unreasonable and unneccessary to impose these equipment on private flyers

I erge EASA towithdraw or substantually ammend the proposal or exempt small helicopters (say below 3000kg) from them.

my preferred solution is that EASA adopt option 4C as defined in paragraph 2.9 of NOTICE OF PROPOSED AMENDMENT (NPA) NO 2009-02G if his equipment is to be mandated adequate time will be needed to comply, 25 yrs for floats and 10yrs for ELT's would be reasonable. with exemptions were original equipment manufacturers equipment is either not available, no longer made, or was never designed.

The UK CAA has taken the view of "regulation at a sensible minimum", and

"safety in a cost effective manner" These principals should also be followed by EASA.

[1] (COM(2007) 869 final), Point 34.

[2] European Parliament resolution of 3 February 2009 on an Agenda for Sustainable Future in General and Business Aviation (2008/2134(INI), Point 4.

comment *6581* comment by: *Danish Powerflying Union*

There is no need for approved equipment to determine a flightpath or to navigate under VFR conditions. Updated GPS equipment and a chart is sufficient.

We suggest the following text in (a) (1):

(1) control or, **in case of a non-commercial VFR flight,** determine the flight path.

comment *6628* comment by: *KLM Cityhopper*

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS

comment *6782* comment by: *Icelandair*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *7214* comment by: *Paul Monahan*

I wish to raise my strongest objection to these new rules. They are totally restrictive on helicopters. The document has been badly drafted. No thought appears to have been put into it - it looks like a cut-and-paste effort. From a pilot's point of view, these rules are totally unworkable and seriously need to be looked at again.

comment *7240* comment by: *AIR FRANCE*

Relevant Text:

Approved and Non-Approved Equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630 including all the alleviations and grandfather rights from EU-OPS.

comment *7371* comment by: *Europe Air Sports, VP*

This requirements needs to be reviewed because, in the case of balloon, no instruments are used to determine the flight path. The pilot is monitoring the air travel of his balloon by external reference.

comment *7464* comment by: *David ROBERTS*

Sub para (c) 'as well as any additional equipment.....' and (c) (1). For many sailplanes that have sophisticated (non-Part 21) flight computers, this would be an unnecessary restriction. These types of equipment are essential for the higher performance end of the sport of gliding, and are generally GPS based. The information provided enables the pilot to fly an accurate route to his planned destination, be it a turning point or the destination airfield. Whilst such sailplanes have, of course, the basic isntruments such as magnetic compass, ASI, altimeter etc (which I suppose would satisfy (a) (1)-(3), nevertheless we must not let rules stand in the way of technological advance. Anothe rexmaple of such instrumentation of 'Flarm', a mutual aircraft-to-aircraft collison path alert system, using GPS.

Proposal: review this draft rule carefully with industry experts to ensure it

does not disenranchise modern non Part 21-required instrumentation / technology in, for example, sailplanes.

comment *7484* comment by: *Arno Glover*

My main objection to many of the proposals is the lack of any recognition of the following;

- Small VFR only helicopters operate very differently to large commercial helicopters under different rules and weather conditions – the circumstance surround the risk of operations are therefore very different
- There is no equality in the proposals to recognize that light fixed wing aircraft are no dissimilar to light helicopters in their operation under VFR conditions – yet the proposed rules are very disproportional

Reference GM OPS.GEN.400(b)

In general the proposals fail to offer any distinction between private and commercial helicopter operations and a such all helicopters types are treated the same

In reality there cannot be rules that fail to distinguish between the operations of say a small light Robinson R22 helicopter and a large offshore helicopter.

I suggest that the proposals should view light helicopters the same as private fixed wing aircraft because statistics reveal that private helicopter flights are no less dangerous than private fixed wing.

Helicopters owners would be subject to costly airframe / equipment refits whereas light fixed wing aircraft operating in the same manner will have almost no changes or further costs imposed on them as a result of the proposals

comment *7531* comment by: *Pascal JOUBERT*

The reader does not understand which equipment may determine the flight path in a balloon. Does it mean the pilot in command should carry on a map? In fact 2: one aeronautical and one detailed (scale adapted to balloon activity). Note: all VFR balloon operations should be performed with the surface in sight.

comment *7642* comment by: *European Balloon Corporation*

The reader does not understand which equipment may determine the flight path in a balloon. Does it mean the pilot in command should carry on a map? In fact 2: one aeronautical and one detailed (scale adapted to balloon activity). Note: all VFR balloon operations should be performed with the

surface in sight. Most pilot are flying with GPS.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.405 Equipment for all aircraft p. 41-42

comment *26* comment by: *George Knight*

Whether Powered Sailplanes including SLMGs are included in the definition of aeroplanes is not clearly stated in this NPA. They should be excluded from the requirement to carry fire extinguishers since, as far as I know, none already in service are so fitted and physical constraints may make retrofitting very difficult if not impossible. They are not required under the EASA rules that cover certification of such aircraft.

comment *408* comment by: *EHOC*

General

It is not clear why the previously single rule for seats, safety belts and harnesses has been divided between a number of rules (GEN.405, GEN.480 GEN.545, CAT.406 and CAT.482); it might be more appropriate to put all of the elements concerned with seats into a single rule in GEN.480.

comment *504* comment by: *E.I.S. Aircraft*

(a) (1): replace "except in the case of aerobatic flights" by "except where it adversely affects the safety of crew and/or passengers"

add AMC OPS.GEN.405(a)(1) "Adverse effects on the crew's and/or passenger's safety are expected on aerobatic flights, where the hand fire extinguisher may become a hazard due to high G-loads"

reason: Aerobatic flights are only one (although the most common) example for possible adverse effects on the crew's safety, as stated in the respective Guidance Material.

Following EASA's concept of "hard" and "soft law", the Aerobatic Flights would be subject to the AMC, where other exemptions might be added, in case adverse effects on safety are identified

advantage: the proposed wording gives the same level of safety but offers more flexibility in case other hazards than the one mentioned in the GM will be identified in the future

comment *912* comment by: *CAA-NL*

Comment regarding:

BALLOONS

(d) Balloons shall be equipped in accordance with (a)(1)(i) and an alternative source of ignition.

Suggestion CAA-NL:

Exclude Gasballoons for this requirement.

comment *913* comment by: *CAA-NL*

Comment regarding:

CARRIAGE OF PARACHUTISTS

(f) Notwithstanding the provisions of (a)(2), in the case of carriage of parachutists, the floor may be used as a seat, provided means are available for the parachutists to hold on.

Suggestion CAA-NL:

Include this text in (a)(2)

Reason:

Inconsistency.

Subject: Carriage of parachutist' is not and a/c.

comment *991* comment by: *REGA*

HEMS-mission: For transports of babies in an incubator, there are no restraint devices available.

Proposal (4)

(…) a restraint device for each person younger than 24 months, except when transported in an incubator; and (…)

comment *1350* comment by: *AECA helicopteros.*

It is not clear why the previously single rule for seats, safety belts and harnesses has been divided between a number of rules (GEN.405, GEN.480 GEN.545, CAT.406 and CAT.482); it might be more appropriate to put all of the elements concerned with seats into a single rule in GEN.480.

comment *1384* comment by: *Royal Danish Aeroclub*

It is imparativ for the parachute sport, that they not are forced into the

same regulations as normal passenger transportation.

We do support the exception in paragraph (f).

comment *1547* comment by: *Des Russell*

The pilot already has two indications of attitude in VFR conditions - one is the AI and the other is the horizon.

Des Russell

comment *2006* comment by: *Klaus HARTMANN*

zu (d) und (e) :

Für Ballone wird ein Handfeuerlöscher und eine zusätzliche Zündquelle gefordert.

Nur für große und kommerziell betriebene Ballone werden unter anderem zusätzlich gefordert: Schutzhandschuhe, Kappmesser und Feuerlöschdecke.

Die hier genannte zusätzliche Ausrüstung die nur für große Ballone gefordert wird, gehört aber grundsätzlich zur Sicherheits-Ausrüstung in jeden Ballon.

Daher sollten die Punkte (1) , (3) und (4) für alle Ballone festgelegt werden.

comment *2023* comment by: *Ulrich Baum*

In small airplances with very limited cockpit space, the requirement to have a hand fire extinguisher

(1) may not be feasible due to space and weight restrictions, in particular for TMGs or small 1- or 2-seat airplanes

(2) may create an additional safety hazard, e.g. when a fire extinguisher is accidentally activated in flight, causing loss of sight and extreme disturbance.

On the other hand, using a hand fire extinguisher in case of an in-flight fire will in most cases not be practical due to restricted cockpit space and the hazard of losing sight and aircraft control. In case of an in-flight fire, small airplanes will therefore usually execute an immediate emergency landing. I am not aware of any case where a hand fire extinguisher was used successfully on an in-flight fire in a small airplane. The only reasonable use would be in a fire on the ground.

Since it creates additional risks, may not be feasible, and appears of little use for increasing flight safety, I suggest to drop the requirement of a hand fire extinguisher for small airplanes (e.g., up to 2000kg MTOW).

comment *2657* comment by: *AOPA-Sweden*

AOPA-S does not consider a child restraint device necessary for small GA piston driven aircraft.

comment *2786* comment by: *Southern Cross International*

It is proposed to change OPS.GEN.405 (a) (5) as follows:

(5) spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses which are required for the correct operation of instruments and equipment required by Part-OPS and that are accessible in flight.

comment *3152* comment by: *UK CAA*

Page No: 41

Paragraph No: OPS.GEN.405(b)

Comment:

There is no AMC or GM material offered for OPS.GEN.405(b) relating to the type of extinguishing agent for the required fire extinguishers. Guidance should be provided similar to AMC.OPS.CAT.405.

Justification:

Clarity of requirement

Proposed Text (if applicable):

AMC OPS.***GEN***.405 Hand fire extinguishers – Motor-powered aircraft

HAND FIRE EXTINGUISHERS – NUMBER, LOCATION AND TYPE

1. The fire extinguishers located in the cockpit should contain Halon 1211 (bromochlorodifluoro-methane, CBrCIF2) or an equivalent extinguishing agent.

2. For aeroplanes with a maximum approved passenger seating configuration between 31 and 60, one of the required fire extinguishers located in the passenger compartment should contain Halon 1211 (bromochlorodi-fluoromethane, CBrCIF2) or an equivalent extinguishing agent.

3. For aeroplanes with a maximum approved passenger seating configuration of more than 61, at least two of the fire extinguishers located in the passenger compartment should contain Halon 1211 (bromochlorodi-fluoromethane, CBrCIF2) or an equivalent extinguishing agent.

comment *3154* comment by: *UK CAA*

Page No: 41, 42, 56

Paragraph No:

OPS.GEN 405 and 410; 600 and 605 and others

Comment: The incremental nature of the requirements in OPS.GEN 600 – all aircraft – and OPS.GEN 605 - non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations – is clarified by the latter commencing with "In addition…", whereas in the case of OPS.GEN 405 – all aircraft – and then OPS.GEN 410 – VFR flights – the same principle is not followed.

Justification: Consistency throughout the IRs.

Proposed Text (if applicable): Consistent use or deletion of "In addition…"

comment *3233* comment by: *Aero-Club of Switzerland*

To (a) (1): Please delete the requirement for for all aircraft operated by a single pilot, make a change from "shall" to "should".

The wording of (b) is correct in our view, it covers all aspects of fire-fighting during flight. Fighting a fire on ground, after a forced landing for instance, is a different thing.

We ask the Agency to propose adequate fire fighting rules for the different forms of air operations, looking at the very wide variations of aircraft involved.

Justification: The use of any fire extinguisher in a cabin of an aircraft is dangerous for all occupants because of the agents used.

It is much safer to have a pilot concentrating on the emergency procedures learned and on landing the aircraft as quickly as possible than to try to extinguish the fire.

The mission to extinguish a fire on board a an aircraft described cannot reasonably be delegated to a passenger.

comment *3418* comment by: *barry birch*

Why a hook knife? Seems odd. If you need to cut something then you are involved in operating the balloon in a way that is not standard practise!! Barry Birch Balloon Pilot/Instructor, Italy.

comment *3562* comment by: *Walter Gessky*

OPS.GEN.405(f)

Comment:

See OPS.GEN.110 Carriage of persons , AEROPLANES AND HELICOPTERS

"(c) Prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each person on board shall occupy a seat or berth and, except in the case of parachute operations, have his/her safety belt or harness properly secured."

Is it intended that in the case of parachute operation each person on board have his/her safety belt properly secured or what kinds on hold on are required? Clarification requested. When no safety belts are required, than this shall be clarified in OPS.GEN.110 .

comment *4064* comment by: *Ted Moore*

The minimum equipment list for balloons includes a hook knife which is a throwback to gas ballooning.

comment *4193* comment by: *DGAC*

General comment regarding (a)(3) & (a)(4) & (e)(2) ::

Those provisions deal with seat belts and restraining devices. As there is a paragraph dedicated to seat belts and harnesses (OPS.GEN.480 Seat belts & harnesses), move the provisions of (a)(3) & (a)(4) & (e)(2) to OPS.GEN.480).

comment *4194* comment by: *DGAC*

General comment n°2 on (a)(3) & (a)(4) & (e)(2) ::

To avoid any misunderstanding, there should be

- a definition in OPS.GEN.010 for seat belt, seat belt with shoulder strap or harness, harness, in terms of anchorage points, and
- an AMC to these definitions explaining that, unless otherwise provided, a safety harness (5 points) is deemed to be compliant to the requirement for safety belt with shoulder harness (4 points), deemed to be compliant with safety belt with diagonal shoulder strap (3 points), deemed to be compliant with safety belt (2 points)

comment *4195* comment by: *DGAC*

(a)(4): Replace "a restraint device" by "a child restraint device (CRD)". This

will make the link with the AMC more understandable

comment *4196* comment by: *DGAC*

Proposal : Add a new § in (a) as follows :

"For aerobatics, a 5-point harness is required for each seat".

comment *4197* comment by: *DGAC*

(b) : The use of halon as a fire extinguisher should be addressed in the IR not only in the AMC.

Justification : as of today, Halon is the only efficient extinguishing agent. New agents are in the process of being developed by the industry for hand extinguishers. For cargo and engine automatic extinguishers, though, no other agent has been developed so far.

As there are discussions at European level on the topic, for environment concerns, which may impose in a EU regulation the end of the special exemption for aviation, we fear that having the possibility to use halon in a simple AMC will make that provision not usable, as it will be outweighed by the EU regulation. This might cause safety concerns.

comment *4198* comment by: *DGAC*

Rewrite (c) as follows :

"(c) Sailplanes shall be equipped in accordance with (a)(2)**,** ~~and~~ (a)(3) **and (a)(4)"**.

Indeed there is no provision that prevents children under 24 month from being a passenger in a sailplane.

comment *4199* comment by: *DGAC*

Proposal : Add to (c) a provision stating that "a 4-point harness is required. For sailplanes whose airworthiness certificates has been issued **after December, 1st 1990 (Arrêté 24/07/91 § 2.4.5)** on which . no device preventing a pilot from sliding forward is available, a 5-point harness is required."

Justification : This provision is considered important for safety in our national requirements (*Arrêté 24/07/1991 - § 2.4.5*)

comment *4200* comment by: *DGAC*

(d) : add "in the case of "hot air balloons" after "alternative source of ignition"

comment *4201* comment by: *DGAC*

(e)(1), (e)(3) and (e)(4) shall be applicable to all balloons.

comment *4202* comment by: *DGAC*

(e)(2) : Rewrite as follows :

"(e)(2) ~~crew~~ restraint harness(es) **for the minimum required flight crew**;

The harnesses shall not hinder the movements of the crew members.

comment *4203* comment by: *DGAC*

(e)(5) : Rewrite as follows :

"(e)(5) a drop line of at least ~~30~~ **25** metres (m).

Justification :

There are only two length available for drop lines : 25 or 50 metres

comment *4204* comment by: *DGAC*

There is a problem of consistency: "CARRIAGE OF PARACHUTISTS" is not a type of aircraft. For ease of reading and understanding, delete the section "CARRIAGE OF PARACHUTISTS" and move the content of (f) toward (a)(2) to read : "(a)(2)a seat or berth for each person older than 24 months **except in the case of carriage of parachutists, where the floor may be used as a seat, provided means are available for the parachutists to hold on**.

comment *4400* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (4) a restraint device for each person younger than 24 months during transportation; and

comment *5131* comment by: *UK CAA*

Page No: 42

Paragraph No: OPS.GEN.405(e)(3)

Comment:

The requirement to carry a hook-knife in a hot-air balloon should be removed.

Justification:

The carriage of a hook-knife in a hot-air balloon has no safety benefit.

Proposed Text (if applicable):

LARGE BALLOONS AND BALLOONS INVOLVED IN COMMERCIAL OPERATIONS

(e) Balloons with a maximum passenger capacity of more than 11 and balloons used in commercial operations shall, in addition to (d), be equipped with:

(1) protective gloves for each crew member;

(2) crew restraint harness(es);

~~(3) a hook knife;~~

(4) a fire blanket or fire resistant cover; and

(5) a drop line of at least 30 metres (m).

comment *5253* comment by: *Graham HALLETT*

OPS.GEN.405. (d).

In balloons where the lifting gas is inflammable (such as hydrogen gas balloons), sources of ignition are generally discouraged. I assume this is an oversight in the wording, rather than a startling display of ignorance on the subject. I would suggest this should apply to hot air balloons only.

comment *5260* comment by: *Graham HALLETT*

OPS.GEN.405 (e)

Whilst this list generally seems reasonable for large balloons and some smaller balloons, there are certain circumstances where it is not. Again, the definition of what commercial operations encompasses is not totally clear, but it may include passenger transport in smaller balloons, also display flying in single man 'hopper' type balloons.

For balloons with non-compartmented baskets or no turning vents, the use of restraint harnesses is problematic and could prove more dangerous than not using them. Also, it states 'crew harnesses', rather than 'pilot harness'. This would appear to mandate the use of such a harness for any crew who

may be present, even though they may not have any flight duties, effectively flying as passengers. Indeed, the use of the term crew, rather than pilot belies a possible lack of understanding of the nature of balloon operations.

For one-man 'hopper' balloons the carriage and deployment of a fire blanket is awkward at best, so this should not be mandatory. Similarly a drop line is often an unnecessary burden when it is clear that it will not be needed in the forthcoming short duration of the flight.

I do not know what a hook knife is, as opposed to any other sort of knife. A knife is often useful, but a better definition of the type must be given before comment can be passed.

The prudent pilot is likely to be equipped with as many of the above as possible, so it should not be necessary to mandate their carriage in all circumstances. Since I believe the intent of this clause is to apply to passenger carrying balloons, I would suggest that rather than apply to all commercial operations, it should apply to commercial passenger transport operations only:

Change title to:

LARGE BALLOONS AND BALLOONS INVOLVED IN COMMERCIAL PASSENGER TRANSPORT OPERATIONS

Change subclause (2) to:

Pilot restraint harness (for balloons with compartmented baskets and turning vents only).

Provided the change of title is agreed, there is no need to alter subclauses (4) & (5). However, if this restriction is not agreed, then some change tothese subclauses is required to remove this requirement for balloons without traditional baskets.

comment

5269 comment by: *Heli-Lift Services*

We would endorse the views expressed by the Helicopter Club of Great Britain, particularly on the matter of flotation equipment.

Kind Regards

Stuart Ring

comment

5288 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(5) spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are accessible in flight.

Comment:

Good clarification

comment

5293 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

LARGE BALLOONS AND BALLOONS INVOLVED IN COMMERCIAL OPERATIONS

- - -

(e) Balloons with a maximum passenger capacity of more than 11 and balloons used in commercial operations shall, in addition to (d), be equipped with:

(1) protective gloves for each crew member;

(2) crew restraint harness(es);

(3) a hook knife;

(4) a fire blanket or fire resistant cover; and

(5) a drop line of at least 30 metres (m).

- - -

Comment:

Since there is always a risk that the pilot falls out of the basket and the passengers remain inside, the risk for the passengers is unacceptable for CAT. There should always be a requirement for some kind of crew restraint system, however simple it may be.

Reference to a known incident in Sweden:

Incident no 1990-04-07

Upon landing, one passenger as well as the PiC fell out, another passenger jumped out while a third passenger remained onboard and the balloon continued its flight. The commander managed to shout instructions to the passenger on how to cut off the gas supply to the burner. However, the balloon continued to fly for another 15 minutes before it landed without damages.

Proposal (including ***new text***):

There should be a requirement for a crew restraint harness for smaller balloons used for CAT

comment

5339 comment by: *Norwegian Air Sports Federation*

We do support the exception in paragraph (F)

comment *5512* comment by: *Peter Moeller*

405 (a)(4) a baby in an incubator cannot be provided with a restarint device

comment *5673* comment by: *ERA*

European Regions Airline Association Comment

AEROPLANES AND HELICOPTERS

(a) Aeroplanes and helicopters shall be equipped with:

(5) spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are accessible in flight.

ERA members feel that accessibility is not the criteria. As NPA OPS 43 was not approved and was just a draft , the criteria should be "for use". Therefore please change sub-paragraph 5 to read:

(5) Spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be changed in flight.

comment *5736* comment by: *AS Miller*

OPS.GEN.405.Equipment for all aircraft

"...(1) except in the case of aerobatic flights...."

AMC.OP.GEN.405(a)(1) Equipment for all aircraft

Aerobatic aircraft are not the only ones to experience frequent, alternating, flight loads during normal operations. Launching gliders into lee wave system can require the tug aircraft to repeatedly climb and descend in the extremely turbulent air associated with strong air flows in the lee of mountains. Once off tow, the glider can climb in the smooth higher air, but the tug immediately returns for a further dose.

Proposal *change the wording in the IR to: "(1) except in the case of aerobatic, and other flights as approved by NAAs, at least one ....."*

and the AMC to:

2. For aerobatic, and other flights as approved by NAAs, the hand fire extinguishers may become a hazard due to frequent, alternating, flight loads.

comment *5860* comment by: *Fédération Française Aéronautique*

For "light" aeroplanes, **i.e. *non complex aeroplane with MTOW below 2T***, the requirement to have on board a "fire extinguisher" is largely questionable : French FFA believes that a hand fire extinguisher in the

cockpit of this category of aeroplane is useless in flight and, moreover, its use can be dangerous.

Justifications : 1) A fire extinguisher, even a hand one, is quite heavy and difficult to store securely in the small cockpit space of that aeroplane category.

2) The in flight use on that category of aeroplane of a fire extinguisher will be very difficult and, moreover, the extinguisher product itself can be dangerous for people on board.

3) Nothing in flight safety analysis shows that a fire extinguisher on board of non complex aeroplanes will improve flight safety by any way.

4) Installation and periodic maintenance of a fire extinguisher on board that category of aeroplane will cost time and money for the operators (mainly aero-clubs) without any actual benefit in flight safety.

FFA proposal : Suppress the fire extinguisher requirement for non complex aeroplane involved in non commercial operations, at least for aeroplanes below 2,000 kg MTOW.

comment *6264* comment by: *Lufthansa CityLine GmbH*

Lufthansa CityLine feels that accessibility is not the criteria. As NPA OPS 43 was not approved and was just a draft , the criteria should be "for use". Therefore please change sub-paragraph 5 to read:

(5) Spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be changed in flight.

comment *6567* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.405(a)(1)

Wording in the NPA

(1) except in the case of aerobatic flights, at least one hand fire extinguisher:

(i) in the cockpit; and

(ii) in each passenger compartment which is separate from the cockpit;

Our proposal

except in the case of aerobatic flights, tow flights or an MTOW of 750kg or less, at least one hand fire extinguisher

Issue with current wording

For small aircraft this requirement is a weight and space issue

Rationale

Small aircraft in many cases will have an issue to place a hand extinguisher at a reasonable location. Tow planes should be kept as light as possible so adding the requirement for ELT, fire extinguisher and first aid kit in sum adds unnecessary weight.

comment *6780* comment by: *ETF*

(a) (4) Comment: The proposed text says restraint device for each person younger then 24 months but does not give any indication on where the infant should sit or if double occupancy is permitted.

comment *6879* comment by: *Luftsport-Verband Bayern*

zu: (1) except in the case of aerobatic flights, at least one hand fire extinguisher:(i) in the cockpit: Für ein Einmanncockpit erscheint die Forderung nach einem Feuerlöscher keinen Sicherheitsgewinn auszulösen. Lediglich beim Brand am Boden könnte dies von Nutzen sein.

Vorschlag Neuformulierung: (1) except in the case of single handed Airplanes, aerobatic flights, at least one hand fire extinguisher:(i) in the cockpit;

comment *7229* comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU is of the opinion that the requirement of an hand fire extinguisher in the cockpit of a small aeroplane (non complex aeroplane with MTOW less than 2,000 kg) is not a good idea.

Justification : use in flight of a fire extinguisher inside the small cockpit of a small aeroplane seems too risky for persons on board, pilot included. Additionally, the efficiency to fight a fire on board is questionable. Actually, the EPFU is of the opinion that this efficiency will be close to zero...

So EPFU is of the opinion that this requirement must be suppressed for non commercial operations on non complex aeroplanes.

comment *7289* comment by: *Richard Simpson*

Page 42 OPS GEN 410 (b) (3)

For VFR Flight in a helicopter, even a single AI is not of any real use, having two will not make flying safer. A second indicator would be very expensive to

fit, around £4000 for a typical piston helicopter and there will likely not be a panel aperture spare for this extra instrument. This is not an ICAO recommendation and there is no reason to believe that safety is increased by this recommendation.

comment *7382* comment by: *DAvid Monks*

Response comment to 410b

A VFR certified helicopter does not require an AH.

A non IR pilot is not permitted to fly by sole reference to instruments therefore an AH is not required.

If 2no AH were fitted which could be trusted if 1No were suspect faulty.

This requirement is not a safe reccomendation and would jepodise pilot safety without the ability to cross reference with a known correct instrument unless the conditions were VMC as permitted by type.

comment *7404* comment by: *A. Mertz*

Das Platzangebot in kleinen Flugzeugen lässt oft die sichere Befestigung eines Feuerlöschers an einem geeigneten Ort nicht zu. Der Feuerlöscher muss gleichzeitig leicht erreichbar sein und die Halterung muss im Falle eines Unfalls gegebenenfalls hohe Kräfte aufnehmen können.

Ein geeigneter Formulierungsvorschlag wäre:

(a) Aeroplanes and helicopters with more than 4 seats .....

Ein weiterer gangbarer Weg wäre, Flugzeuge der ELA-Kategorie von der Pflicht einen Verbandskasten und einen Feuerlöscher mitzuführen auszunehmen.

comment *7532* comment by: *Pascal JOUBERT*

Only the pilot should dispose of a harness.

Justification: the crew and the pilot are in the same compartment. Ropes may entangle together and limit pilot's movements.

comment *7533* comment by: *Pascal JOUBERT*

What is the purpose of this hook knife?

Justification: why a knife would be more necessary during commercial operation than a non-commercial operation?

comment *7534* comment by: *Pascal JOUBERT*

Please replace 'at least 30 metres' by 'at least 25 metres'.

Justification: drop lines are sold in 2 sizes today 25 m or 50 m. Please be lenient with people already equipped with a 25 m drop line.

comment *7643* comment by: *European Balloon Corporation*

(e)2 Only the pilot should dispose of a harness.

Justification: the crew and the pilot are in the same compartment. Ropes may entangle together and limit pilot's movements.

comment *7644* comment by: *European Balloon Corporation*

(e) 3

What is the purpose of this hook knife?

Justification: why a knife would be more necessary during commercial operation than a non-commercial operation?

comment *7645* comment by: *European Balloon Corporation*

(e) 5

Please replace 'at least 30 metres' by 'at least 25 metres'.

Justification: drop lines are sold in 2 sizes today 25 m or 50 m. Please be lenient with people already equipped with a 25 m drop line.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.410 Flight instruments and equipment - VFR flights p. 42-43

comment *27* comment by: *George Knight*

-(a) (2) Sailplanes should not be required to be equipped with a means to measure time because, (unlike most other types of aircraft) their cross country flight consists of a series of climbs during which they drift followed by short cruises to the next cloud which may be only in the general direction of the next waypoint. Time has little relevance to sailplane navigation since they do not cruise in straight lines between waypoints (even if they

sometimes wish they could).

comment *28* comment by: *George Knight*

-(b) The listed equipment for sailplanes unable to maintain attitude without reference to flight instruments conflicts with the regulations for certification by setting a different requirement.

comment *29* comment by: *George Knight*

(b) (2) & (3) These two points require sailplanes & powered sailplanes to carry an attitude indicator but not a turn and slip when unable to maintain attitude without reference to flight instruments. This is not appropriate or reasonable. A sailplane should be required to carry a T&S OR AI to fly in these conditions but not both.

comment *30* comment by: *George Knight*

(b) (4) I have never seen a sailplane or powered sailplane with a means of displaying a stabilised heading (i.e. a Direction Indicator). Apart from installation issues they are not necessary in gliders even in IMC (currently permitted in the UK). Sailplanes, powered sailplanes, SLMGs and TMGs should be exempted.

comment *122* comment by: *AgustaWestland*

In OPS.GEN.410(b)(5) it seems that a portion of text has been missed.

comment *323* comment by: *AgustaWestland*

1. Why, for a VFR flight, two Attitude Indicators (AI) must be available? This is not required neither by CS27 nor CS29. A standby AI is required only by Appendix B (Airworthiness criteria for helicopter instrument flight) to CS27/29. Similarly JAR-OPS 3.650 (Day VFR Ops) did not require a second AI. While a stby AI is required by JAR-OPS 3.652 (IFR or night ops).
2. ICAO Annex 6 Part III Ch.4 Para.4.4.1 prescribes a secon AI for Night ops
3. This rule seems to be more conservative than ICAO SARP,JAR-OPS 3 and the Airworthiness Rules that are the basis for granting a Type Certificate.Additionally compliance to OPS.GEN.410(c) seems to

require 4 AI's.

4. OPS.GEN.410(b)(5) is incomplete.

comment *412* comment by: ***EHOC***

General

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and non-commercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

Paragraph (b)

The text in GEN and CAT are two ways of doing similar things; the discriminant in GEN is objective and superior to CAT (which contains a prescriptive requirement). No further text is required for helicopters in CAT as GEN covers the requirement. Because accuracy is required it may be necessary only to provide a GM for CAT helicopters stating that:

"GM OPS.GEN.410(b)

REDUCED VISUAL CUE ENVIRONMNENT - HELICOPTERS

1. Environmental condition where the risk of loss of control is high and reference to one or more flight instruments may be necessary occurs when:

a. operating over land or water with a visibility of less than 1500m; and/or

b. operating over water and out of sight of land.

2. Because instruments cannot be fitted or removed temporarily, the net effect of not having specified instruments is an operational limitation."

However, that does leave aeroplanes and helicopters with MCTOM > 3175 kg; this can be accommodated with an abbreviated rule text:

"(b) Helicopters with a maximum certificated take-off mass exceeding 3175 kg and aeroplanes shall, in addition to (a), be equipped with a means of measuring and displaying:"

Even with this, a note is required to avoid double compliance.

Paragraph (b)(3)

It is not clear where the requirement for two attitude indicators comes from;

no text that can be found (ICAO or JAR) specifies this for helicopters.

Paragraph (c)

Under existing requirements, attitude and stabilised heading are not required for helicopter, VFR, two crew operations. However, this is a reasonable requirement when two pilots have to be carried.

comment *623* comment by: *ECA - European Cockpit Association*

Comment: change text as follows:

(a) When operating under Visual Flight Rules (VFR), sailplanes, aeroplanes, and helicopters shall be equipped with a means of measuring and displaying:

(1) magnetic heading;

(2) time, in hours, minutes and seconds;

(3) ~~**pressure altitude**~~ **A sensitive pressure altimeter calibrated in feet with a sub-scale setting, calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight**; and

(4) ~~**indicated air speed**~~ **An airspeed indicator calibrated in knots**.

Justification:

Text as proposed comes from the original JAR-OPS 3.

comment *825* comment by: *Reto Ruesch*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *939* comment by: *Aersud*

First: It does not take sense to talk about "helicopters operating under VFR cannot be maintained in a desiderated attitude without reference to one or more flight instrument...". When we talk about VFR flights we have to consider that the flight is also conducted with a proper outside reference (ground or horizon).

Second: It's not clear what are the "two separate means of indicating attitude". Does it mean two instruments or two different type of instruments? (example: one gyro-horizon + one std-by gyro-horizon or one gyro-horizon + turn and bank indicator).

There are no explanation also on the AMC.

Proposal

Change: (3) attitude. ~~In the case of helicopters, two separate means of indicating attitude shall be available,~~

OR / AND

Specify in the AMC how to comply with this requirement.

Note

Priority: **M**

comment *940* comment by: *Aersud*

Comment

For two pilots you request additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), (b)(3), (b)(4). In case of (b)(3) we talk about an "attitude indicator, in the case of helicopters, two separate means of indication are necessary". Does it mean that we have to install 4 attitude indicators? Can two gyro-horizon + 1 std.by gyro-horizon comply with this requirement?

Proposal

Specify in the AMC how to comply to this requirement

Note

Priority: **M**

comment *1087* comment by: *EUROCOPTER*

Comment on OPS.GEN.410 (b)(2):

It is propose to write:

*(2) turn and slip for aeroplanes**; ~~and~~** slip for helicopters;*

Reason: it has to be clear that only the display of slip is required for helicopters.

comment *1089* comment by: *EUROCOPTER*

Comment on OPS.GEN.410(b)(3):

Wording modification proposal:

(3) attitude. ***~~In the case of helicopters, two separate means of indicating attitude shall be available~~****;*

Rationale:

Flights under VFR which cannot be maintained in a desired attitude without reference to one or more flight instruments are typically flights over calm water.

OPS.CAT.410(b) already requests, in addition to OPS.GEN.410, one attitude indicator for flights over water. The proposal is so: one attitude indicator in GEN + 1 attitude indicator for commercial air transport over water. It would not realistic to request 3 attitude indicators for CAT over water.

comment *1096* comment by: *David COURT*

A means of "indicating envelope temperature" would mean adding thermistors to many balloons which do not have them and do not need them.

If the wording was changed to say "indicating excessive envelope temperature" then a temperature flag would be adequate.

comment *1126* comment by: *Heli Gotthard*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *1174* comment by: *Stefan Huber*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *1244* comment by: *Air Zermatt*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *1295* comment by: *Air-Glaciers (pf)*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further

complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *1357* comment by: *Helicopter Club of Great Britain*

Page 42

Ops.Gen.410 (b) (3)

In the case of helicopters, two separate means of indicating attitude shall be available.

Reason for Objection

It would be very expensive to install a second AI. Many helicopters do not have the panel space. It is not necessary for VFR helicopters. It is not an ICAO recommendation. Appendix VI, paragraph 40 (p32) concludes thus; *"Although this is not required in ICAO Annex 6 Part II and Part III, it is considered a useful tool to improve safety".* No supporting evidence whatsoever is provided, and no proportionality is considered for private flight in non complex helicopters..

Suggested alternative wording

Ops.Gen.410 (b) (3) attitude. (remainder of text deleted)

Acceptable means of compliance

None – this is not even an ICAO recommendation!

comment *1385* comment by: *Royal Danish Aeroclub*

We do not understand the demand for having equipment displaying time in hours, minutes and seconds on board a sailplane.

We suggest to change the paragraph (a)(2) to read:

"(2) except for sailplanes flying VFR, time, in hours, minutes and seconds."

comment *1436* comment by: *Mike Pascall*

Page 42

Ops.Gen.410 (b) (3)

In the case of helicopters, two separate means of indicating attitude shall be available.

Reason for Objection

It would be very expensive to install a second AI. Many helicopters do not have the panel space. It is not necessary for VFR helicopters. It is not an

ICAO recommendation.Appendix VI, paragraph 40 (p32) concludes thus; *"Although this is not required in ICAO Annex 6 Part II and Part III, it is considered a useful tool to improve safety".* No supporting evidence whatsoever is provided, and no proportionality is considered for private flight in non complex helicopters..

Suggested alternative wording

Ops.Gen.410 (b) (3) attitude. (remainder of text deleted)

Acceptable means of compliance

None – this is not even an ICAO recommendation!

comment *1448* comment by: *R Spiers*

Reason for Objection

Installing a second AI in private non-complex would be expensive as do not have spare panel space. It is also not necessary for helicopters flying under VFR rules. There is no evidence that for private flying this is required. It is not an ICAO recommendation.Appendix VI, paragraph 40 (p32) concludes thus; *"Although this is not required in ICAO Annex 6 Part II and Part III, it is considered a useful tool to improve safety".*

Suggested alternative wording

Ops.Gen.410 (b) (3) attitude. (remainder of text deleted)

Acceptable means of compliance

None – this is not an ICAO recommendation.

comment *1459* comment by: *Aubrey Bristow*

P42 410 b 3

The need for a second means of indicating attitude under VFR is disproportionate and unecessary. There is no evidence of risk from only a single device. A second device cannot be fitted to smaller aircraft due to both total space and panel space. The additional weight increases risk. For low hours pilots failure of one device in any case would possible simply cause confusion and disorientation, where as failure when only one device is present should result in resumption of flying with reference to the ground visually.

P43 a 3 second static pressure source

There is no evidence a light helicopter in VMC has been at risk with only one stsaic pressure source. By definition the aircraft is not in icing conditions. There is no mechanism for adding a second source and the cost and disruption would be disproportionate

P45 420 f

The need to carry a liferaft should be at the discretion of the commander.

A mandatory liferaft is simply not possible in smaller helicopters. There is no evidence of need based on the very small number of ditchings and high proven safety of over water flight by helicopters. Even if one can be carried, it can be near impossible to jettison it on ditching and there is no case history to prove it is practical. There is a risk of accidental inflation before or during jettisoning which could injure or entrap passengers or crew and the further risk of inadvertant flight outside C of G and weight limits by low hour pilots accustomed to all loading configurations being currently within limits with their family. More experienced pilots who might be asumed to be flying overwater with empty seats or even solo (since single engined helicopters would not carry passengers commercially over water) are best placed to decide whether they could deploy a liferaft on ditching or not.

P45 425.H b

The mandatory demand for floatation devices is unecessary, disproportionate and reduces safety.

There have been very few ditchings by light helicopters within the EU and no loss of life. If a light helicopter ditches without floats the rotors are stopped quickly by contact with the water allowing egress before sinking. The addition of floats would at best result in egress with rotors running or delayed egress such that the hull submerges with the passengers still on board, but in practice a small top heavy aircraft in even a mild swell would invert so that egress would be more difficult and disorientation increased.

It woul be far preferable to mandate underwater breathing equipment to allow less hasty egress as the aircraft settles

Floats are also expensive and cannot be retro fitted to many aircraft , efectively banning them from over water flight even within the UK. Deployment especially for low hours pilots in an emergency engine out descent further increases cockpit workload and the risk of a suboptimal landing on water with risk of death. Floats can fail, need servicing and dramatically add to weight. Most light helicopters can load each seat within C of G and weight limits. Adding floats for helicopter pilots accustomed to this significantly risks overloading and flight outside C of G albeit inadvertantly.

P46 C 1

A fixed automatic ELT is inappropriate for light helicopters. I would suggest mandatory GPS equipped portable ELTs.

A fixed ELT is disproportionate in cost. Most engine off landings involve low G forces which would not activate the device. This could cause death as the pilot may assume the device to have activated. In fact the only circumstance in which it would fire would be a CFIT accident which is invariably fatal.

The greatest advantage of an ELT in the UK is over water. A light helicopter rapidly sinks whilst the crew and passengers float on the tide and current away from the hull. A fixed ELT would delay rescue as SAR would home into the sunken hull and not locate the survivors.

P202 415 H (a) (6)

The mandatory fitting of trainable landing lights is ridiculous.

Light helicopters currently have fixed lights for night flying. These are simple and effective. Trainable lights do not exist for many helicopters and even if they did the weight and cost would be prohibitive. In my experience they not infrequently fail and then cannot illuminate the landing path at all. Fixed lights do not suffer this problem.

Low hours pilots might also suffer as a result of the increased cockpit workload of having to steer the light and there must be a risk of disorientation and inadvertant contact. In summary, no benefit has been shown, it cannot be done and there is a risk of injury

comment *1472* comment by: *EUROCOPTER*

§ (c):

Duplication of attitude ((b)(3)) and stabilised heading ((b)(4)) is not requested by JAR-OPS 3.650 (h). This requirement only concerns helicopters over 3175 kg; or operating over water or when the visibility is less than 1500 m; and is already dealt in OPS.CAT.410 (b).

Proposal:

(c) Whenever two pilots are required for the operation, aeroplanes and helicopters shall be equipped with an additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), ~~***(b)(3) and (b)(4).***~~

comment *1517* comment by: *Chris Fox*

Para (b) (3) - There is no basis for requiring the fitment of a second Attitude Indicator for VFR flight in light helicopters.It is not an ICAO requirement, and there is no evidence or safety case to support this requirement.

For many light helicopters, fitment of a second AI is difficult or impossible due to limitations of panel space and weight.

This requirement should be deleted.

comment *1617* comment by: *Luftfahrt-Bundesamt*

The LBA requests to stay away from the performance base rule making here. If this system shall be used, OPS.GEN 405 should be phrased in a similar way. However, this does not make much sense at all. Same with this paragraph.

Justification: see LBA - General Comment, reason 3.

comment *1665* comment by: *JSLEE*

Page42

Ops.Gen.410 (b) (3)

In the case of helicopters two separate attitude indicators to be available.

Reason for objection

As EASA have not given reasons for the proposed changes to the equipment needed for night flying one can only assume that they are unaware of the limitations of single engine helicopter metrological flying conditions.

A single engine helicopter is only permitted to fly in visual flight conditions.

This means they must remain clear of clouds at all times.

A pilot flying in VFR conditions should never need a second attitude indicator. If the aircraft has entered icing conditions, which would only normally occur in cloud at or above the freezing level. In which case the pilot would not be flying in VFR conditions and flying illegally. The fitting of this instrument may indeed encourage instrument rated pilots to do so.

The fitting of a second attitude indicator is impractical in many single engine helicopter instrument panels! There is just insufficient room. The panels were designed for VFR flying and the size and shape of the panel designed to accommodate those instruments necessary for safe VFR flying Not IFR. The modifications to the instrument panel would require CAA approval with the associated approval costs.

comment *1667* comment by: *JSLEE*

Page 43

Ops.Gen.415 (a) (3)

An alternative static source

As EASA have not given reasons for the proposed changes to the equipment needed for day or night flying one can only assume that they are unaware of the limitations of single engine helicopter metrological flying conditions.

A single engine helicopter is only permitted to fly in visual flight conditions.

This means they must remain clear of clouds at all times.

The only time a pilot flying in VFR conditions would need an alternative static source is if the aircraft has entered icing conditions, which would only normally occur in cloud at or above the freezing level. In which case the pilot would not be flying in VFR conditions and flying illegally. The fitting of these instruments may indeed encourage instrument rated pilots to do so.

The fitting of a second static source would be expensive, disproportionate and only of use when flying in icing conditions. The modifications may require CAA approval with the associated approval costs.

comment *1685* comment by: *Dassault Aviation*

Technical comment.

Page 42 OPS.GEN.410 §(b)(5): how can we measure *when power is not adequately supplied to the instruments* ? also on some a/c, no power is needed for vertical speed required by §(b)(1) - only air pressure is enough - so §(b)(5) can not be complied with. Proposal is to keep this requirement but not under §(b)(5), under a new (c) for example, and also to exempt vertical speed from this requirement.

comment *1714* comment by: *William Harford*

THis is entirely discriminatory against non complex, privately operated helicopters as opposed to non complex, mjotor powered, privately operated aeroplanes.

There is no evidence to support a safety case for such a requirement.

comment *1752* comment by: *Swedish Soaring Federation*

Regarding sailplanes; magnetic heading can be dispayed by a compass or another device that can display magnetic heading.

comment *1828* comment by: *Q Aviation Ltd*

Adding more instumentation to light helicopters will be counter productive.

There is no room for them, and they are not needed.

We cannot afford extra costs on instrumentation and equipment that we will never use.

More people will give up flying.

We fly for fun, and if the weather is so bad as to make extra instrumentation beneficial, then the very weather that necessitates the use of instrumentation will beyond the capabilities of the pilot.

So he will crash anyway.

Better to focus on teaching a pilot when to fly, and when to stay on the ground.

comment *1860* comment by: *SHA (AS)*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types

and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *1903* comment by: *Ian MACDONALD*

Section (b) (3) is not necessary for VFR flight and impossible to achieve in many hundreds of light helicopters such as the R22. There is neither the panel space, electrical capacity or, given the many other proposals for modification, the weight capacity to implement this. It is not proportionate to require such equipment in aircraft which are VFR only. Bear in mind that many early machines are legally flying with no attitude indicator, other than the prime and safest one, looking out of the cockpit.

comment *1905* comment by: *Helifly (UK) Ltd*

Objection to OPS.GEN.410 b3

It would be disproportionately expensive to fit a second AI to the Robinson R44 operated by Helifly. There is no room in the panel which means a complete new panel would need to be fitted. For VFR flights a secondary AI is not needed. If the flight is being conducted in compliance this VFR rules even the primary AI should not be required! It is the understanding of Helifly that a second AI is not even an ICAO recommendation.

comment *1936* comment by: *Berner Oberländer Helikopter AG BOHAG*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further

complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2007* comment by: *Klaus HARTMANN*

zu (d) und (e) :

Für Ballone werden zur Instrumentierung Uhr, barometrischer Höhenmesser und Hüllenthermometer gefordert. Nur für große und kommerziell betriebene Ballone werden zusätzlich Variometer und Manometer für jede Versorgungsleitung gefordert.

Hierbei kann es sich nur um einen Irrtum handeln, da jeder Ballon für die sichere Führung und zur Kontrolle der Einhaltung der Betriebsgrenzen mit diesen Instrumenten ausgerüstet sein muß.

comment *2020* comment by: *Heliswiss AG, Belp*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2094* comment by: *Dirk Hatebur*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be

maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2124* comment by: *Heliswiss*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2132* comment by: *Heliswiss NV*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2418* comment by: *Jan Brühlmann*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text

provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2537* comment by: *James Leavesley*

Having to have two seperate altitudes will cause confusion to any pilot in a stressful situation, if showing different readings which one is right.

My instrument panel doesn't have any room for another instrument so it would have to all be changed, otherwise it would look like a "stuck on" and give no reassurance to any first time passengers. A group who frequently fly with the ppl helicopter pilot.

There is no safety benefit to a VFR PPL pilot for having two attitude instruments

Please do not change the claibration of equipment only confusion will occur and the addition aeed for yet more equipment

comment *2550* comment by: *Walter Mayer, Heliswiss*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2616* comment by: *John Matchett*

It is illegal for VFR pilots to fly in cloud. The need for additional

attitude equipment to be fitted is inapprpriate

comment *2658* comment by: *AOPA-Sweden*

(a):

For a VFR flight, there is no need for a precision down to the nearest second. Hours and minutes are enough.

comment *2659* comment by: *AOPA-Sweden*

(b):

A VFR-flight is by definition a flight when the attitude is maintained by visual references out of the cockpit and in VMC. AOPA-Sweden does not agree to a need of additional instruments during operations in VFR/VMC, where the desired attitude not can be maintained to one or more instruments. AOPA-S does not see such a scenario. AOPA-S can see a need for VSI during night and a DG during VFR on top.

comment *2660* comment by: *AOPA-Sweden*

(b) (2): Modern aircraft with glass cockpit does not always have turn and slip indicators. The rule should be modified in order to also allow modern glass cockpit aircraft accordingly. I.e. Garmin 1000 glass cockpit.

comment *2661* comment by: *AOPA-Sweden*

(b) (5): None of the instruments listed in OPS.GEN.410 (a) has a need of external power, AOPA-S suggest this point can be deleted.

comment *2803* comment by: *Ed Sturmer*

Dual AIs in small helicopters in VFR.

Expensive and NO proven safety benefit.

Experience and statistics show no safety benefit to this expensive proposal.

comment *2816* comment by: *Peter Waldron*

As many helictopters do not have panel space for this second indicator it would be extremely expensive to install. It is certainly not necessary for VFR helicopters and is not an ICAO recommendation. Appendix VI, paragraph 40 (p32) states that this is "considered a useful tool to improve safety".

There is absolutely no evidence provided to support this and no proportionality for private flight in non complex helicopters. This is not an ICAO recommendation.

comment *2838* comment by: *Philipp Peterhans*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2928* comment by: *Pascal DREER*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2970* comment by: *REGA*

(b)(3) Delete all after attitude: there is a change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *3057* comment by: *Richard Dawson*

There should not be a requirement for an additional Attitude Indicator in helicopters. It would not be possible, for example, to fit an additional AI into my R44.

The majority of non-complex helicopters (such as my R44) are rated for VFR flight only and are not allowed to be flown by reference to instruments alone. Therefore there is no requirement for even one AI let alone two in such aircraft.

This seems to be a sensible requirement for commercial aircraft which are flying IFR and need redundancy.

comment *3145* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

to e: Every balloon should be equipped with a variometer. It is an essential for life-instrument

comment *3153* comment by: *UK CAA*

Page: 42

Paragraph No: OPS.GEN.410

Comment:

This paragraph, and OPS.GEN.415, detail the required flight instruments and equipment for various flight regimes. The matter is complex due to the varying requirements of the different types of operation, the flight conditions and the time of day. It is felt that the subject could be simplified, and capture some additional requirements noted in ICAO Annex 6 Part II and III (Section III), by adapting the text as indicated. The comment in NPA 2009-02A (paragraph 40 page 32) regarding the layout as used in JAR-OPS 0 is agreed, subject to the proposed amendments. The full section is reproduced for clarity of the changes.

Justification:

Simplification of the text, correction of errors of commission and inclusion of missing elements of ICAO Annex 6 Part II and III.

Proposed Text (if applicable):

OPS.GEN.410 Flight instruments and equipment - VFR flights

SAILPLANES, AEROPLANES AND HELICOPTERS

(a) When operating under Visual Flight Rules (VFR), sailplanes, aeroplanes, and helicopters shall be equipped with a means of measuring and displaying:

(1) magnetic heading;

(2) time, in hours, minutes and seconds;

(3) pressure altitude; and

(4) indicated air speed.

(5) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number.

(b) When ***a*** sailplane~~s~~, aeroplane~~s~~ ~~and~~ ***or*** helicopter~~s~~ ***is being operated*** ~~operating~~ under VFR ~~cannot be maintained in a desired attitude without reference to one or more flight instruments,~~:

(1) over land or water with a visibility of less than 1500m; and/or

(2) over water and out of sight of land; or

(3) in conditions where the risk of loss of control is high and reference to one or more flight instruments may be necessary,

it shall, in addition to those required in (a), be equipped with a means of measuring and displaying:

(1) vertical speed;

(2) turn and slip for aeroplanes, and slip for helicopters;

(3) attitude. ~~In the case of helicopters, two separate means of indicating attitude shall be available;~~

(4) stabilised heading; and

(5) when power is not adequately supplied to the instruments.

COMPLEX MOTOR POWERED AEROPLANES

(c) Complex Motor Powered Aeroplanes when flying under the conditions of (b) shall additionally be equipped with:

(1) a second independent means of measuring and displaying altitude;

(2) an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating system clearly visible to the pilot-in-command for aeroplanes first issued with an individual certificate of airworthiness on or after the 1 January 1975. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument that the attitude indicator is being operated by emergency power.

AEROPLANES AND HELICOPTERS IN MULTI-PILOT OPERATIONS

(***d***) Whenever two pilots are required for the operation, ***the second pilot station for*** aeroplanes and helicopters shall be equipped with an additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), (b)(3) and (b)(4).

BALLOONS

(***e***) When operating under VFR, balloons shall be equipped in accordance with (a)(2), (a)(3) and also with:

(1) a means of indicating:

(i) drift direction; and

(ii) envelope temperature; and

LARGE BALLOONS AND BALLOONS INVOLVED IN COMMERCIAL OPERATIONS

(***f***) Balloons with a maximum passenger capacity of more than 11 and balloons used in commercial operations, when operating under VFR shall, in addition to (d), be equipped with:

(1) a means of measuring and displaying:

(i) vertical speed; and

(ii) pressure for each ***fuel*** supply line;

comment *3170* comment by: *Richard ALLEN*

(1) (ii) temperature is already catered for with a "temp link" and a flag attached. Electronic temperature devices are useful but should not be mandatory.

comment *3238* comment by: *Suffolk Helicopters*

Ops Gen 410 (b) (3)

The requirement for two Attitude indicators for light, non instrument helicopters is excessive, unnecessary and will not contribute to safety when most pilots of such aircraft are not even instrument rated in the first place.

comment *3419* comment by: *barry birch*

Balloons are already fitted with a means of indicating maximum operational temperature. Regular monitoring of internal envelope temperature even when flying with large passenger balloons is not a standard practise nor is it necessary, as the flight preparation requires a load calculation to be carried out for the meteorological conditions at the time of the flight so that the max. temperature will not be exceeded.

Balloon pilots do not fly and monitor the internal envelope temperature during normal operational procedures. Drift direction would be measured how? And why is this necessary? Barry Birch Balloon Pilot/Instructor, Italy.

comment *3548* comment by: *IAOPA Europe*

It is not clear when the conditions specified under b) would be met since VFR implies that the flight is made with external reference.

The only condition where b) would seem applicable would be for VFR on top operations, however - as already pointed out - there are no provisions anywhere in the regulation for such operations.

Is is suggested that VFR on top operations should be made possible and in this case the equipment requirements under b) would be sensible. Section b) should then explicitly be for this purpose, since in all other cases VFR is made with external reference.

comment *3740* comment by: *Civil Aviation Authority of Norway*

Comment:

This paragraph, and OPS.GEN.415, detail the required flight instruments and equipment for various flight regimes. The matter is complex due the varying requirements of the different types of operation, the flight conditions and the time of day. It is felt that the subject could be simplified somewhat, and capture some additional requirements noted in ICAO Annex 6 Part II and III (Section III), by adapting the text as indicated. The comment in NPA 2009-02A (paragraph 40 page 32) regarding the layout as used in JAR-OPS 0 is agreed, subject to the proposed amendments. The full section is reproduced for clarity of the changes.

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Proposed Text

(if applicable):

OPS.GEN.410 Flight instruments and equipment - VFR flights

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(a) When operating under Visual Flight Rules (VFR), sailplanes, aeroplanes, and helicopters shall be equipped with a means of measuring and displaying:

(1) magnetic heading;

(2) time, in hours, minutes and seconds;

(3) pressure altitude; and

(4) indicated air speed.

(5) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number.

(b) When sailplanes, aeroplanes and helicopters operating under VFR cannot be maintained in a desired attitude without reference to one or more flight instruments, it shall, in addition to those required in (a), be equipped with a means of measuring and displaying:

(1) vertical speed;

(2) turn and slip for aeroplanes, and slip for helicopters;

(3) attitude. ~~In the case of helicopters, two separate means of indicating attitude shall be available;~~

(4) stabilised heading; and

(5) when power is not adequately supplied to the instruments.

COMPLEX MOTOR POWERED AEROPLANES

(c) Complex Motor Powered Aeroplanes when flying under the conditions of (b) shall additionally be equipped with:

(1) a second independent means of measuring and displaying altitude;

(2) an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating system clearly visible to the pilot-in-command for aeroplanes first issued with an individual certificate of airworthiness on or after the 1 January 1975. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument that the attitude indicator is being operated by emergency power.

AEROPLANES AND HELICOPTERS IN MULTI-PILOT OPERATIONS

(***d***) Whenever two pilots are required for the operation, ***the second pilot station for*** aeroplanes and helicopters shall be equipped with an additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), (b)(3) and (b)(4).

BALLOONS

(***e***) When operating under VFR, balloons shall be equipped in accordance with (a)(2), (a)(3) and also with:

(1) a means of indicating:

(i) drift direction; and

(ii) envelope temperature; and

LARGE BALLOONS AND BALLOONS INVOLVED IN COMMERCIAL OPERATIONS

(***f***) Balloons with a maximum passenger capacity of more than 11 and balloons used in commercial operations, when operating under VFR shall, in addition to (d), be equipped with:

(1) a means of measuring and displaying:

(i) vertical speed; and

(ii) pressure for each ***fuel*** supply line;

comment *3890* comment by: *FOM ANWB MAA*

OPS.GEN.410 Flight instruments and equipment - VFR flights

B (3) attitude. ~~In the case of helicopters, two separate means of indicating attitude shall be available;~~

change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *3935* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(b)(3) Delete all after attitude: there is a change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *3958* comment by: *HDM Luftrettung gGmbH*

OPS GEN 410: The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *4069* comment by: *Ted Moore*

The means of indicating drift direction in a balloon must be a gps as a compass cannot be read accurately when the orientation of the basket changes frequently in flight. As the flight speed in generally very low it is possible to assess drift direction by reference to the map and does not require instrumentation.

comment *4110* comment by: *Benedikt SCHLEGEL*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *4205* comment by: *DGAC*

Proposal : Delete § b) « cannot be maintained in a desired attitude ».

Justification : This refers to a British concept ("IMC rating") which is not applicable, even considered as illegal, in the other European countries. This very specificity should only be addressed in a SPA.

As a consequence :

1)1- **Proposal** : Move (b)(1) and (b)(2) to OPS.GEN.410 (a) to read :

"(5) vertical speed only for sailplanes";

"(6) turn and slip for aeroplanes and slip for helicopters".

Justification :this items are necessary for VFR with sailplanes, aeroplanes and helicopters

2)

2- 2- **Proposal** : Move (b)(3) "attitude" and (b)(4) "stabilised heading" to § OPS.GEN.415

3)

3- What kind of instrument or equipment is described by "when power is not adequately supplied to the instruments" ?

comment *4206* comment by: *DGAC*

Proposal : BALLOONS : move (e)(1)(i) "vertical speed" to (d) (1) (iii)

Justification : This provision concerns all balloons, not only large balloons

comment *4207* comment by: *DGAC*

(e) (1) (ii) "pressure for each supply line".

Proposal :

Delete the sentence

Justification :

The amount of gas left in the bottle can easily be estimated by calculation and the pilot is able to assume with the magnetic indicator that the bottle is about to be empty. Also, the total amount of gas shall be sufficient to insure the flight plus 30 minutes.

comment *4524* comment by: *Christophe Baumann*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM

comment *4562* comment by: *ADAC Luftrettung GmbH*

How many attitude indicators? 1, 2 , 3 or 4?

(b)(3) Delete all after attitude: there is a change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences

between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *5041* comment by: *AS Miller*

OPS.GEN.410 Flight instruments and equipment - VFR flights

SAILPLANES, AEROPLANES AND HELICOPTERS

para (b)(4) requires a means of measuring and displaying stabilised heading when the desired attitude can not be maintained without reference to instruments.

The magnetic compasses currently fitted to all gliders have proven to be adequate. Twenty years ago, a particular model, "Bohli", provided a degree of stability, but this facility was found to be unnecessary and the model did not find a place in the market.

Proposal *Para (b)(4) must read "stabilised heading (not sailplanes)";*

comment *5076* comment by: *Trevor Wilcock*

I would hope that if the pilot is wearing a watch this would satisfy para a2! I cannot see the need for this to be mandatory for sailplanes (unless perhaps they are to be in contact with ATC), and sailplane panel space is limited.

comment *5261* comment by: *Graham HALLETT*

OPS.GEN.410(d)

Clause (i). The most practical method of measuring drift is with a map and the mark 1 eyeball. Would it not be simpler to say a map must be carried? Indeed, since a map will always be carried anyway, why not just delete this clause?

Clause (ii)

I do not believe there is a need to indicate envelope temperature in gas balloons.

For hot-air balloons, there is no need to continuously monitor the envelope temperature, there is only a need to indicate excessive temperature. Since this requirement is addressed by the airworthiness requirement to have such an indication (usually a temperature flag), this clause is superfluous and may simply be removed.

comment *5263* comment by: *Graham HALLETT*

OPS.GEN.410 (e).

Whilst this may be reasonable for large balloons and indeed not unreasonble for many others, 'Commercial Operations' will encompass many types of balloons and flying where it is not necessary and/or not practical. For example, tethered flying and flights using one-man 'hopper' type balloons are examples which spring to mind immediately, there are doubtless others.

This clause could be made applicable to just large balloons only, with no detriment to safety. If it must also be applied to some commercial operations, this should be to commercial operations involving the carriage of passengers only.

comment *5295* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) When operating under visual flight rules (VFR), sailplanes, aeroplanes, and helicopters shall be equipped with a means of measuring and displaying:

. . .

(2) time, in hours, minutes and seconds;

Comment:

Delete "shall be equipped with".

Justification: A requirement for a time piece equipment could be subject to an installation, which could be very costly.

Proposal (including ***new text***):

Stipulate that the commander when operating under visual flight rules (VFR) shall have access to a means of measuring and displaying:

(a) When operating under visual flight rules (VFR), sailplanes, aeroplanes, and helicopters shall ~~be equipped with~~ ***have access to*** a means of measuring and displaying:

. . .

(2) time, in hours, minutes and seconds

. . .

comment *5330* comment by: *Norwegian Air Sports Federation*

For VFR flights magnetic heading can be displayed by an compass or other device (GPS etc.) that can display magnetic heading.

We do not understand why sailplanes have to carry equipment to display

time.

Proposal:

(2) except for sailplanes flying VFR, time, in hours, minutes and seconds.

comment *5333* comment by: *European Private Helicopter Alliance*

Page 42

Ops.Gen.410 (b) (3)

In the case of helicopters, two separate means of indicating attitude shall be available.

Reason for Objection

It would be very expensive to install a second AI. Many helicopters do not have the panel space. It is not necessary for VFR helicopters. It is not an ICAO recommendation. Appendix VI, paragraph 40 (p32) concludes thus; *"Although this is not required in ICAO Annex 6 Part II and Part III, it is considered a useful tool to improve safety".* No supporting evidence whatsoever is provided, and no proportionality is considered for private flight in non complex helicopters..

Suggested alternative wording

Ops.Gen.410 (b) (3) attitude. (remainder of text deleted)

Acceptable means of compliance

None – this is not even an ICAO recommendation!

comment *5426* comment by: *ALFA-HELICOPTER*

(b)(3) Delete all after attitude: there is a change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *5514* comment by: *James Tuke*

OPS.GEN 410 Flight Instruments and equipment - VFR Flights - Helicopter Section

(b) (3) The case of fitting a second altimeter seems to me to be more appropriate for Fixed wing aircraft which do not have such good visibility from them as helicopters. Most helicopters also have GPS units fitted which can indicate altitude (albeit not as accurately as a pressure driven altimeter) this could act as a second device as in most small helicopters there is quite simply no room to fit a second altimeter and in my experience (approx 6000hrs flying) I have never suffered a total altimter failure

comment *5580* comment by: *Peter Moeller*

410 (b)(3) delete all after attitude. One attitude indicator for a VFR operating helicopter should be sufficient to provide adequate safety

410(c) with two pilots on board two attitude indicators should be enough for a VFR operating helicopter to provide an adequate level of safety.

comment *5669* comment by: *DON BURT*

B.(3) IN A rOBINSON R44 THERE IS NOT SPACE FOR AN ADDITIONAL AI TO FIT ONE WOULD MEAN AN ATTACHMENT TO THE PANEL OR A NEW PANEL. i GUESS THIS WOULD BE VERY EXPENSIVE AND UNDER VFR UN-NECCESSARY

comment *5744* comment by: *Aero-Club of Switzerland*

(b) (3) We se no reason for a second altimeter on helicopters! Please delete the second sentence.

Justification: There will not be an increase in safety, only in cost. It is not a useful tool to achieve any gain in safety. The proposal of the Agency is not based on any evidence and not on ICAO SARP.

comment *5771* comment by: *Norsk Luftambulanse*

(c): Double (b)(3)? We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *5800* comment by: *Ph.Walker*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple

operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *5867* comment by: *Ian Casselden*

In the case of helicopters, two separate means of indicating attitude shall be available.

Reason for Objection

Many helicopters do not have the panel space. It is not necessary for VFR helicopters.

it is not an ICAO recommendation in many small single pilot helicopters this means one more thing to adjust in flight, one omre distraction, for what benefit ?

what is the safety case, are altimeters unrealiable, and most (all) helicopter operation is VFR in sight of the ground !

comment *5908* comment by: *HSD Hubschrauber Sonder Dienst*

410 (c): unclear requirement, one can interprete, that one would need 4 attitude indicators in a helicopter, which is operated with two pilots. That makes it together with a standby horizon 5 attitude indicators. Please clarify!!

comment *6000* comment by: *Fédération Française Aéronautique*

OPS.GEN.410 (b) (3) : Attitude.

Conditions in which this "attitude instrument" is required must be clarified. Attitude instrument is not generally necessary or usefull in most VFR operations. Many small VFR aeroplanes operated in sports and recreational flying organisations are not equipped, and there is no safety reason to change the present situation.

French FFA asks for clarification on that item.

comment *6129* comment by: *Hans MESSERLI*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex

types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *6165* comment by: *EUROPEAN GLIDING UNION*

Regarding sailplanes; magnetic heading can be dispayed by a compass or another device that can display magnetic heading.

comment *6299* comment by: *Heliswiss International*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *6359* comment by: *Trans Héli (pf)*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot -

even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *6425* comment by: *George Heritage*

It is not necessary in VFR helicopters, it is not an ICAO requirement, weight and space would be limited.

comment *6483* comment by: *EUROPEAN GLIDING UNION*

In case of sailplanes, requirement as under (a)(2) for measuring and displaying time (in hours, minutes and seconds) in a sailplane or powered sailplane should be possible also by the pilot having an ordinary watch instead of a fixed one in instrument panel. Justification for this is the limited space sailplanes have, and that there is no time based flight procedures used.

comment *6536* comment by: *European Gliding Union (EGU)*

OPS GEN 410

Proposed wording a(3)"pressure altitude (units of measurement in meters' (m) is acceptable); and

Justification: The ICAO regulation on the use of metric and non metric measurements and indications need to be kept in place. For example, traditionally the Glider Community works in Meters (actually the No1. Choice of ICAO). By going the non metric path thousands of aircraft would need a retrofit in Altimeter and Speedometer.

Recommendation: Keep ICAO regulation in place and allow for all aircraft the use of metric indications.

comment *6538* comment by: *European Gliding Union (EGU)*

Proposed wording: a(2) time, in hours, minutes and seconds (not applicable for sailplanes);

Justification: As the minimum equipment for a sailplane did not foresee a clock for measurement of time up to now, this rule induces heavy load for the installation into all sailplanes in Europe. It means a minor change not only for all types of sailplanes but also for each glider with an individual instrument panel, which are the majority.

As acceptable means of compliance, a wrist watch worn by the pilot shall be

acceptable.

The requirement for a time piece should not be more specifically as the present wording allows for kind of time keeping equipment

Recommendation: leave OPS GEN 410 as written today.

comment *6552* comment by: *Sloane Helicopters Ltd*

All UK single-engined helicopters are VFR only and many do not have an Artificial Horizon. To insist on two AHs being fitted is unacceptable. Most light helicopters would not have the panel space and it would be extremely expensive.

comment *6602* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.410 Flight instruments and equipment - VFR flights

B (3) attitude. ~~In the case of helicopters, two separate means of indicating attitude shall be available;~~

This is a change from JAR-OPS 3, only one was required. We see no need to carry 4 means of indicating attitude when 2 pilots are required.

comment *6698* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

In case of sailplanes, requirement as under (a)(2) for measuring and displaying time (in hours, minutes and seconds) in a sailplane or powered sailplane should be possible also by the pilot having an ordinary watch instead of a fixed one in instrument panel. Justification for this is the limited space sailplanes have, and that there is no time based flight procedures used.

comment *6745* comment by: *Clive Morrell*

In the case of helicopters, two separate means of indicating attitude shall be available.'

Comment; This is completely unnecessary for a VFR helicopter. Many small helicopters (eg R22) have no space for installation of such an additional instrument.

A single Attitude indicator should be acceptable for private VFR helicopters

comment *6790* comment by: *Kinetic Avionics Ltd*

Section 410(b)(3)

If this section is intended to refer to night VFR flight in helicopters, then it is disproportionate to require two separate attitude indicators for private flight in small helicopters given that few will be so equipped and the installation cost would be considerable, even where space permits. Such helicopters are generally approved for VFR flight only and flight in the absence of visual cues is prohibited. Therefore the safety benefit from a back-up attitude indicator does not justify the cost.

The reference to "in the case of helicopters, two separate means of indicating attitude" should be deleted for private VFR operations.

comment *6880* comment by: *Luftsport-Verband Bayern*

…two separate means of indicating attitude shall be available…

Die Mitglieder des Deutschen Hubschrauberclubs, Mitglied im Luftsport-Verband Bayern und DAeC, fürhen ihre Hubschrauberflüge nach Sichtflugregeln durch, zwei Geräte fordert auch die ICAO nicht, Hubschrauber werden zumeist von einem Piloten geflogen.

Wo soll bei einer R-22 ein zweites Gerät installiert werden?

Dieses sollte gestrichen werden.

comment *6903* comment by: *Swiss Helicopter Group*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *6925* comment by: *Christian Hölzle*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day

VFR', 'Night VFR' and 'IFR - day and night').

comment *6971* comment by: *Eliticino SA*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *7165* comment by: *Paul Monahan*

I object to this proposal. It would be expensive to install and is not an ICAO recommendation.

comment *7179* comment by: *DHV*

Page 42

Ops.Gen.410 (b) (3)

In the case of helicopters, two separate means of indicating attitude shall be available.

Reason for Objection

It would be very expensive to install a second AI. Many helicopters do not have the panel space. It is not necessary for VFR helicopters. It is not an ICAO recommendation. Appendix VI, paragraph 40 (p32) concludes thus; *"Although this is not required in ICAO Annex 6 Part II and Part III, it is considered a useful tool to improve safety".* No supporting evidence whatsoever is provided, and no proportionality is considered for private flight in non complex helicopters..

Suggested alternative wording

Ops.Gen.410 (b) (3) attitude. (remainder of text deleted)

Acceptable means of compliance

None – this is not even an ICAO recommendation!

comment *7466* comment by: *David ROBERTS*

sub para (a) (1) There is no need for equipment on a sailplane to indicate time in seconds. Further, it is not necessary to have a time-piece in the sailplane itself. A wrist watch on the pilot is sufficient. Sailplane panels are already very crowded. And adding a clock to the panel would no doubt involve a minor modification approval under Part 21, at great certification expense. Totally unnecessary.

Proposal: If EASA insists on sailplane pilots have on board a means of determining the time, then the rule should exclude the need for a time piece in seconds, and a wrist watch on the pilot should be allowed.

comment *7470* comment by: *Henry Pelham*

Page 42 Ops.Gen.410 (b) (3)

It is almost impossible to fit a second AI in my Enstrom 480 the cost would be considerable and out of all proportion to its enhancement of safety the helicopter is not permitted to fly in IFR conditions. AIs are very reliable. This would appear to be complete overkill. It has never been mandatory to fit second a AI and there have not so far as I am aware been any critical failures in non complex private Helicopters.

comment *7479* comment by: *Norwegian Air Sports Federation, Gliding Section*

OPS.GEN.410 Flight Instruments and equipment - VFR flights

(a) (1) A magnetic heading indicator (compass) should not be required for sailplanes.

According to Certification Specification CS-22, para CS 22.1303, a magnetic heading indicator is only required for powered sailplanes, and is not installed in a large number of European sailplanes. Sailplanes do not usually rely on flying precise compass headings for navigation, as they need to follow areas of lift for cross-country flights. Many training sailplanes are only used for local flights, where a compass is a superfluous instrument.

The compass is not normally a very expensive instrument, but periodic calibration of compasses in all sailplanes will place an additional burden on sailplane maintenance organisations/personell, in many cases this is work performed on instrument that provides very little practical benefil to sailplane pilots.

(a) (2) The pilot's personal wrist-watch (or similar) should be sufficient to indicate time.

comment *7481* comment by: *simon lichtenstein*

Night Flight

I just cannot see any justification for these proposals either. The cost, the weight again, would cause performance problems rendering R22s unflyable and R44s hugely more expensive. We already have to add TWO extra lights here in the UK than they do in USA where the original two are fine. These extra lights add weight and cause drag on the aircraft increasing fuel consumption and therefore C02 output and some times if activated accidentally in the daytime can cause people to run their batteries flat, so in effect causing anther potential problem.

Solution

It seems to me that if you were to simply bring the light/private helicopters under the same rules as private fixed wing then most of the objections I have would be removed and that there would be more harmony and clarity to the rules for all concerned. I wish to see the day where there are more light helicopter types around rejuvenating our ailing aviation industry. In Italy there are two different light helicopter types that fly there legally and in France that are not allowed to fly here in the UK. I would like to see the rules go the way the microlight world went, which is now safer than it has ever been.

comment *7485* comment by: *Arno Glover*

In the case of helicopters, two separate means of indicating attitude shall be available.

VFR helicopters do not require a second AI in order operate within the constraints of VFR flight – a single AI is sufficient and its loss in VMC conditions will not prevent a safe powered landing.

comment *7497* comment by: *David George*

"Attitude. In the case of helicopters, two separate means of indicating attitude shall be available."

All UK single engined helicopters are VFR only and many do not have an Artificial Horizon. To insist on two AHs being fitted is ridiculous. Most light helicopters would not have the panel space and it would be extremely expensive.

comment *7520* comment by: *Deutscher Aero Club E.V.*

... two separate means of indicating attitude shall be available ...

Unsere Hubschrauberflöge erfolgen nach 8ichtflugregeln,zwei Geräte fordert

auch die leAO nicht, Hubschrauber werden zumeist von einem Piloten geflogen.

Wo soll bei einer R-22 ein zweites Gerät installiert werden?

Bitte streichenl

comment *7535* comment by: *Pascal JOUBERT*

The reader does not understand which equipment may determine the drift direction in a balloon. Does it mean the pilot in command should carry on a map? In fact 2: one aeronautical and one detailed (scale adapted to balloon activity). Note: all VFR balloon operations should be performed with the surface in sight.

comment *7536* comment by: *Pascal JOUBERT*

Please clarify the type of the mean of indicating envelope temperature. It is not necessary to add a second temperature indicator, even if these indicator is an instant-reading.

Justification: CS-31 HB.49 (e) requires a means to indicate the maximum envelope skin temperature or maximum internal air temperature during operation.

comment *7537* comment by: *Pascal JOUBERT*

(d) 1 (ii)

Why the last sentence of these paragraph finishes with 'and'? Is there missing some words ?

comment *7538* comment by: *Pascal JOUBERT*

Presentation: why using (d) 1 if there is no (d) 2?

comment *7539* comment by: *Pascal JOUBERT*

An external source of ignition, a means to assess the fuel quantity and universal pliers are missing in this equipment list.

comment *7571* comment by: *AOPA UK*

For a VFR flight, there is no need for a precision down to the nearest second. Hours and minutes are enough.

comment *7572* comment by: *AOPA UK*

A VFR-flight is by definition a flight when the attitude is maintained by visual references out of the cockpit and in VMC. AOPA UK does not agree to a need of additional instruments during operations in VFRNMC, where the desired attitude not can be maintained by one or more instruments.

comment *7573* comment by: *AOPA UK*

Modern aircraft with glass cockpit does not always have turn and slip indicators. The rule should be modified in order to also allow modern glass cockpit aircraft accordingly such as the Garmin 1000.

comment *7574* comment by: *AOPA UK*

None of the instruments listed in OPS.GEN.410 (a) has a need of external power, AOPA UK suggests that this point can be deleted.

comment *7646* comment by: *European Balloon Corporation*

(d) 1 (i)

The reader does not understand which equipment may determine the drift direction in a balloon. Does it mean the pilot in command should carry on a map? In fact 2: one aeronautical and one detailed (scale adapted to balloon activity). Note: all VFR balloon operations should be performed with the surface in sight.

comment *7647* comment by: *European Balloon Corporation*

(d) 1 (ii)

Please clarify the type of the mean of indicating envelope temperature. It is not necessary to add a second temperature indicator, even if these indicator is an instant-reading.

Justification: CS-31 HB.49 (e) requires a means to indicate the maximum envelope skin temperature or maximum internal air temperature during operation.

The flight manual is enough concerning temperature indicator, it looks like

much too much overruled.

comment *7648* comment by: *European Balloon Corporation*

(d) 1 (ii)

Why the last sentence of these paragraph finishes with 'and'? Is there missing some words ?

comment *7649* comment by: *European Balloon Corporation*

(d) 1

Presentation: why using (d) 1 if there is no (d) 2?

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights p. 43-44

comment *31* comment by: *George Knight*

This whole section seems to attempt to impose commercial standards where they are not appropriate. Furthermore by combining the requirements for night flying with instrument flying it will make if complexly impossible for sailplanes and many other light aircraft to fly on instruments in daylight if permitted by pilot licensing rules which are not yet finalised.

Sailplanes rarely fly at night and for those that do existing rules are sufficient. I have made a proposal later in this comment.

When sailplanes fly IFR it is only en-route and never for take off or for approach and landing. Invariably they fly IMC / IFR by day. For those reasons most of the proposals in this rule which assume that aircraft that fly IMC will also do so at night are totally inappropriate for sailplanes. There is no safety case for the disproportionate proposal to apply rules designed for CAT to sailplanes. In any case the power required is not available. The requirements for instrument lights and cabin lights in gliders is beyond any reasonable persons comprehension.

I believe a only solution is to separate this section into two. One section covering night flights and the other IFR flights. I propose:

OPS.GEN.415a

Flight instruments and equipment - VFR night flights

AEROPLANES AND HELICOPTERS.

(a) Aeroplanes and helicopters operating Visual Flight Rules (VFR) night flights shall, in addition to complying with OPS.GEN.410(a), (b), and (c), be

equipped with:

(1) a means of measuring and displaying outside air temperature;

(2) a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed;

(3) an alternative source of static pressure;

(4) an anti-collision light system;

(5) navigation/position lights;

(6) a landing light;

(7) lighting supplied from the aircraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aircraft;

(8) lighting supplied from the aircraft's electrical system to provide illumination in all passenger compartments;

(9) an electric torch for each crew member station;

(10) lights to conform with International Regulations for Preventing Collisions at Sea (hereinafter referred to as International Regulations for Preventing Collisions at Sea) if the aircraft is amphibious; and

(11) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number.

(b) Aeroplanes operating VFR night flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

SAILPLANES

Sailplanes operating VFR night flights shall display either a steady red light of at least five candela, showing in all directions, or lights in accordance (a) (5) and (9). [This is the current UK regulation.]

BALLOONS

(d) Balloons operated at night shall, in addition to complying with OPS.GEN.410a (d) and (e), as applicable, be equipped with:

(1) position lights; and

(2) a means of illuminating all of the instruments used by the flight crew.

OPS.GEN.415b

Flight instruments and equipment – Day IFR/IMC flights

AEROPLANES AND HELICOPTERS.

(a) Aeroplanes and helicopters operating Instrument Flight Rules / IMC flights shall, in addition to complying with OPS.GEN.410(a), (b), and (c), be equipped with:

(1) a means of measuring and displaying outside air temperature;

(2) a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed;

(3) an alternative source of static pressure;

(11) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number.

SAILPLANES

Sailplanes operating day IFR flights, shall comply with OPS.GEN.415b (a) (1)

comment *99* comment by: *EUROCOPTER*

Comment on OPS.GEN.415 (b) (CHART HOLDER):

In order to allow classical charts displayed on chart holders or charts electronically displayed by EFBs (Electronic Flight Bags), it is proposed to change the word "chart holder" to a more generic one, and to transfer into the AMC the installation constraint of the chart illumination.

(b) ... shall be equipped with ***~~a chart holder in an easily readable position which can be illuminated for night operations~~ a means to hold or to electronically display a chart.***

See also the associated proposed modification in AMC OPS.GEN.415 (b)

comment *353* comment by: *ECA - European Cockpit Association*

Comment: as the wording into the parenthesis is redundant, change as follows:

(10) lights to conform with International Regulations for Preventing Collisions at Sea **~~(hereinafter referred to as International Regulations for Preventing Collisions at Sea)~~** if the aircraft is amphibious; and

comment *415* comment by: *EHOC*

Paragraph (a)(3)

The requirement for an 'alternate source of static pressure' is an extremely heavy requirement for GA helicopters; such provisions are usually only provided if an aircraft is certificated for flight in IMC - not for VFR night flights. This requirement would constrain night VFR flight to helicopters which have been certificated to Appendix C of CS-27/29.

These issues have been avoided in Annex 6 Part III - which follows the FARs, and breaks the SARPs for instruments into three sets: VFR Day; VFR Night; and IFR (day and night). If it is decided that this is not appropriate, there must be additional provisions (alleviations) for those helicopters which will be flying VFR Night but not IFR.

Paragraph (a)(4)

Because anti-coll for helicopters already occurs in CAT.410; it appears to be a double requirement.

comment *554* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.415(a)(9): change as follows: choose one of the two options:

(9) an electric torch for each **required** crew**member readily accessible at their designated** ~~**member**~~ station;

OR

(9) an electric torch **at** ~~**for**~~ each crew member station;

Justification:

In line with JAR-OPS and grammatically more correct.

comment *824* comment by: *Reto Ruesch*

At least two landing lights; electric torch for each crew member

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *914* comment by: *CAA-NL*

Comment regarding:

SAILPLANES

(c) Sailplanes operating VFR night flights or IFR flights, shall comply with (a) (4) to (10) inclusive.

Comment CAA-NL:

Sailplanes don’t fly IFR but only temp IMC (cloud flying)

comment *1090* comment by: *EUROCOPTER*

Comment on OPS.GEN.415(a)(3):

Wording modification proposal:

~~***(a)(3) an alternative source of static pressure.***~~

Reason: the requirement of an alternate source of static pressure is not requested by ICAO Annex 6 Part III Section III General Aviation - what is the justification of this requirement? We draw the attention that currently many single helicopters are not equipped with an alternate source of static presure because it is not mandated by ICAO and because JAR-OPS 3 (CAT) forbids to operate in VFR night, as it is a limitation of the Performance Class 3.

comment *1125* comment by: *Heli Gotthard*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *1173* comment by: *Stefan Huber*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *1243* comment by: *Air Zermatt*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *1294* comment by: *Air-Glaciers (pf)*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *1358* comment by: *Helicopter Club of Great Britain*

Page 43

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of whether it is by day or by night. If the flight is in visual conditions, a heated pitot head is unnecessary. Many private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is, in any case, prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

None -

comment *1359* comment by: *Helicopter Club of Great Britain*

Page 43

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of if it is by day or by night. If the flight is in visual conditions an alternate static source is unnecessary. Most private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None

comment *1437* comment by: *Mike Pascall*

Page 43

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of whether it is by day or by night. If the flight is in visual conditions, a heated pitot head is unnecessary. Many private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is, in any case, prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

comment *1438* comment by: *Mike Pascall*

Page 43

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of if it is by day or by night. If the flight is in visual conditions an alternate static source is unnecessary. Most private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None

comment *1449* comment by: *R Spiers*

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for

the means of measuring and displaying indicated air speed

Reason for Objection

If an aircraft is flying under VFR rules, then a heated pitot head is unnecessary. This would be an expensive addition to add and only useful if flying in icing conditions, which is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

None -

comment *1450* comment by: *R Spiers*

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

If an aircraft is flying under VFR flight rules then an alternate static source is unnecessary as conditions would not create the position where a iced static source would be an issue. A flight where this would be a problem is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None

comment *1467* comment by: *John Henshall*

For GA it is not sensible to require a torch for each crew station to be carried.

comment *1479* comment by: *Alan Hardy*

I am in disagreement with this proposal as it is expensive and is unneccessary for privately owned helicopters. It should be up to the owner

to decide to carry a live raft, install floats and have a fixed ELT

comment *1520* comment by: *Chris Fox*

Para (a) (2): For VFR flight (whether by day or night), a means of heating the pitot head is not necessary.

Compliance with this requirement would be difficult and expensive in many light helicopters, and there is no evidence to support it.

The requirement should be deleted for private VFR flight in light helicopters.

comment *1521* comment by: *Chris Fox*

Para (a) (3): For VFR flight (whether by day or night), an alternative static source is not necessary.

Compliance with this requirement would be difficult and expensive in many light helicopters, and there is no evidence to support it.

The requirement should be deleted for private VFR flight in light helicopters.

comment *1550* comment by: *Des Russell*

Ref: Fitting IFR equipment in a VFR only private helicopter

Fitting a helicopter with equipment that is necessary only in IFR conditions will only serve to encourage pilots to fly in those conditions thereby breaking the law and being a negative as far as safety is concerned.

comment *1618* comment by: *Luftfahrt-Bundesamt*

The LBA requests to stay away from the performance base rule making here. If this system shall be used, OPS.GEN 405 should be phrased in a similar way. However, this does not make much sense at all. Same with this paragraph.

Justification: see LBA - General Comment, reason 3.

comment *1658* comment by: *Netcopter*

As I Director and Pilot in Charge for an SME that has successfully and safely operated a single engine turbine helicopter on self-fly business for almost 10 years, I am very concerned that proposed ICAO standards severely discriminate against the practical and efficient use of this type of helicopter within the British Isles. The proposals will increase operating costs

disproportionately and jeopardise the viability of being able to operate a non-complex turbine helicopter in the manner we have done for many years. Additionally as a PPL(A) holder with some 500+ hours of fixed wing experience, I note that private helicopters are not being treated the same as private fixed wing operations, and in my experience the turbine helicopter engine is substantially a more stable and mechanically reliable device that many piston engines fitted to the fixed wing fleet.

comment *1662* comment by: *Netcopter*

I have safely operated my single engine turbine helicopter on VFR night operations (non-icing conditions). This has been assisted by the fitment of a pilot movable landing light and a radar altimeter. I see no justification in the requirement for a second attitude indicator, installation of pitot tube heater nor alternative static pressure source, which would be economically and technically prohibitive to retro-fit on what is at 1998 model year, a relatively young helicopter. I believe the disadvantages of the ICAO proposal firmly outweighs any likely benefit.

comment *1666* comment by: *JSLEE*

Page43

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for means of measuring and displaying indicated air speed

As EASA have not given reasons for the proposed changes to the equipment needed for day or night flying one can only assume that they are unaware of the limitations of single engine helicopter metrological flying conditions.

A single engine helicopter is only permitted to fly in visual flight conditions.

This means they must remain clear of clouds at all times.

The only time a pilot flying in VFR conditions would need a heated pitot tube is if the aircraft has entered icing conditions, which would only normally occur in cloud at or above the freezing level. In which case the pilot would not be flying in VFR conditions and flying illegally. The fitting of these instruments may indeed encourage instrument rated pilots to do so.

The fitting of a heated pitot tube would be very expensive and may need CAA approval with the associated approval costs and would be disproportionate to any benefit.

comment *1716* comment by: *William Harford*

An alternate source of static pressure and provision for preventing icing on airspeed sensors only becomes relevant during flight in cloud or known icing conditions.

Helicopters operating under VFR at night do not require such a provision.

There are no non complex helicopters which are certified to operate in known icing conditions.

comment *1738* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *1739* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *1748* comment by: *Richard Dawson*

(a)(2) a means of preventing malfunction due to condensation.....

VFR helicopters are by definition not allowed to flying in icing conditions and therefore a heated pitot tube are unnecessary. This requirement would therefore be a large cost (if it is even possible) for no practical purpose.

comment *1749* comment by: *Richard Dawson*

(a)(3) *alternative source of static pressure*

This is not a reasonable requirement for VFR helicopters which don'talready have this incorporated into the design. This requirement would be valid for a helicopter used for IFR however most privately owned helicopters are non-complex and do not need this. Adding this to a helicopter would be expensive and serve no practical purpose.

comment *1791* comment by: *Heli Gotthard AG Erstfeld*

OPS.GEN.415 At least two landing lights; electric torch for each crew member

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *1792* comment by: *Heli Gotthard AG Erstfeld*

OPS.GEN.410 Flight instruments and equipment-VFR flights

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM

comment *1826* comment by: *Q Aviation Ltd*

This is completely impractical for smaller VFR helicopters

why would we fly in these conditions anyway? We don't now, so there is no need to impose impossible legislation that will acheive nothing.

comment *1853* comment by: *Aeromega*

These requirements are not practical to fit on small helicopters. What evidence is there that accidents have occurred due to the absence of items such as heated pitots on small helicopters flying at night. Weight limitations and system requirements would mean that the useable load of small helicopters such as the R22 would be reduced further by this equipment. Training for night qualifications would therefore have to be carried out on larger more expensive types adding to the costs of obtaining a CPL (H).

comment *1904* comment by: *Ian MACDONALD*

Section (a) (2) There is no VFR helicopter licenced for flight in icing conditions. Installing should equipment would only increase the chance of accidents and the additional weight penalty, complete with all the other modifications, would see many hundreds of light helicopters rendered practically inoperable.

comment *1906* comment by: *Helifly (UK) Ltd*

Objection to OPS.GEN.415 a2

There is no heated pitot option for a Robinson R44, and there does not need to be one! The machine is only certified for flight under VFR rules outside of conditions that could lead to icing. The proposal would be expensive to implement and is disproportionate for a non-complex helicopter operated within the terms of the POH.

Objection to OPS.GEN.415 a3

The objection is the same as for a2. An alternate source of static pressure is not required for a non-complex light helicopter operated in VFR conditions within the terms of the POH.

comment *1916* comment by: *Ingmar Hedblom*

(a)(1) Why only amphibious aircraft and not all aircraft operating from water?

(b) Normally during VFR Day or Night charts are handled in the same way

and chart holders are not used. Why are helicopters not required to carry chart holder at night?

A Chart holder is normally used to hold the approach and landing plates during IFR flights

(d) Normally a balloon is moving with the air mass and how shall the position lights be oriented?

Proposed text: "(b) Aeroplanes operating IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations."

comment *1935* comment by: *Berner Oberländer Helikopter AG BOHAG*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2029* comment by: *Ulrich Baum*

Ref. (3): many small airplanes currently approved for night VFR (but not for IFR) do not provide an alternate source of static pressure. This requirement would require operators to install such an alternat source, which will result in an undue cost, if it is possible to have it certified in the first place. I suggest to drop this requirement for night VFR flights.

comment *2092* comment by: *Dirk Hatebur*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2131* comment by: *Heliswiss NV*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2254* comment by: *Ian MACDONALD*

Section (a) (3) is unnecessary, disproportionate and expensive for VFR helicopters. The standard procedure of landing as soon as practical is perfectly adequate in the event of static source dependent instruments failing.

comment *2289* comment by: *Austro Control GmbH*

SAILPLANES

(c) Sailplanes operating VFR night flights ~~or IFR flights,~~ shall comply with....

shall be changed:

SAILPLANES

*(c) Sailplanes operating VFR night flights or flights **in clouds**, shall comply with...*

Justification:

Delete IFR flights, there are no controlled flight under IFR possible for sailplanes.

comment *2323* comment by: *heliswiss ag, belp*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2417* comment by: *Jan Brühlmann*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes

'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2450* comment by: *Catherine Nussbaumer*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *2535* comment by: *Aerocorp Limited*

The helicopters we safely operate VFR at night are not permitted to fly in icing conditions. Condensation in the pitot lines has never been an issue and it should be borne in mind that helicopters, unlike fixed wing aircraft, are not as critically affected by incorrect airspeed indications or static source line problems. We can always stop and consider the situation!

As far as we are aware, the machines we operate cannot be fitted with pitot heaters and there is no available modification for the provision of an alternate static source.

Being unable to operate at night would severely restrict our winter operations. We could really do without this unjustifiable meddling and intrusion in these difficult times.

comment *2538* comment by: *James Leavesley*

As A PPL pilot my license doesn't allow me to fly in icing conditions therefore this is another expense and adds weight to my machinewaist to weight and money

Same goes for the extra sourse of static, extra weight and would require another instrument where there is no room on the pannel.

Extra Lights - My R44 has already got two very good night light s and two fixed emergency lights, they ppoint in the direction of travel and are excellent at night. Additional requirent are only going to increase wieght and require expensive equipment change,, please no

Knee boards - I do not believe that an illuminiated knee board would help in any way, it would be an additional distraction when flying at night, the less light in the cockpit the better whatever the colour

comment *2549* comment by: *Walter Mayer, Heliswiss*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2617* comment by: *John Matchett*

It is illegal for VFR helicopter pilots to fly IFR unless they have an appropiate

rating. In VFR flight such conditions are rarely encountered and are overcoming by applying VFR flying rules

comment *2645* comment by: *British Gliding Association*

OPS GEN 415 presents a number of technical and operational difficulties and indeed impossibilities for sailplanes, which of course cannot generate electrical power.

Sailplanes very occasionally fly at night. Sailplanes that operate at night carry position lights and the BGA supports that continued requirement.

For operational, safety and sporting reasons and where airspace classifications allow, sailplanes can and do fly non-VFR when en-route. Sailplanes do not take off or land non-VFR. When operating non-VFR, sailplanes do not carry the equipment or lights described in this IR and there is no known safety case that would require them to do so.The proposed requirement is disproportional.

The total power drain from the equipment required under OPS GEN 415, ie. navigation/position lights, adequate illumination for all instruments and equipment essential to the safe operation of the aircraft, a landing light and illumination in all passenger compartments would preclude a sailplane from operating other than in day VFR flight. Clearly this is not the intention of this IR.

The BGA propose that the wording of OPS.GEN 415 (c) should be modified

as follows;

SAILPLANES

(c) Sailplanes operating VFR or IFR night flights shall comply with (a) (5), (9) and (10) inclusive.

comment *2662* comment by: *AOPA-Sweden*

(a) (9): A carry-on flash-light should be acceptable for small GA-airplanes with a MTOW <5,700kg.

comment *2663* comment by: *AOPA-Sweden*

(b): This requirement should only be applicable to IFR flights. For VFR flights, AOPA-S does not deem a lighted chart holder necessary and the size of the map will make it impractical to fit in, since the critical parts of the flight will be performed with visual references.

comment *2804* comment by: *Ed Sturmer*

Pitot de-icing night VFR in small helicopters.

VFR is VFR even at night.

Experience and statistics show no safety benefit to this expensive proposal.

comment *2806* comment by: *Ed Sturmer*

Alternate staic small helicopters VFR night.

Ditto

Experience and statistics show no safety benefit to this expensive proposal.

comment *2823* comment by: *Peter Waldron*

In regard to the means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

This is an unreasonable requirement for VFR flight either by day or by night. When the flight is in visual conditions a heated pilot head is unnecessary. It would be an unnecessary and expensive requirement which would only be of use in icy flying weather and such flight is prohibited in VFR helicopters.

comment *2827* comment by: *Peter Waldron*

An alternative source of static pressure.

This is an unreasonable requirement for VFR flight whether by day or night. If the flight is on a visual basis an alternative static source would be completely unnecessary. Private VFR helicopters are not generally equipped as per this proposal. Again this is unnecessary and would be an expensive requirement which would only be of use in icy conditions. This is prohibited in VFR helicopters.

comment *2837* comment by: *Philipp Peterhans*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *2927* comment by: *Pascal DREER*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *3155* comment by: *UK CAA*

Page: 43

Paragraph No: OPS.GEN.415

Comment:

This paragraph, together with OPS.GEN.410, detail the required flight instruments and equipment for various flight regimes. The matter is complex due the varying requirements of the different types of operation, the flight conditions and the time of day. It is felt that the subject could be simplified by breaking out the lighting requirements from the instrument requirements into a new section (OPS.GEN.XXX) as there are several errors of commission included in the NPA. It is also necessary to capture some additional requirements noted in ICAO Annex 6 Part II and III (Section III). The full section is reproduced for clarity of the changes. It is not clear, other than as mentioned in draft JAR-OPS 0, where the requirement at (a)(3) for an alternative source of static pressure arises from so it has been deleted. Nor is it clear where the requirement at original paragraph (c) for a Sailplane to have an anti-collision light arises from, so this has also been deleted.

These changes will require consequential adjustments to be made to the associated AMCs and GM.

Justification:

Simplification of the text, correction of errors of commission and inclusion of missing elements of ICAO Annex 6 Part II and III. Deletion of need for an alternative source of static pressure as no requirement can be found at this level of regulation. Original paragraph (a)(10) has been corrected to delete duplication of text and to change 'amphibious' to *'operation on the water'* as some seaplanes are not amphibious.

Proposed Text (if applicable):

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

AEROPLANES AND HELICOPTERS.

(a) Aeroplanes and helicopters operating Visual Flight Rules (VFR) night flights and Instrument Flight Rules (IFR) flights shall, in addition to complying with OPS.GEN.410(a), ***and*** (b) ~~and (c),~~ be equipped with:

(1) a means of measuring and displaying outside air temperature;

(2) a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed;

~~(3) an alternative source of static pressure;~~

~~(4) an anti-collision light system;~~

~~(5) navigation/position lights;~~

~~(6) a landing light;~~

~~(7) lighting supplied from the aircraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aircraft;~~

~~(8) lighting supplied from the aircraft's electrical system to provide illumination in all passenger compartments;~~

~~(9) an electric torch for each crew member station;~~

~~(10) lights to conform with International Regulations for Preventing Collisions at Sea (hereinafter referred to as International Regulations for Preventing Collisions at Sea) if the aircraft is amphibious; and~~

~~(11) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number~~.

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

(c) Helicopters operating IFR flights shall be equipped with an additional means of measuring and displaying attitude.

(d) Complex Motor Powered Aeroplanes operating IFR flights shall

comply with OPS.GEN.410(c).

~~SAILPLANES~~

~~(c) Sailplanes operating VFR night flights or IFR flights, shall comply with (a) (4) to (10) inclusive.~~

~~BALLOONS~~

~~(d) Balloons operated at night shall, in addition to complying with OPS.GEN.410(d) and (e), as applicable, be equipped with:~~

~~(1) position lights; and~~

~~(2) a means of illuminating all of the instruments used by the flight crew.~~

OPS.GEN.XXX Aircraft Operating Lights

AEROPLANES AND HELICOPTERS

(a) Aeroplanes and helicopters operating at night shall be equipped with:

(1) an anti-collision light system;

(2) navigation lights;

(2) a landing light;

(3) lighting supplied from the aircraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aircraft;

(4) an electric torch for each crew member station;

(5) lighting supplied from the aircraft's electrical system to provide illumination in all passenger compartments; and

(6) lights to conform with International Regulations for Preventing Collisions at Sea if the aircraft is ~~amphibious~~ operated on the water.

(b) Aeroplanes and helicopters fitted with an anti-collision light system shall display that light in flight during the day.

SAILPLANES

(c) Sailplanes operated at night shall comply with (a) (2) to (4) inclusive.

BALLOONS

(d) Balloons operated at night shall be equipped with:

(1) position lights; and

(2) a means of illuminating all of the instruments used by the flight crew

comment *3241* comment by: *Suffolk Helicopters*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed;

This is unnecessary and excessive as helicopters are prohibited from flying in icing conditions.

comment *3246* comment by: *Suffolk Helicopters*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

AEROPLANES AND HELICOPTERS.

(a) Aeroplanes and helicopters operating Visual Flight Rules (VFR) night flights and

Instrument Flight Rules (IFR) flights shall, in addition to complying with OPS.GEN.410(a), (b), and (c), be equipped with:

(3) an alternative source of static pressure;

Comment

This is an unnecessary and excessive requirement, with no safety justification, and virtually impossible to implement for most light helicopters.

comment *3251* comment by: *Aero-Club of Switzerland*

(a) (2) is disproportionate for aircraft engaged under VFR it is reasonable under IFR, please adapt your proposal.

Justification: If flights are undertaken in VMC under VFR a heated pitot head is not necessary in our view.

(a) (3) We do not see a need for an alternative source of static pressure an all aircraft. Please adapt your proposal.

Justification: An alternative source of static pressure would be of use only while flying in icing conditions. We think such flights are not undertaken under VFR.

(c): We ask the Agency to exclude (a) (4) ... (10) as requirement for cloud flying with sailplanes.

Justifications: We do not see a reasonable possibility to install an appropriate power source.

Sailplanes very rarely fly at night.

General question: Is this paragraph in line with the latest ICAO Annex 6 Part III requirements?

comment *3380* comment by: *guy Corbett*

Paragraph (c) Sailplanes operating VFR night flights or IFR flights, shall comply with (a) (4) to (10) inclusive.

should be changed to

(c) Sailplanes operating VFR night flights shall comply with (a) (4) to (10) inclusive.

As sailplanes do not have sufficient electrical power to comply with these rules and the IFR flight will only be en-route and exclude take-off and landing

comment *3549* comment by: *IAOPA Europe*

To require that VFR night flight are subject to the same equipment requirements as IFR flights is not reasonable.

For VFR night flight the following equipment is not relevant as compared to VFR day flights:

* Means of measuring and displaying outside air temperature (no difference from VFR day operations)

* Pitot heating (since the aircraft will not enter clouds - no difference from VFR day operations)

* Mach indicator (no difference from VFR day operations)

* illuminated chart holder (cockpit lighting or a torch will be be sufficient and most VFR maps will not fit a chart holder anyway)

comment *3563* comment by: *Walter Gessky*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

(a)(1) Lights required at Sea shall be mentioned in this point and not a reference used to other regulations.

SAILPLANES

(c) Sailplanes operating VFR night flights or ~~IFR flights~~ **flights in clouds**, shall comply with (a) (4) to (10) inclusive.

Justification:

Delete IFR flights, no controlled flight under IFR possible.

comment *3590* comment by: *PPL/IR Europe*

Para (b) is not a certification requirement for night VFR or IFR and should be deleted for non-commerical operations. The varierty of suitable cockpit lighting, accessories and layout is captured during certification of individual types, and should not be constrained by this kind of "one-size-fits-all" regulation.

comment *3739* comment by: *Civil Aviation Authority of Norway*

Comment:

This paragraph, and together with OPS.GEN.410, detail the required flight instruments and equipment for various flight regimes. The matter is complex due the varying requirements of the different types of operation, the flight conditions and the time of day. It is felt that the subject could be simplified somewhat by breaking out the lighting requirements from the instrument requirements into a new section (OPS.GEN.XXX) as there are several errors of commission included in the NPA. It is also necessary to capture some additional requirements noted in ICAO Annex 6 Part II and III (Section III). The full section is reproduced for clarity of the changes. It is not clear, other than as mentioned in draft JAR-OPS 0, where the requirement at (a)(3) for an alternative source of static pressure arises from so it has been deleted. Nor is it clear where the requirement at original paragraph (c) for a Sailplane to have an anti-collision light arises from, so this has also been deleted.

These changes will require adjustments to the associated AMCs and GM.

Justification:

Simplification of the text, correction of errors of commission and inclusion of missing elements of ICAO Annex 6 Part II and III. Deletion of need for an alternative source of static pressure as no requirement can be found at this level of regulation. Original paragraph (a)(10) has been corrected to delete duplication of text and to change 'amphibious' to *'operation on the water'* as some seaplanes are not amphibious.

Proposed Text

(if applicable):

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

AEROPLANES AND HELICOPTERS.

(a) Aeroplanes and helicopters operating Visual Flight Rules (VFR) night flights and Instrument Flight Rules (IFR) flights shall, in addition to complying with OPS.GEN.410(a), ***and*** (b) ~~and (c),~~ be equipped with:

(1) a means of measuring and displaying outside air temperature;

(2) a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed;

~~(3) an alternative source of static pressure;~~

~~(4) an anti-collision light system;~~

~~(5) navigation/position lights;~~

~~(6) a landing light;~~

~~(7) lighting supplied from the aircraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aircraft;~~

~~(8) lighting supplied from the aircraft's electrical system to provide illumination in all passenger compartments;~~

~~(9) an electric torch for each crew member station;~~

~~(10) lights to conform with International Regulations for Preventing Collisions at Sea (hereinafter referred to as International Regulations for Preventing Collisions at Sea) if the aircraft is amphibious; and~~

~~(11) in the case of aeroplanes with speed limitations expressed in terms of Mach number, a means of indicating Mach number~~.

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

(c) Helicopters operating IFR flights shall be equipped with an additional means of measuring and displaying attitude.

(d) Complex Motor Powered Aeroplanes operating IFR flights shall comply with OPS.GEN.410(c).

~~SAILPLANES~~

~~(c) Sailplanes operating VFR night flights or IFR flights, shall comply with (a) (4) to (10) inclusive.~~

~~BALLOONS~~

~~(d) Balloons operated at night shall, in addition to complying with OPS.GEN.410(d) and (e), as applicable, be equipped with:~~

~~(1) position lights; and~~

~~(2) a means of illuminating all of the instruments used by the flight crew.~~

OPS.GEN.XXX Aircraft Operating Lights

AEROPLANES AND HELICOPTERS

(a) Aeroplanes and helicopters operating at night shall be equipped with:

(1) an anti-collision light system;

(2) navigation lights;

(2) a landing light;

(3) lighting supplied from the aircraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aircraft;

(4) an electric torch for each crew member station;

(5) lighting supplied from the aircraft's electrical system to provide illumination in all passenger compartments; and

(6) lights to conform with International Regulations for Preventing Collisions at Sea if the aircraft is ~~amphibious~~ operated on the water.

(b) Aeroplanes and helicopters fitted with an anti-collision light system shall display that light in flight during the day.

SAILPLANES

(c) Sailplanes operated at night shall comply with (a) (2) to (4) inclusive.

BALLOONS

(d) Balloons operated at night shall be equipped with:

(1) position lights; and

(2) a means of illuminating all of the instruments used by the flight crew

comment *3872* comment by: *M Wilson-NetJets*

Original text:

(a) (1) a means of measuring and displaying outside air temperature;

Suggested new text:

a means of measuring **or calculating from other measured airdata information** and displaying outside air temperature;

Comment/suggestion:

Measuring would insinuate a probe to directly measure the OAT while often the OAT (in the form of SAT) is derived from TAT and airspeed or Mach number.

comment *3874* comment by: *M Wilson-NetJets*

Original text:

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

Suggested new text:

Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations, **unless the aeroplane and the operator are approved to operate with alternate means to paper charts.**

Comment / suggestion:

If the operator and aeroplane are approved for alternate means to provide chart data to the flight crew (like EFB electronic charts) this requirement is not necessary.

comment *3891* comment by: *FOM ANWB MAA*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

AEROPLANES AND HELICOPTERS.

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

RMK:

For helicopter IFR operations a (lighted) kneeboard should be acceptable to fulfil this requirement.

comment *3937* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(b) For helicopter IFR operations a (lighted) kneeboard should be acceptable to fulfil this requirement.

comment *3956* comment by: *HDM Luftrettung gGmbH*

OPS GEN 415: ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters. The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements

('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *4109* comment by: *Benedikt SCHLEGEL*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *4153* comment by: *colin rosenberg*

I feel the instruments currently used now for the night flight to be more than adequate, and unnessary to add more, obviously from a cost point of view, and feel very safe flying at night with what we have now.

comment *4208* comment by: *DGAC*

Amend the title as follows to take into account the fact that not only VFR night flights and IFR flights are dealt with in this paragraph and that the criteria are not only the flight rules but the meteorological conditions :

"Flight instruments and equipment – **Flight at night or in IMC and** VFR night flights and IFR flights"

comment *4209* comment by: *DGAC*

O **Proposal:** Add to (a)(1) '… **for IMC flights** » and add the following instruments :

1) 1) attitude

2) stabilized heading

3) vertical speed

4) a second attitude instrument or a turn and slip indicator with an electrical supply independent from the first one

comment *4210* comment by: *DGAC*

O Besides there are numerous other instruments required by our national safety requirements for general aviation which are missing in this NPA. Drawing the comparison has been really time consuming. We are not in a position, though, to make deeper comment in such a short time. This is in favour of converting this NPA into an A-NPA to enable stakeholders to give deeper comments

comment *4211* comment by: *DGAC*

O There seems to be provisions missing, compared to annex 6 and our national rules, requiring minimum performance specifications for instruments such as failure indicators, etc. We might be wrong but the reading is not always easy.

comment *4212* comment by: *DGAC*

Proposal : Rewrite "Sailplanes operating ~~VFR night flights~~ **at night** or **in IMC** ~~IFR flights~~"

Justification : No sailplanes are allowed in IFR flights (some are allowed in IMC in some MS)

comment *4401* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (a) Aeroplanes and helicopters operating Visual Flight Rules (VFR) night flights and Instrument Flight Rules (IFR) flights shall, in addition to complying with OPS.GEN.410(a), (b), **and if applicable** (c), be equipped with:

comment *4402* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *4521* comment by: *Christophe Baumann*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *4568* comment by: *ADAC Luftrettung GmbH*

Chartholder: For helicopter IFR operations a (lighted) kneeboard should be acceptable to fulfil this requirement.

comment *5056* comment by: *AS Miller*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

OPS.GEN.525 Communiation equipment

In the colder and wetter parts of Europe much glider flying takes place in

IMC, under IFR, principally within the 1,000' layer just below cloud base.

None of the equipment listed here is appropriate for this flying.

It is risible to specify a landing light.

Proposals

OPS.GEN.415

Replace SAILPLANES wording with:

(c) Sailplanes operating at night shall comply with (a)(5), (9) & (10)

OPS.GEN.525

Replace the wording in para (a) with:

Where communication with outside agencies is required, aircraft shall be provided with radio communication equipment.

comment

5296 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

SAILPLANES

(c) Sailplanes operating VFR night flights or IFR flights, shall comply with (a) (4) to (10) inclusive.

Comment:

Sailplanes are not operated under IFR rules, but may be flown in IMC.

Proposal (including new text):

SAILPLANES

(c) Sailplanes operating VFR night flights or ***in IMC*** ~~IFR flights~~, shall comply with (a) (4) to (10) inclusive.

comment

5305 comment by: *Light Aircraft Association UK*

The LAA submits that the difference between the requirements of day VFR flight and night VFR flight should only be the provision of adequate lighting. The requirements in a)2) and a)3) are not required for night VFR.

comment

5306 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

AEROPLANES AND HELICOPTERS.

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations

Comment: It is reasonable to expect a need for a chart holder for helicopter night flight as well as for aeroplanes.

Proposal (including ***new text***):

(b) Aeroplanes ***and helicopters*** operating VFR night flights and IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

comment *5335* comment by: *European Private Helicopter Alliance*

Page 43

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of whether it is by day or by night. If the flight is in visual conditions, a heated pitot head is unnecessary. Many private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is, in any case, prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

None -

comment *5337* comment by: *European Private Helicopter Alliance*

Page 43

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of if it is by day or by night. If the flight is in visual conditions an alternate static source is unnecessary. Most private VFR

helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None -

comment *5534* comment by: *James Tuke*

OPS.GEN.415 Flight Instruments & Eqpt. VFR Night Para. (a) , (2)

Fitting a heated pitot to an aircraft such as a small helicopter which is not cleared for flight into icing conditions is quite simply not necessary. This item should be removed.

comment *5600* comment by: *Peter Moeller*

415(a)(6) this should be two landing lights of which one at least is adjustable

comment *5604* comment by: *Peter Moeller*

415(b) For IFR flights with helicopters a kneeboard which can be iluminated for night flights should be enough to provide adequate safety.

comment *5674* comment by: *DON BURT*

A (2) A headed pitot tube would be needed in icing conditions. Helicopters are not allowed to fly in icing conditions and therefore a heated pitot tube would appear not to be needed. Such a fitment would be an expensive as there is no provision for this item in a R44

A (3) As helicopters can't fly in icing conditions where is the need for an alternative source of static pressure.

comment *5697* comment by: *Avon CAYZER*

OPS GEN 415. Why do you need a second alternative static preessure source & gauge, a backup portable gps with speed and altitude covers this for £300-£1,000.

OPS GEN 425 DITCHING

Private Helicopters have a excellent safety record with very few machines having ditched and almost zero loss of life. These machines have not had floats which add weight and maynot inflate or partly inflate causing rollover. If the owner wants floats due to extended water flying that should be his /her / companies choice.

comment *5772* comment by: *Norsk Luftambulanse*

(a)(6) For helicopter 2 landing lights required, one at least trendable in the vertical plane (Search and landing light)

comment *5773* comment by: *Norsk Luftambulanse*

(b) For helicopter IFR operations a (lighted) kneeboard should be acceptable to fulfil this requirement.

comment *5799* comment by: *Ph.Walker*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *5869* comment by: *Ian Casselden*

Reason for Objection

Is this needed for light helicopters only cleared for VFR and non icing conditions

there is no history of this being a cause of any incident or accident in the UK

most (if not all) light helicopter are not equiped, the modification cost would high and for some machines not possible.

the disadvantages of reduces battery life if an electrical fault occured and harder work altenators, reduce engine power etc would far outweigh the benefits

flight in icing conditions is prohibited in VFR helicopters.

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

None -

comment *5914* comment by: *HSD Hubschrauber Sonder Dienst*

415 (a) (6) a landing light

This differs vom JAR-OPS 3 where two light sources where required (landing and search light, the latter adjustable), please clarify!!!

comment *5951* comment by: *HSD Hubschrauber Sonder Dienst*

415 (b) For clarification should read:"....with a chart holder / lightable kneeboard in an easily readable ...."

comment *6128* comment by: *Hans MESSERLI*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *6174* comment by: *EUROPEAN GLIDING UNION*

Sailplanes (c): Anti-collision lights, nav-lights and landing lights are not necessary for cloud flying with gliders.

Proposal: Exclude (a) (4) to (10) for cloud flying with sailplanes.

comment *6298* comment by: *Heliswiss International*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *6314* comment by: *SHA (AS)*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *6358* comment by: *Trans Héli (pf)*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *6431* comment by: *George Heritage*

(a) (2) - Not necessary for VFR flight - not allowed to fly IMC or icing conditions.

comment *6440* comment by: *George Heritage*

(a) (3) - Unnecessary for private VFR helicopters and would be only of use in icing conditions, which are prohibited anyway.

comment *6531* comment by: *TG WHITING*

This section presents a number of difficulties for sailplanes, which only rarely fly at night and do not take off or land non-VFR. For those sailplanes that fly at night (not permitted in the UK) then these should carry position lights and this seems a necessary requirement.

For the vast majority of sailplane flights carried out in VFR conditions (on non-VFR en route where airspace classifications permit) do not require any of the lighting systems described here. The power drain on the equipment listed here would render a sailplane unable to operating in anything but a daytime VFR flight. This requirement seems disproportionate for the effect that it would have on sailplane operations, and I would like to see the wording modified to ensure that sailplanes comply with a (5), (9) and (10) when operating in VFR or IFR night flying.

comment *6553* comment by: *Sloane Helicopters Ltd*

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of whether it is by day or by night. If the flight is in visual conditions, a heated pitot head is unnecessary. Many private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is, in any case, prohibited for VFR helicopters.

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of if it is by day or by night. If the flight is in visual conditions an alternate static source is unnecessary. Most private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is prohibited for VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None

comment *6603* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights AEROPLANES AND HELICOPTERS.

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

Remark: For helicopter IFR operations a (lighted) kneeboard should be acceptable to fulfil this requirement.

comment *6699* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

This OPS.GEN.415 creates several technical problems and clear impossibilities for sailplanes, that do not have a generator for making electric power.

We consider night flight operations occasionally only, but need for position lights for such cases seems to be obvious.

In case of part of a sailplane flight is made non-VFR (in case of a sailplane

cloud flying activity as allowed in several Member States like in Finland and Sweden among several others), there has not been need for this kind of set of an additional electrical equipment for internal or external lighting or illumination of a sailplane as now proposed in this IR. There are not known safety cases either to justify why this IR should now lay down requirements for sailplanes in this width.

The total power drain from the equipment required under OPS.GEN.415, i.e. navigation/position lights, adequate illumination for all instruments and equipment essential to the safe operation of the aircraft, a landing light and illumination in all passenger compartments would preclude a sailplane from other operations than in day in VFR. We can not believe this is the intentions of this IR.

We support that the wording of OPS.GEN.415 item (c) should be modified as proposed by the BGA in their relevant comment:

SAILPLANES

(c) Sailplanes operating VFR or IFR night lights shall comply with (a)(5), (9) and (10) inclusive.

comment *6713* comment by: *Kinetic Avionics Ltd*

415(a) (2) and (3). Comment

Small helicopter types are generally not equipped for IFR flight and are approved for day and night VFR operation only. Flight in cloud or icing conditions for these types is generally prohibited. Therefore these proposed requirements would lead to a high modification cost for no safety benefit, effectively prohibiting night flight for many helicopters.

Proposed wording change for (a) (2) and (3)

... except for helicopter types where flight in IMC or icing conditions is prohibited.

comment *6754* comment by: *Clive Morrell*

'A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicating air speed.'

Comment; VFR helicopters are prohibited from entering icing conditions. If they inadvertently do so, they will have bigger problems to solve than air speed indication.

In addition, I do not believe that=2 0condensation is a problem in Indicated air speed systems.

In view of the above, heated pressure sensors would be totally unnecessary and an excessively expensive item to install in light VFR helicopters.

comment *6756* comment by: *Clive Morrell*

'An alternative source of static pressure.'

Comment; Failure of the main static source is an icing related problem. Icing conditions are prohibited in VFR helicopters. Few light VFR helicopters are equipped with an alternate static source and this does not seem to have been a problem in the past.

This should not be a requirement for simple VFR helicopters.

comment *6765* comment by: *Greger Ahlbeck*

Paragraph text: (a)(10) lights to conform with International Regulations for Preventing Collisions at Sea (hereinafter referred to as International Regulations for Preventing Collisions at Sea) if the aircraft is amphibious; and …

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

(d) Balloons operated at night shall, in addition to complying with OPS.GEN.410(d) and (e), as applicable, be equipped with: (1) position lights; and

Comment: (a)(1) Why is this paragraph only valid for amphibious aircraft and not all aircraft operating from water or moorining during darkness?

(b) Why are helicopters not required to carry chart holder at night?

(d) Normally a balloon is moving with the air mass and how shall the position lights be oriented?

comment *6778* comment by: *Greger Ahlbeck*

Paragraph text:

(b) Aeroplanes operating VFR night flights and IFR flights and helicopters operating IFR flights shall be equipped with a chart holder in an easily readable position which can be illuminated for night operations.

Comment:

(b) Helicopters are not required to carry chart holders during night operations. If chart holder means a device holding a landing plate or a approach chart this paragraph is then not applicable to aircraft operating VFR during night. Of course there must be necessary light available to read maps

Proposal (including ***new text***):delete the requirement to have chart holders on airplanes operating VFR night.

comment *6882* comment by: *Luftsport-Verband Bayern*

…a means of preventing malfunction due to either condensation or icing….

Die Mitglieder des Deutschen Hubschrauberclubs, Mitglied im Luftsport-Verband Bayern und DAeC, fliegen Hubschrauber bei Wettkämpfen am Tag und nach VFR. Flug in Vereisung ist verboten.

Entsprechend sollte dieser Absatz gestrichen werden.

Seite 43, Ops. Gen 415…an alternative source of static pressure…

Die Mitglieder des Deutschen Hubschrauberclubs, Mitglied im Luftsport-Verband Bayern und DAeC, fliegen nach Sichtflugregeln, nicht IFR in IMC

Entsprechend sollte dieser Absatz gestrichen werden.

comment *6902* comment by: *Swiss Helicopter Group*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *6926* comment by: *Christian Hölzle*

The set of rules for instruments VFR, night VFR and IFR are made extremely complex by the policy of inheritance. It is not certain that the existing text provides a clear and unambiguous text for each and every categorisation that is required. The combination of rules has to provide for simple types and complex types in General Aviation; it must also cater for simple types and complex types in Commercial Air Transport; and simple and complex types in commercial and noncommercial Aerial Work. The criteria for instruments and equipment varies for simple types within GA, CAT and AW and also for complex types in GA, CAT and AW. There are also differences between: single pilot and two pilots; operations when control can be maintained by reference outside the cockpit and those where it cannot - even though all of these are designated as VFR (and even further complicated by the inheritance from VFR to IFR). To maintain a simple operational text, it might be better to establish separate rules in each of the Subparts GEN, CAT and COM.

comment *6969* comment by: *Eliticino SA*

ICAO Annex 6 Part III now has separate requirements for night VFR for helicopters.The ICAO designation for helicopters should be used; it removes 'flight in controlled airspace' and has three separate requirements ('Day VFR', 'Night VFR' and 'IFR - day and night').

comment *7169* comment by: *Paul Monahan*

Ops.Gen.415(a) (2) and (3). I object to these proposals. It's unnecessary and expensive equipment which would only be used if flying in icing conditions.

Such flights are prohibited in VFR helis.

comment *7180* comment by: *DHV*

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of whether it is by day or by night. If the flight is in visual conditions, a heated pitot head is unnecessary. Many private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is, in any case, prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(2)

Except for non complex helicopters in private visual flight, a means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed.

Acceptable means of compliance

None -

Ops.Gen.415 (a) (3)

An alternative source of static pressure

Reason for Objection

Whilst this is a reasonable requirement for instrument flight, it is not for VFR flight, regardless of if it is by day or by night. If the flight is in visual conditions an alternate static source is unnecessary. Most private VFR helicopters are not equipped as proposed. It would be an unnecessary, disproportionate and expensive requirement, and would only be of use if flying in icing conditions. Such flight is prohibited in VFR helicopters.

Suggested alternative wording

Ops.Gen.415 (a)(3):

Except for non complex helicopters in private visual flight, an alternative source of static pressure.

Acceptable means of compliance

None -

comment *7293* comment by: *Richard Simpson*

OPS GEN 415 (a) (2)

A heated pitot tube is not a reasonable requirement for VFR flight in a non-complex piston helicopter. A heated pitot tube is only of use in icing conditions for which such machines are not cleared to fly i the first place. Fitting of such equipment is expensive and not in proportion with the use and complexity of such machines

OPS GEN 415 (a) (3)

An alternate static source is not a reasonable requirement and unnecessary for VFR flight in a non-complex piston helicopter either by day or night. Most aircraft are not equipped in this way. Fitting of such equipment is expensive and not in proportion with the normal use and complexity of such machines

comment *7318* comment by: *Danish Powerflying Union*

(b)

In several aeroplanes/aircrafts, especially other than complex motor-powered aircrafts, it will be difficult or impossible to fit a stationary chart holder in an easily readable position without interfering access to other equipment/functions during flight.

Instead we suggest following text:

(b) **.....shall be equipped with a stationary light, supplied from the aircrafts electrical system, to provide illumination for charts.**

comment *7392* comment by: *DAvid Monks*

A means of anti Icing is not required in VMC conditions whether operations is day or night. Under VFR flight in icing conditions is prohibited.

comment *7397* comment by: *DAvid Monks*

415 a3

It is not a reasonable request for an alternate static pressure source for a non complex VFR machine. It should not be required for a VFR flight.

comment *7453* comment by: *European Sailplane Manufacturers*

Sailplanes (c): Anti-collision lights, nav-lights and landing lights are not necessary for cloud flying with gliders.

Proposal: Exclude (a) (4) to (10) for cloud flying with sailplanes.

comment *7467* comment by: *David ROBERTS*

sub para (c) Sailplanes: Whilst the intro sub para (a) refers to VFR night flights and IFR, the case of sailplanes flying non VFR / IMC (vide FCL.008 discussion) needs to be considered.

The night flying rquirements are sensible, subject to the proposal modification below. To my knowledge in EU gliding, only the Poles do night flying in sailplanes (as I pointed out in the drafting discussion!)

Sailplanes fly non-VFR day in many EU states, and safely without the requirements set out in these proposed rules (a) (4) - (10). Sailplanes cannot generate power and have limited battery capacity, which is needed for the panel instrumentation and other equipment.

The external surfaces of sailplanes are designed for maximum efficiency and therefore any addtion / protusion would have an adverse impact on performance.

There is no safety case presented for these proposed rules, and as far as I am aware, there is no history of a lack of lighting being the cause of accidents in day-non VFR / IMC in sailplanes.

Proposal: Sailplanes to be excluded from these rules, except for night flight VFR where rules (a) (5) (9) and (10) only should apply.

comment *7473* comment by: *Henry Pelham*

Page 43

Ops.Gen.415 (a) (2) & (3)

These two items are just not available for an Enstrom 480 or for many non complex helicopters used for general aviation. If it were possible to fit them they would have to be designed and manufactured specially at considerable cost as the majority of non complex helicopters are manufactured in America where there is no such requirement it is likely that such modification would be very difficult to achieve.

comment *7486* comment by: *Arno Glover*

Ops.Gen.415 (a) (2)

A means of preventing malfunction due to either condensation or icing for

the means of measuring and displaying indicated air speed

A pitot head heater is required in icing conditions not normally associated with VFR flights in private VFR helicopters – to fit such an item is disproportionate in cost in relation to the perceived safety benefit particularly as flight in icing conditions is not permitted for VFR compliance.

comment *7487* comment by: *Arno Glover*

Ops.Gen.415 (a) (3)

An alternative source of static pressure

If the flight is conducted in VMC conditions an alternate static source is unnecessary – therefore this requirement is unnecessary for VFR only helicopters

comment *7498* comment by: *David George*

OPS.GEN.415 a2:-

"A means of preventing malfunction due to either condensation or icing for the means of measuring and displaying indicated air speed."

All UK single engined helicopters are VFR only. Fitting a heated pitot would only be worthwhile if a helicopter was flying IFR in icing conditions.

comment *7499* comment by: *David George*

OPS.GEN.415 a3:-

"An alternative source of static pressure."

All UK single engined helicopters are VFR only. An alternative source of static pressure would only be worthwhile if a helicopter was flying IFR in icing conditions.

comment *7521* comment by: *Deutscher Aero Club E.V.*

... a means of preventing malfunction due to either condensation or iclng ...

Wir fliegen Hubschrauber bei Wettkämpfen am Tage und nach VFR.Flug in Vereisung ist verboten.

Bitte streichen!

comment *7522* comment by: *Deutscher Aero Club E.V.*

.. an alternative source of staUe pressure ...

Wir fliegen nach Sichtflugregeln,nicht IFR in IMe

Bitte streichen!

comment *7575* comment by: *AOPA UK*

A carry-on flash-light should be acceptable for small GA-airplanes with a MTOW <5,700kg.

comment *7576* comment by: *AOPA UK*

This requirement should only be applicable to IFR flights. For VFR flights, AOPA UK does not deem a lighted chart holder necessary and the size of the map will make it impractical to fit in, since the critical parts of the flight will be performed with visual references.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.420 Flights over water p. 44-45

comment *32* comment by: *George Knight*

Sailplanes & Balloons

-(a) (1) It should also be permitted to wear a life jacked donned prior to departure if approved by the pilot-in-command. This is the normal practice in SEP light aircraft over water.

comment *324* comment by: *AgustaWestland*

HELICOPTERS

(e)(1) ...at a distance (it should be added) " from land"

(f) add "from land" in two positions.

comment *416* comment by: *EHOC*

Paragraph (d)

The numbering system in (d) does not work because items (i) and (ii) are subsidiary to (1) and (2) and not just to (2). It also makes the requirement

difficult to refer to from (f).

Paragraph (f)

Because there are a number of complicated conditions in (d), the requirement should be spelled out here:

"(f) ..., be equipped with (a)(3) and (d)(i) and (ii)."

Paragraph (g)

The text would be improved by amending as follows.

(g) The pilot-in-command of a helicopter operated in Performance Class 3 shall determine the risks to survival of the occupants of the helicopter in the event of a ditching~~, based on which he/she shall determine~~ **when deciding** if the life jackets required in (e) shall be worn by all occupants.

comment *1014* comment by: *Michael Kroell*

Helicopters

(2) Performance Class 3 - should state ...distance to the land

comment *1052* comment by: *AECA helicopteros.*

The text would be improved by amending as follows.

(g) The pilot-in-command of a helicopter operated in Performance Class 3 shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, based on which he/she shall determine when deciding if the life jackets required in (e)(1) shall be worn by all occupants.

comment *1341* comment by: *EUROCOPTER*

OPS.GEN.420 (e)(2) uses the wording "beyond autorotational distance from land" while OPS.GEN.425.H § (b)(2) uses the wording: "beyong a safe forced landing distance from land".

Proposal: the same wording should be used both in OPS.GEN.420 (e)(2) and in OPS.GEN.425.H (b)(2).

comment *1352* comment by: *AECA helicopteros.*

Because there are a number of complicated conditions in (d), the requirement should be spelled out here:

"(f) ..., be equipped with (a)(3) and (d)(i) and (ii)."

comment *1363* comment by: *Helicopter Club of Great Britain*

Page 45 Over Water Equipment Requirements

Ops.Gen.420 (f)

For private helicopter flights in non complex helicopters it should be the pilots option to carry a liferaft or not.

Reason for Objection

Proportionality for recreational and private helicopter flights. Where the helicopter is non-complex there is not room in the helicopter for safe storage of an accessable life raft when only one person is in the helicopter. successful deployment is unlikely. There is also a danger of inadvertant inflation which could cause loss of control of the helicopter.

Suggested alternative wording

Add new sentence at the end of current text.

For non-complex private helicopter flight life raft carriage is at the pilots option.

comment *1439* comment by: *Mike Pascall*

Page 45 Over Water Equipment Requirements

Ops.Gen.420 (f)

For private helicopter flights in non complex helicopters it should be the pilots option to carry a liferaft or not.

Reason for Objection

Proportionality for recreational and private helicopter flights. Where the helicopter is non-complex there is not room in the helicopter for safe storage of an accessable life raft when only one person is in the helicopter. successful deployment is unlikely. There is also a danger of inadvertant inflation which could cause loss of control of the helicopter.

Suggested alternative wording

Add new sentence at the end of current text.

For non-complex private helicopter flight life raft carriage is at the pilots option.

comment *1451* comment by: *R Spiers*

Ops.Gen.420 (f)

Reason for Objection

For a non complex helicopter carrying a life raft will not be possible due to space constraints. If it was possible to fit one into a private non complex

helicopter the chances of it being successfully deployed in the event of a ditching is unlikely due to the issues of getting a large raft through the doors before the helicopter drops below the surface.

Suggested alternative wording

Add new sentence at the end of current text.

For non-complex private helicopter flight life raft carriage is at the pilots option.

comment *1464* comment by: *EUROCOPTER*

§ (f): Text modification proposal: '*…be equipped with (a)(3) and (d)* ***(i)&(ii)***. '

Reason: it is confusing that a requirement for helicopters starts with "The pilot-in-command of a aeroplane …"

comment *1551* comment by: *Des Russell*

Once again the decision what safety equipment is carried in a private helicopter is up to the pilot.

comment *1566* comment by: *Richard Paul Bateman*

There is no evidence base that this massive expense (floats etc) will save lives.

Helicopter regulations should be proportionate.

comment *1591* comment by: *Royal Danish Aeroclub*

Electric illuminations on flotation devices is all right.

But we do think that demanding electric illumination on each life jacket is to much. To keep the electric illumination is good shape and working is demanding. The same lightning can be supplied by chemical lights.

Electric or chemical illumination should be an option - not a demand.

comment *1619* comment by: *Luftfahrt-Bundesamt*

In our view, the text of GM OPS.GEN 420 (a)-(e) needs to be incorporated in the rule, as it is the case in EU-OPS. The text has clear rule character.

Applicability date 1 July 2008 needs to be adjusted.

comment *1659* comment by: *Peter Winslow*

This proposed legislation seems absolutely disproportionate to the risk. I do not believe there has ever been a case of an R22 or R44 ditching. Surely the kind of requirements that you outline should be confined to helicopters over 3175kg. Please don't spoil or make unaffordable the genuine enjoyment of visiting countries outside the UK.

What is the logic for wanting to apply this legislation to helicopters and not fixed wing?

comment *1660* comment by: *Netcopter*

My single engine turbine helicopter was originally delivered new with floats due to it's original base postioning on the Isle of Wight. With operational experience and with no likely probability of a mechanical failure over water, these floats were removed after less than 12 months. With float packs in place, airspeed performance reduced by 15 kts, useable payload reduced by 300 kgs, duration reduced by almost 30% and with corresponding increase in fuel consumption. In our experience, the limited time spent flying over water (beyond 10 mins flying time from land) cannot justify the additional capital and maintenance costs, and operational penalties associated with the requirement to carry floats. It is unreasonable to effectively ban a large proportion of the UK/Ireland helicopter fleet from crossing stretches of water.

comment 1668 comment by: *JSLEE*

Page45

Ops.Gen.420 (e) & Ops.Gen.425.H (b)

Over Water Equipment requirements

This proposal is prejudiced against non Main Land European helicopter owners/pilots.

UK owners/pilots live on an island and very occasionally wish to cross to main land Europe or to Ireland. The cost of carrying float equipment all year round for the occasional flight is quite ridiculous and out of proportion to the risk. The initial cost of fitting floatation equipment to my B206 is about £50,000.00 and would involve changing the skids from low to high. The cost of maintenance would also increase significantly.

Many helicopters such as the R22 cannot be retro fitted with floatation equipment.

The hourly cost of running a helicopter would increase due to the reduced air

speed caused by the additional drag and weight. Performance figures would change; this may require changes to the Pilots Operator Handbook? If this is the case the aircraft manufacturer can only do so who would pay his cost? Does the manufacturer still exist? In addition the payload would be reduced as the equipment weighs at least 50 kilos which means less fuel and or baggage can be carried.

The European Community are supposed to be leading the world in reducing carbon emissions this will only add to it.

There is also a very important safety issue. Most private helicopter pilots would never have operated a helicopter fitted with floatation equipment. All helicopter pilots practice autorotation as part of their training. I am reliably informed the technique may well be different when fitted with floatation equipment. An engine off landing onto water with the floats deployed will definitely be different and will normally result in the aircraft rolling and being lost.

Flying in and around the UK often involves flying for a short time over water, for example crossing rivers, reservoirs and lakes. For many years there has been a special helicopter route through London following the Thames which is in regular use by single engine helicopters without floatation equipment. To my knowledge there has never been an occasion where a helicopter using this route has landed on water due to an engine failure or any other malfunction.

Therefore to impose such a restriction as proposed serves no safety benefit whatsoever, but those owners/pilots whose aircraft are unable to comply will have severe flying restrictions, those who choose to comply will have significant capital and revenue expenditure. Private helicopter pilots are aware of the risks of flying over large expanses of water; but I suggest it is far less dangerous than when flying in mountainous areas such as the Alps. How long before EASA tries to ban single engine helicopters mountain flying.

Why is EASA trying to impose far more restrictions on helicopters than single engine fixed wing aircraft? A single engine aircraft crossing the channel from the UK flying below controlled airspace would not be able to make land from mid channel in the event of an engine failure; the requirements should be the same for both forms of aircraft.

comment *1673* comment by: *Dassault Aviation*

Editorial comment:

Page 44 : OPS.GEN.420 §(d)(2)(ii) : "is" seems superfluous.

comment *1717* comment by: *William Harford*

(e) (2) seems to assume that non complex single engined helicopters are less reliable that non complex motor powered single engined aeroplanes

which are permitted to fly up to the lesser of 30 minutes at cruising speed or 100nm from land without the carriage of life rafts.

Many small non complex privately operated helicopters do not have sufficient space within the cabin to carry a life raft.

Life rafts themselves represent a danger to flight should they inflate spontaneously.

UK CAA statistics demonstrate that privately operated single engined helicopters have a substantially better safety record with regard to flight over water than do privately operated single engined aeroplanes.

This proposal discriminates against privately operated single engined helicopters in an entirely arbitrary way.

Privately operated single engined helicopters should have parity with privately operated single engined aeroplanes.

comment *1740* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *1750* comment by: *Richard Dawson*

(f)

The need to take a life raft on a private helicopter flight should be made at the discretion of the pilot. It should not be a requirement.

Some helicopters e.g. R22 are too small for a life raft to be realistically carried. In addition, there are significant dangers associated with doing so e.g. what the pilot (who may be alone) will do if the life raft inflates during flight - this could have catastrophic effect as controls are interfered with. Finally, and assuming the pilot has successfully ditched, it may be impossible for the pilot to manhandle the raft from the sinking helicopter while saving

themself and/or passengers.

comment *1827* comment by: *Q Aviation Ltd*

I fly a Robinson R22 helicopter, which is a small two seater.

there is no room for a dingy when there are two people on board.

it is completely impactical to insist on a dingy being carried.

I also fly a R44 4 seat helicopter. The dingy would have to be carried in the back, and the chance of getting it out and successfully inflated is about zero in the event of an emergency.

Fitting floats is either prohibitively expensive or impractical or impossible or all three.

There is no evidence to prove that fitting floatation devices will save lives. I don't think there are any cases of fatalities from drowning in UK waters after a survivable crash landing in water in private helicopters.

Flying for leisure carries a risk, just like everything else in life and I choose to mitigate this risk over water by

- checking the engine and other guages even more dilligently prior to "coasting out"

- choosing the shortest practical route over water to reach my intended destination

- wearing a life jacket and warm clothes

- carrying a PLB

- maintaining radio contact with the appropriate ground based service.

I am capable of making my own decisions to mitigate the risks of flying, and would suggest that no more regulation is required.

The cost of compliance - if possible - would be utterly disproportionate with the perceived benefits gained.

Why should there be any difference in the rules for a landplane and a helicopter?

In a typical year, a private pilot would fly between 30 and 75 hours. Of these, maybe 30 minutes would be over water. It doesn't make any sense to try and legislate against a problem that simply doesn't exist.

martin rutty

PPL with 2,500 TT and who regularly flies across the English Channel.

comment *1920* comment by: *Tony Castro*

Unless I understood incorrectly you want to prescribe floatation equipment for light helicopters. This is unreasonnbale and very expensive. I have been

flying over water for 10 years on a Hughes 500 and wilst I appreciate the potential advantages of floats I cannot afford them and they are also heavy !!. On some short skid helicopters you cannot fit them at all..

comment *1924* comment by: *Malcolm BIRD*

I am very concerned about the proposals to require new levels of equipment on small helicopters. Helicopters by their very nature are very sensitive to carried weight and as more equipment becomes mandatory so the useful load carrying capacity reduces - and there is usually not much capacity to start with. Hence, it is important to critically consider any and all requirements that add weight, as well as cost, to the aircraft.

To consider the new proposals:

Life raft requirement - it is already accepted that life jackets should be worn for flight over substantial areas of water. Small helicopters do not have the weight lifting capacity or space to handle a life raft. To carry such equipment would compromise the safety of every flight for the very small possibility of being useful on a very small number of occasions. Thousands of water crossings have been carried out, the risk is understood, the need for a life raft is not proven and should be left to the discretion of the pilot.

Overall the proposals seem to treat small helicopters as if they were major commercial, passenger carrying aircraft. What might be reasonable for a large multi-engined aircraft is most certainly not necessarily reasonable on a small aircraft where every person on board has their own door. I ask that any proposals be proprortional to the risk and size of the aircraft involved.

comment *1980* comment by: *Andrew Price*

I own and lease out a Robinson R44 hence am an extremely small operator.

These changes especially the floats would basically put me out of business. The extra equipment for everything that is proposed would cost approximately £50,000 which I couldnt afford.

comment *1984* comment by: *Helifly (UK) Ltd*

Objection to OPS.GEN.420 e & OPS.GEN.425.H b

There is no accident data to support this requirement. As an island state this ruling would unfairly restrict the private use by UK owners / pilots of helicopters to visit Europe or even some of the islands close to the UK mainland. It would also restrict commercial positioning operations as inefficient routing would have to be taken to avoid any water crossings.

Floats would be a massive expense to any light helicopter operator / owner and in many cases there is no float option available. For the R44 that Helifly

operates the cost would be circa £23,000! This would not be commercially viable.

Fixed wing aircraft in the same category as the R44 are not proposed to have the same restrictions. Why not? Statistically they are just as likely to have to ditch? Once again this proposal seems to be disproportionate, expensive to implement and founded on no real evidence.

There is not comparable UK CAA regulation with regard to floats. In fact as recently as 2004 a CAA study concluded: "*The CAA has considered comments … and information available from the UK accident record. It appears that, for small helicopters at least, ditchings may be generally survivable even without floatation equipment. Although the technical requirements of floatation equipment are common to all helicopters, irrespective of the purpose of the flight, it is accepted that the requirements for General Aviation do not have to be the same as for public transport operations.*"

comment *2030* comment by: *Ulrich Baum*

For non-commercial operations, safety measures for flights over water should be left entirely at the pilot's discretion. I suggest to apply OPS.GEN.420 to commercial operations only.

comment *2252* comment by: *Roy MURPHY*

I agree for commercial flights, but this is ridiculous for private flights in the UK! We're an island for goodness sake with more water than any other country in the EU!

comment *2253* comment by: *Patrick Wilkinson*

Life rafts and flotation equipment are unnecessary for single engine helicopter flights for moderate distances over water. In an autorotative water landing a helicopter, unlike a fixed wing aircraft sinks quickly and there is no chance of deploying a life raft. Neither is there anywhere to stow it in a R44. The equipment proposed to be mandatory for both over water flights and night flights are wholly excessive and will cost over £60,000 i.e. half the cost of my aircraft. The equipment will never be fitted to light helicopters and so the effect of the proposed new regulations will be to completely prevent flights by private light helicopters over water. This is an outrageous infringement of my personal liberty. No commercial provate helicopter flights with non-fee paying passengers do not need protecting from themselves! We all knowingly accept the risks and assess these carefully before flight. We do not need these new regulations!

comment *2255* comment by: *Ian MACDONALD*

Section (e) There has not been a fatality due to ditching a light helicopter in the UK whilst there have been several involving light aircraft. To impose additional requirements is unnecessary, disproportionate and discriminatory. The economic use of helicopters used for travel to other EU states, over large estuaries and lakes would become illegal.

comment *2277* comment by: *Austro Control GmbH*

General comment: Flight over water should be defined more clearly for balloons (e.g. the size of lakes, rivers...)

(a) (3) (i)

A definition *"over water beyond gliding distance from the shore"* is not practicable for Balloons, therefore there should be a distinction between sailplanes and balloons.

comment *2539* comment by: *James Leavesley*

In a R44 helicopter there is no room to store a life raft where it would be of any use to the occupants after ditching in water.

The only space is under the seats and noone would be looking to go back into the machine they had just left to lift yhr seat and pull out the lieraft.

There woudl be great chance of anyone getting caught or snagged when trying to do so and be pulled down under the water by the sinking machine.

Any Fire officier will advise any mamber of the public to leave a burning building asap and let it burn. Why do you want some one who has escaped an ditching helicopter to go back to it and try and retrieve a liferaft.

Any sensible pilot in command wears and askes their passengers to wear the life jackets when flying over large areas of water. THis is common sense but shouldn't be manditory as often could cause fear in pasengers even before they set off.

Lifejackets maybe liferafts no they only add a disproportanant amount of wieght and are inaccesable when needed. There isn't sufficient room in most small helicopters for anything else. We don't need the extra weight either.

comment *2618* comment by: *John Matchett*

Small helicopters are not designed to carry life rafts.

Trying to extract a life raft in a small helicopter in an emergenvcy is likely to create a fatality rather than save it

comment *2664* comment by: *AOPA-Sweden*

(h): An electric illumination should not be necessary for non-commercial flights in small aircraft. It will require a huge investments for the owners, because there is no such a requirement today.

comment *2666* comment by: *AOPA-Sweden*

(a) (1) (j): Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *2807* comment by: *Ed Sturmer*

Small helicopters over water -

Floats should be optional. expensive and of dubious practical use.

ELTs proven unreliable, stay with helicopter and sink with it. personal beacons better.

comment *2885* comment by: *Peter Waldron*

Over Water Equipment Requirements

There needs to be proportionality for private helicopter flights. Storage and accessibility would be difficult as there is not enough room and successful deployment would be unlikely. Inadvertant inflation of the life raft could occur and could cause loss of control of the helicopter.

For non-complex private helicopter flight life raft carriage is at the pilots discretion.

comment *3156* comment by: *UK CAA*

Page No: 44

Paragraph No: OPS.GEN.420 (d)

Comment:

The requirement of the text has not faithfully reproduced the ICAO Annex 6 Part II standard at 2.4.4.3.

Additionally, it is noted that the ICAO definition of 'Extended flight over water' as the distance of 93 km (50 nm) or 30 minutes at normal cruising speed, has been extended to 100 nm, in the proposal (mirrored by EU-OPS).

Justification:

Editorial and standardisation

Proposed Text (if applicable):

AEROPLANES

(d) The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to:

(1) 120 minutes at ***normal*** cruising speed or 400 nautical miles (nm), whichever is the lesser, in the case of aeroplanes capable of continuing the flight to an aerodrome with the critical power unit(s) becoming inoperative at any point along the route or planned diversions; or

(2) 30 minutes at ***normal*** cruising speed or 100 nm, whichever is the lesser, for all other aeroplanes,

shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage, in addition to (b) or (c) ~~and (a)(3),~~ of:

(i) (a)(3);

(i***i***) life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and (ii***i***) life-saving equipment, including means of sustaining life, as is appropriate to the flight to be undertaken.

comment *3157* comment by: *UK CAA*

Page No: 45

Paragraph No:

OPS.GEN.420 (e), (f) and (g)

Comment:

The text of the paragraphs would be improved by amending as indicated

Justification:

Clarity of purpose and standardisation.

Proposed Text (if applicable):

(e) Helicopters shall be equipped with (a)(1), when operated in:

(1) Performance Class 1 or 2 on a flight over water at a distance ***from land*** corresponding to more than 10 minutes flying time at normal cruising speed; ……..

(f) When operated in Performance Class 1 or 2 on a flight over water at a distance ***from land*** corresponding to more than 10 minutes flying time at normal cruising speed or in Performance Class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, helicopters shall, in addition to (a)(1), and when not precluded by considerations related to the type

of helicopter used, be equipped with (a)(3) and (d) ***(i) and (ii)***.

(g) The pilot-in-command of a helicopter operated in Performance Class 3 shall determine the risks to survival of the occupants of the helicopter in the event of a ditching~~, based on which he/she shall determine~~ ***when deciding*** if the life jackets required in (e) shall be worn by all occupants.

comment *3158* comment by: *UK CAA*

Page No: 45

Paragraph No: OPS.GEN.420(h)

Comment:

The requirement for lifejackets to be equipped with a means of electric illumination, according to the title, is for all aircraft and yet sailplanes and balloons (paragraph (a)) are omitted from the list.

Justification:

Consistency

Proposed Text (if applicable):

ALL AIRCRAFT

(h) Each life jacket or equivalent individual flotation device, when carried in accordance with ***(a),*** (b), (c), (d), (e), (f) or (g) shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

comment *3248* comment by: *Suffolk Helicopters*

HELICOPTERS

(e) Helicopters shall be equipped with (a)(1), when operated in:

(1) Performance Class 1 or 2 on a flight over water at a distance corresponding to more than 10 minutes flying time at normal cruising speed; (2) Performance Class 3 on a flight over water beyond autorotational distance from the land; or

(3) Performance Class 2 or 3 when taking off or landing at an aerodrome/operating site where the take-off or approach path is over water.

Comment

This requirement is excessive and unnecessary with no basis in the safety record of light helicopters over water.

It would prevent the use of the vast majority of UK based light helicopters outside the UK, and make many over water flights in the UK impossible.

There is much evidence, supported by the CAA, that ditching is

survivable for light helicopters.

comment *3550* comment by: *Alexander Economou*

How many helicopter flights have flown over water going to and from mainland UK in the last 5 years?

How many helicopters have ditched in UK coastal waters in the last 5 years?

How do you intent to regluate this proposed rule? Will you be carrying out ispections?

I am opposed to this illogical proposal which will:

a) Have a negative impact and not a positive impact on flying.

b) Impossible to regulate.

How many lives/year to you intend to save with this rule? And how much does it cost for each life saved?

comment *3764* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of the paragraphs would be improved by amending as indicated.

Justification:

Clarity of purpose and standardisation.

Proposed Text

(if applicable):

(e) Helicopters shall be equipped with (a)(1), when operated in:

(1) Performance Class 1 or 2 on a flight over water at a distance ***from land*** corresponding to more than 10 minutes flying time at normal cruising speed; ……..

(f) When operated in Performance Class 1 or 2 on a flight over water at a distance ***from land*** corresponding to more than 10 minutes flying time at normal cruising speed or or in Performance Class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, helicopters shall, in addition to (a)(1), and when not precluded by considerations related to the type of helicopter used, be equipped with (a)(3) and (d) ***(i) and (ii)***.

(g) The pilot-in-command of a helicopter operated in Performance Class 3 shall determine the risks to survival of the occupants of the helicopter in the event of a ditching~~, based on which he/she shall determine~~ ***when deciding*** if the life jackets required in (e) shall be worn by all occupants.

comment *3990* comment by: *Bill Pitcher*

The extra expense will put new helicopter purchases off, especially if they do not have any need or desire to cross water.

The helicopter industry is already overburdened with legislation and taxation making ownership a borderline achievement for most people without extra expenses being imposed.

Self fly hire helicopters will become uneconomic to hire due to rising costs which have to be passed on to the hirer.

There is no evidence that these new policies will improve safety and save lives, which would otherwise have been lost

comment *4155* comment by: *colin rosenberg*

The installation of floats on my companies helicopter is prohibitively expensive, and unesscesary, having flown regularly over water to Ireland, France, even the Isle of White, I feel it totally unreasonable to expect such changes and restrict the business and commerce that this means of transport allows.

comment *4213* comment by: *DGAC*

O **Proposal** : Delete (a)(2)

Justification : We do not require ELT for sailplanes and balloons. Besides balloons are always followed by a vehicule.

comment *4214* comment by: *DGAC*

HELICOPTERS (e) (3) delete § and move it to Part CAT.

comment *5116* comment by: *peter barker*

I have read the detailed comments submitted by the Helicopter Club of Great Britain (HCGB) relating to document numbers NPA 2009-02b & 02g and agree with all the comments made.

I would also express my alarm that in drafting these proposals EASA have demonstrated a worrying lack of understanding of: the practicalities of flying a light helicopter, the difference between private and commercial flying and the risks and costs implicit to their proposals. Also, the proposed requirements are unfair in that they discriminate between light fixed wing aircraft and light helicopters and take no account that Britain is an island and so would be at a disadvatage in comparison with the countries of mainland

Europe.

comment 5322

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

SAILPLANES AND BALLOONS

(a) The pilot-in-command of a sailplane or balloon shall determine the risks to survival of the occupants of the aircraft in the event of a ditching, based on which he/she shall determine the carriage of:

(1) life jackets, or equivalent floatation devices, for each person on board, stowed in a position which is readily accessible from the seat or berth of the person for whose use it is provided;

…

Comment: The entire section refers to other sub-paragraphs earlier in the section. For example, requirements for helicopters flying over water refers to (a)(1) as well as (a)(3) and (d). These sub-paragraphs have headings like "Sailplanes and Balloons" as well as "Aeroplanes". The sub-paragraph Aeroplanes continues with even more referrals, and the referred sub-paragraphs have even more referrals.

All referrals and especially the headings on the sub-sections are confusing

Proposal:

The entire section OPS.GEN.420 needs reconstruction with common requirements without sub headings that refer to other aircraft types than the one in focus.

comment 5324

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

HELICOPTERS

(e) Helicopters shall be equipped with (a)(1), when operated in:

…

(2) Performance Class 3 on a flight over water beyond autorotational distance ***from*** the land; or

Comment: All distances stated as time "from land" should be exchanged with "to land". This since a strong wind from land would carry an aircraft further from land and result in grater distance to land. Furthermore, if the return heading towards land results in a headwind the time to reach land

will increase. This scenario would produce a lower level of safety level than anticipated.

Proposal (including ***new text***):

HELICOPTERS

(e) Helicopters shall be equipped with (a)(1), when operated in:

…

(2) Performance Class 3 on a flight over water beyond autorotational distance ~~from~~ ***to*** the land; or

comment *5341* comment by: *European Private Helicopter Alliance*

Page 45 Over Water Equipment Requirements

Ops.Gen.420 (f)

For private helicopter flights in non complex helicopters it should be the pilots option to carry a liferaft or not.

Reason for Objection

Proportionality for recreational and private helicopter flights. Where the helicopter is non-complex there is not room in the helicopter for safe storage of an accessable life raft when only one person is in the helicopter. successful deployment is unlikely. There is also a danger of inadvertant inflation which could cause loss of control of the helicopter.

Suggested alternative wording

Add new sentence at the end of current text.

For non-complex private helicopter flight life raft carriage is at the pilots option.

comment *5364* comment by: *Norwegian Air Sports Federation*

(H) illumination is good.

We do propose to include chemical illumination in the paragraph.

comment *5562* comment by: *James Tuke*

A Personal Locator beacon is perfectly sufficent for this not a fitted ELT. The benefits derived from this fitted unit are tottally disproportionate to the cost of fitting and the potential lives saved. It could be argued that a PLB may be disproprtionate as well. There is no history suggesting that this measure is necessary, in fact it is an accepted fact that constant RPM, de-reted piston engines are more reliable than a) small turbine units and b) the variable

revving piston engines fitted into fixed wing aircraft.

comment *5677* comment by: *DON BURT*

f. There is no where a life raft can be carried in a R44 when there are four people flying. Use of Life jackets should suffice.

comment *5705* comment by: *Brian KANE*

Dear Sirs

As a private pilot and operator of small helicopters for more than 10 years I write to object to the proposal to insist upon floats being a requirement for over water flight.

The cost of retro-fit would be seriously prohibitive and probably prevent me flying in the future should such legislation becoming a requirement.

I can see no logic in such a requirement; any flight I have conducted over water has been with the benefit of both an immersion suit, life jacket and mini life raft on board. None have been ever been required.

If I had an issue over water I believe I would have much more success in ditching through controlled autorotation than any fixed-wing aeroplane could come near to achieving.

If you are able to acknowledge this message I would be grateful.

Yours faithfully

Brian Kane

Brian Kane

County Cheltenham Limited

48 St Michaels Road Cheltenham Gloucestershire GL51 3RR

+44 7831 762500

comment *5878* comment by: *Danish Powerflying Union*

Electric illumination of floating devices is a good safety. But it is demanding to maintain the equipment and therefore we suggest illumination or use of chemical light to be an option instead of a demand.

comment *6006* comment by: *Fédération Française Aéronautique*

OPS.GEN.420 "Flight over water", LAND-PLANE (b) (2) :

French FFA believes that this proposal is not adapted to non commercial sports and recreational operations, even for initial flight training.

Justifications : Life jackets for each person on board seems disproportionate and very difficult to implement for the numerous sports and recreational flying organisations (aero-clubs) based on aerodromes or airfields situated next to a shoreline (sea, lakes or ponds).

Flight safety statistics do not show specific problems justifying that requirement.

FFA proposal: Delete the OPS.GEN.420 (b) (2) requirement for non commercial operations on non complex aeroplanes, and at least for non complex aeroplanes below 2,000 kg MTOW.

comment *6141* comment by: *ADAC Luftrettung GmbH*

OPS:GEN.420 (e)

In JAR-OPS 3.843 Amdt. 5, steht geschrieben:

(a) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water in hostile enviroment at a distance **from land** corresponding to more than 10 minutes flying time at normal cruise speed unless that helicopter is so disigned for landing on water or is certificated in accordance with ditching provisions.

In der NPA OPS.GEN.420(e) fehlt der Zusatz **from land. Dies ändert die Bedingungen elementar und die Vorschrift wird unnötig verschärft!** HEMS-Flüge nach Helgoland sind dannach nur noch mit entsprechend zertifizierten und ausgestatteten Hubschraubern möglich. Dies ist nicht verhältnismäßig!!

Vorschlag:

1. Der Text wird so übernommen, wie es in der JAR-OPS vorgesehen war:

Helicopter shall be equipped with (a)(1); when operated in:

(1) Performance Class 1 or 2 on a flight over water at a distance **from land** corresponding to more than 10 minutes flying time at normal cruising speed;

oder

2. HEMS-Flüge werden von dieser Regelung explizit ausgenommen.

In HEMS ist es aus medizinischen Gründen nicht immer möglich den transportierten Patienten eine Schwimmweste "Life Jacket" anzulegen. In den meisten Fällen sind die Patienten nicht in der Lage sich die Schwimmweste im Falle eines Unfalles selbst anzulegen. Für solche Fälle muss eine Ausnahmeregelung geschaffen werden.

comment *6236* comment by: *Aero-Club of Switzerland*

(a) (1) life jackets stowed in a position...readily accessible...? We think optimum safety will be reached if life jackets are worn.

Justification: In many cases such a situation does not exist, specially not in the cabins of smaller aircraft.

HELICOPTERS

(e) (f) (g) We think the timeframes proposed are too strict, especially for private operations. Please bring these requirements in line with the ones you propose for fixed wing aircraft.

Justification: In our view it is not proportionate to have the same set of rules for all that different aeronautical activities.

comment *6459* comment by: *George Heritage*

(e) - Is costly - approaching £20000 for floats, which would lower VNE and critically affect the safety of the helicopter (Enstrom 280Cpiston). Likelihood of helicopter remaining upright in anything but dead calm conditions would be impossible and totally impracticable.

comment *6500* comment by: *Beoley Mill Software Ltd*

Dear Sirs/madams,

I would like to object to part of your proposal NPA 2009-02b

The enforcement to fit floats to a helicopter when flying over water is not in my view a good idea, I fly over water about once a year and I have never experienced a problem, in fact I have made extensive searches for any R44's or R22's ditching over water and I have found none, it also seems to be a very rare event throughout the helicopter world except in the case of a few the military helicopters but you don't see the Royal air force with girly pop up floats. As a pleasure flyer I feel fitting floats would be a totally unwanted cost for small helicopters, and would change all the speeds and characteristics of the R44. In truth all it would do is prevent most pleasure pilots from going on the annual visit to France with the flying club. The £20,000 to fit floats is a bit more then I am comfortable with, and I believe floats would not show as a safety feature that saved lives to any pleasure pilot. I think bringing in new legislation for ELT (Which I do carry) isn't such a bad idea although I would suggest a hand held version that fits to the life jacket rather than one fitted to the helicopter. The number of Helicopter crashes in the UK is very small and to keep changing things wont in my view change the number of accidents, its just sods law that accidents happen, someone will cock up whether bad piloting or maintenance but I don't think floats will save anyone. Except the bank balance of the chap who owns the float manufacturing company. (I hope know one on the board of EASA). To finish please feel for the little helicopter pilots who cross the channel once in

a blue moon, at least give us similar dispensation as the little fixed wind pilots flying over water. I know you have a tuff job and it probably seems unfair that everyone is complaining about NPA 2009-02a but for the pleasure flyer its unfair that these very costly additions should be law when it benefits no one. I know you have the power to say no to NPA 2009-02b. Please be on our side.

Best regards

Stuart Rimmer

comment

6550 comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU is of the opinion that life jackets requirement for all persons on board as soon as take-off or landing are partially conducted above water is not necessary on non commercial operations on non complex aeroplanes.

Justifications :

Decades of air operations without life jackets in those circumstances (i.e. flight over water during take-off or landings) on non commercial operations on non complex aeroplane show no flight safety problem, so there is no justification for this requirement.

comment

6665 comment by: *DGAC*

Proposal:

(a)(i) and (b)(1) Replace "from the shore" by "to the shore".

Justification:

Change to take into account wind, the intent being to return to the shore within a certain time.

comment

6688 comment by: *Kinetic Avionics Ltd*

Section (f) - comment

Many types of small helicopter would not have room to carry a life raft safely. In addition there seems little justification on the basis of safety for distinguishing between private helicopter and aeroplane flights.

suggested wording..

shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, and the ability of the aircraft type to safely carry the equipment, based on which he/she shall determine the carriage...

comment *6702* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

In Finland there is propably the largest amount of inland lakes in the world. Due to this reason there are also several aerodromes/gliding sites having a lake in their vicinity. There has, however, not been a safety case that would justify that vicinity of a lake in a takeoff or approach path would create such a risk that this kind of an oversized wide equipment list as required under (a)(ii) for sailplanes would be needed for ensuring safe operations.

It is understandable require safety equipment if a enroute or cross-country flight is made over a water beyond the gliding performance of a sailplane, but that is not comparable with "speculative possibility" as expressed by (2)(ii) of a possible choice of a pilot to make a ditching within a small swimming distance from the nearest land in case of very rare launch failure during a take-off, instead of trying to make a forced landing into a deep forest as a secondary option. We must remark sailplanes have very limited rooms to store wide emergency equipment and in case of a ditching very near the runway end within short swimming distance would be much more safe than choosing a forced langing into 15…25 meter tall pine forest. It should also be noted that sailplanes are normally made either of glassfiber or wood with quite a good floating properties. We must also remark that there has not been a case in Finland where any of a sailplane launch failure or a missed approach would have lead to lost of lives because of a ditching in a lake immediately nearby a runway end.

Therefore, we consider requirement (ii) under item (a) Sailplanes and balloons clearly inappropriate for sailplanes and it should be deleted. There is no justified risk on this and the requirement would be technically difficult of impossible to be fulfilled.

comment *6764* comment by: *Clive Morrell*

OPS. GEN. 420 (f)

'A requirement for carriage of a liferaft.'

Comment; In many small helicopters there is little or no space for stowage of a liferaft. There are also considerations of safe deployment in a ditching situation in a small helicopter. There is also a very large difference between fixed wing and helicopter requirements. Why? Accident data does not support this difference.

Carriage of a liferaft in non complex helicopters should be left to the discretion of the pilot.

comment *6885* comment by: *Luftsport-Verband Bayern*

…Over water equipment requirements…..

Die Forderung gibt es nicht für private Flächenflugzeuge.

Hubschrauber sind nicht weniger sicher! Wenn diese Forderung für

kommerziell genutzte Hubschrauber bei „ausgedehnten Flügen über See" erhoben wird, so mag dies anders bewertet werden.

Manche Hubschrauber können nicht nachgerüstet werden. Dies betrifft auch unsere „Kleinen" ("unsere"=Mitglieder des Deutschen Hubschrauberclubs, Mitglied im Luftsport-Verband Bayern und DAeC; Ausrichter von DM, EM, WM).

Generell gilt: Nachrüstungen sind sehr teuer.

comment *7013* comment by: *John Carr*

The proposal is very bias against helicopters, allowing any aeroplane, singel engined or otherwise, to fly to a distance of 30 minutes/100 miles before the requirement is effective, however a single engine helicopter is effected once outside of autorotive distance and a twin beyond 10 munites flying time, Does not seem to be an even hand here, are helicopter that more prone to alighting on the water?

comment *7170* comment by: *Paul Monahan*

Ops.Gen.420(e) and Ops.Gen.425.H(b). I object to these proposals. They are unnecessary, expensive and disproportionate.

comment *7280* comment by: *DHV*

Ops.Gen.420 (e)

Reason for Objection

There is no safety case for the additional overwater helicopter requirements of emergency flotation equipment for private flight. The private fixed wing requirements would provide adequate safety for private helicopters. Helicopters are no less reliable than fixed wing. The proposed requirements are unnecessary, disproportionate, burdensome, costly and have no basis in accident history.

Especially for private non-commercial use, they would prevent the economic use of many hundreds of helicopters in the UK & Ireland, and prevent access to other EU member states. Flight to the many islands around the UK coast would become illegal, as would flight across river estuaries such as the Severn, Thames, Mersey, Clyde,

Firth or Forth, The Wash, and the Solent, as well as many lakes. Many helicopter types cannot be fitted with floats at all, or only at great cost, which is totally disproportionate to the risk of the occasional flight over water. There are over 1000 helicopters in the UK, most without floats.

There is no comparable UK CAA requirement for private flight, and the UK CAA agreed in their 2004 decision that emergency floatation equipment

should not be mandated for private helicopter flight. The text of their decision said:

The CAA has considered comments … and information available from the UK accident record. It appears that, for small helicopters at least, ditchings may be generally survivable even without floatation equipment. Although the technical requirements of floatation equipment are common to all helicopters, irrespective of the purpose of the flight, it is accepted that the requirements for General Aviation do not have to be the same as for public transport operations.

Implementation of requirements for helicopter floatation equipment would mean that many owners would be unable to comply, and would in effect be prohibited from flying to many destinations in accordance with established custom and practice. For the types of helicopter where compliance is feasible, the costs of compliance may be considered to be unjustified, particularly where owners fly over water for only a few hours each year.

Having considered all of the foregoing, the CAA has decided that it would be inappropriate to mandate permanent or rapidly deployable means of floatation for General Aviation helicopter flights over water, although owners may of course continue to fit such equipment if they wish.

Suggested alternative wording

comment *7402* comment by: *DAvid Monks*

The requirements for fixed wing requirements would suffice for private helicopters .

Indeed the CAA which have the most respected safty record in the world have currently filed a difference with regards to this recommendation.

comment *7463* comment by: *Richard Simpson*

OPS GEN 420

(f)

Not all rotorcraft are capable of carrying a liferaft and the process of deployment of these items is not a straightforward process.

At the discretion of the captain, it should be sufficient to carry personal flotation devices for each passenger.

comment *7480* comment by: *simon lichtenstein*

Emergency floation equipment other than life jackets, again is out of proportion to the problem. No R22 or R44s to my knowledge have ditched in the last 11 years I have been flying helicopters. Floats for R22s would put

them overweight again and for the 44s would make an unecessary extra cost and burden.

comment *7482* comment by: *Tingdene*

I understand that EASA are again looking into the feasibility of fitting floats to all light aircraft which cross water. I would as a PPL(H) holder and owner of a Robinson R44 object to such stringent measures. Currently lifejackets and ELTs used at the discretion of the Pilot for recreation situations should suffice. Making the fitting of floats mandatory would have an enormous impact on cost and more importantly performance. I trust that you take these comments on board. Many thanks Jeremy Pearson

comment *7483* comment by: *Dr John Sargent*

As the owner of a Robinson R22 may I add my voice to the chorus of objections being raised with regard to the proposed imposition of a requirement to have floats fitted for flights over water.

As a private individual and a private pilot only, I feel I should have the right to assess my own risk.

As long as I don't put any one else in danger I think it is wrong to impose legislation which in my case, (since Floats cannot be fitted retrospectively to an R 22), woulfd in theory prevent me crossing the Solent to the Isle of Wight, or flying around the Scottish Western Isles.

The time actually spent over water is very small compared to our annual flight time around the UK, and the proposed legislation is regulation far out of proportion to the flying time at risk.

Please do not add this legislation to Private Flying.

comment *7488* comment by: *Arno Glover*

Over Water Equipment Requirements

Ops.Gen.420 (e) &Ops.Gen.425.H (b)

Again there appears to be inequality in these proposals when comparisons are made between helicopter and fixed wing aircraft. The safety record for private helicopter flights is no worse than fixed wing aircraft - hence the argument on safety grounds for the additional over water requirements of emergency flotation equipment for private helicopters is unnecessary

Most light helicopters cannot be cost effectively retro fitted with flotation gear.

This matter has been recently investigated by the CAA (2004) in the past and there findings stated that it was not necessary to mandate for flotation

gear to be fitted to all private helicopters for short flights across water.

comment *7500* comment by: *David George*

OPS.GEN.420 e and OPS.GEN.425 h:-

Requirement for Emergency Floatation Equipment to be fitted for over water helicopter operations.

I object to these proposals because:-

1. There is no safety case for these proposals.

2. These proposals would, effectively, prohibit helicopter flights over water without emergency floatation equipment.

3. Many helicopters cannot be fitted with floats.

4. The cost of fitting floats is very high - disproportionate to the risk.

5. There is a strong argument that ditching without floats is safer than ditching with floats.

6. Floats increase the operating costs and decrease the performance of helicopters - fuel efficiency is also reduced.

comment *7507* comment by: *Jonathan Palmer*

I consider myself well qualified to comment on these matters. I have 25 years' experience as a helicopter pilot and hold a JAR CPL (H) IR licence. I have over 6000 hours PIC time in mainly Eurocopter AS355N (Class 1 twin engine) AS350, Bell 206 (Class 3 – single engine) helicopters. I have always owned and operated these helicopters too so have substantial experience of costs and economic viability. Furthermore I operate my aircraft for private business purposes, rather than commercial air transport.

OPS.GEN.420 Flights over water

I am concerned that I am not able to comment confidently on this section as I am unsure of the reference under the HELICOPTERS paragraph (f) section of the meaning of being equipped with (d). I assume it refers to the requirement for live rafts and life saving equipment. However I feel the references could be much clearer in general.

comment *7523* comment by: *Deutscher Aero Club E.V.*

... over water equipment requirements ...

Diese Forderung gibt es nicht für private Flächenflugzeuge.Hubschrauber sind nicht weniger sicherIWenn diese Forderung für kommerziell genutzte Hubschrauber "bei ausgedehnten Flögen über See" erhoben wird,so mag dies anders bewertet werden.Manche Hubschrauber können nicht

nachgerüstet werden.

Dies betrifft "auch unsere Kleinen".Generell gift: Nachröstungen sind sehr teuer.

comment *7540* comment by: *Pascal JOUBERT*

Replace 'ELT' by 'PLB'.

Justification: landings and route transport may cause inappropriate activations of any automatic ELT. An ELT is necessary for each basket. A personal locator beacon (PLB) is really better for the ballooning activity.

comment *7543* comment by: *Joe More*

Requiring floatation, life raft and ELT fitment to cross estuaries, lakes, reservoirs, rivers, or to cross to the Isle of Wight and the many Scottish islands would be a grossly disproportionate requirement compared to the risk involved. Also the cost implication would prevent many of my clients from introducing the required equipment.

I am therefore strongly opposed to the proposed regulations, it is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists. I thus urge EASA to either withdraw these proposals entirely, amend them as suggested, define a MTOM weight limit below which they would not apply (e.g. 3175Kg), or simply apply the fixed wing proposals to helicopters. Other practical mitigation measures could be exemptions for helicopters under 3000kg MTOM, for non-complex helicopters, or for helicopters in private flight

comment *7577* comment by: *AOPA UK*

An electric illumination should not be necessary for non-commercial flights in small aircraft. It will require a huge investments for the owners, because there is no such a requirement today.

comment *7650* comment by: *European Balloon Corporation*

(a) 2

ELT is used only on really long flights above water like Gordon Bennett flights. These are really rare flights and there is an internal regulation at this type of competition that imposes a minimum equipment list. I would remove the paragraph : simply overruled.

comment *7653* comment by: *Felix Baumgartner*

We strongly oppose to the proposed regulations commented upon the proposed rules for Air-Ops.

It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists.

It would be completely unreasonable and disproportionate to demand immediate compliance, especially when there is no immediate perceived safety need, not to talk about the added costs.

Being a private pilot of an R22 I just want to pick an example of the requested changes: Life rafts

Where the helicopter is non-complex there is not room in the helicopter for safe storage of an accessable life raft when only one person is in the helicopter. Successful deployment is unlikely. There is also a danger of inadvertant inflation which could cause loss of control of the helicopter.

Most pilots who have space in their helicopter would choose to carry a life raft. However for private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft. The rule needs to be proportionate.

It would theoretically mean that I wouldn´t be able to fly over e.g. the Attersee without a life raft?!

As mentioned above, we strongly oppose the adaptations that ought to be agreed upon.

Regulations have to be proportionate!!

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.425.H Ditching - Helicopters p. 45

comment *325* comment by: *AgustaWestland*

OPS.GEN.425(b)(1) Where a distance is specified it should be added " from land"

comment *1340* comment by: *EUROCOPTER*

OPS.GEN.425.H § (b)(2) uses the wording: "beyong a safe forced landing distance from land" while OPS.GEN.420 (e)(2) uses the wording "beyond autorotational distance from land".

Proposal: the same wording should be used both in OPS.GEN.420 (e)(2) and in OPS.GEN.425.H (b)(2).

comment *1360* comment by: *Helicopter Club of Great Britain*

Page 45 Over Water Equipment Requirement

Ops.Gen.425.H (b)

Reason for Objection

There is no safety case for the additional overwater helicopter requirements of emergency flotation equipment for private flight. The private fixed wing requirements would provide adequate safety for private helicopters. Helicopters are no less reliable than fixed wing. The proposed requirements are unnecessary, disproportionate, burdensome, costly and have no basis in accident history.

Especially for private non-commercial use, they would prevent the economic use of many hundreds of helicopters in the UK & Ireland, and prevent access to other EU member states. Flight to the many islands around the UK coast would become illegal, as would flight across river estuaries such as the Severn, Thames, Mersey, Clyde, Firth or Forth, The Wash, and the Solent, as well as many lakes. Many helicopter types cannot be fitted with floats at all, or only at great cost, which is totally disproportionate to the risk of the occasional flight over water. There are over 1000 helicopters in the UK, most without floats.

There is no comparable UK CAA requirement for private flight, and the UK CAA agreed in their 2004 decision that emergency floatation equipment should not be mandated for private helicopter flight. The text of their decision said:

The CAA has considered comments … and information available from the UK accident record. It appears that, for small helicopters at least, ditchings may be generally survivable even without floatation equipment. Although the technical requirements of floatation equipment are common to all helicopters, irrespective of the purpose of the flight, it is accepted that the requirements for General Aviation do not have to be the same as for public transport operations.

Implementation of requirements for helicopter floatation equipment would mean that many owners would be unable to comply, and would in effect be prohibited from flying to many destinations in accordance with established custom and practice. For the types of helicopter where compliance is feasible, the costs of compliance may be considered to be unjustified, particularly where owners fly over water for only a few hours each year.

Having considered all of the foregoing, the CAA has decided that it would be inappropriate to mandate permanent or rapidly deployable means of floatation for General Aviation helicopter flights over water, although owners may of course continue to fit such equipment if they wish.

Suggested alternative wording

Ops.Gen.425.H (b) .

In addition, for Commercial flight, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in:

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land.

Otherwise the same regulation as fixed wing.

HCGB Comment

a) Floatation Devices

Whilst some helicopters on the UK register are fitted with floats for public transport use, they are expensive to buy, install and maintain, and would be of strictly limited value should a water landing be required. The installation usually consists of a large inflatable 'balloon' attached to both the left and right skids of the helicopter, and a compressed air or other gas bottle installed in the body of the helicopter, together with electronics and buttons in the cockpit to 'fire' them. Their effectiveness requires them to perform perfectly. Should one float fail to inflate, then the helicopter would immediately roll over in the water, and be suspended beneath the working float, severely impeding crew and passenger exit. In anything but a flat calm sea, small helicopters would quickly roll over. The very few ditching incidents show that crews do escape from ditched helicopters not fitted with floats, and that water contact slows and stops the rotor blades allowing that escape. Rotating rotor blades on a float equipped small helicopter, rocking with the waves would become a great impediment to escape.

The writer has personally experienced, over land, an in-flight helicopter emergency in which the helicopter's vibration was so severe that the pipe connections from the compressed air bottle to the floats were severed. Had the emergency occurred over water, the floats would not have functioned.

There are substantial performance and weight penalties when floats are fitted. They can reduce cruising speeds by around 10 knots, thus lengthening every flight, and thus risk exposure and fuel costs. Flying time based maintenance costs are also increased. Float installations typically weigh 30 - 50 kg. Such a decrease in payload could lead to unintentional overloading, which would be a safety hazard. Fuel efficiency is also reduced.

b) The cost of Floatation Devices

The following is the year 2004 cost of fitment of floats to helicopters as quoted by UK maintenance organisations, excluding VAT and installation costs, are as follows:

			Source
Augusta 109 Helicopters		€73.333	Sloane
Enstrom Piston Helicopters	Fixed floats only	€11,280	E. Atlantic
Enstrom turbine		€26,460	"
Eurocopter AS350 and 355 Squirrel:		€49,155.	McAlpine

Helicopters		
Eurocopter EC120	€60,619.	"
Eurocopter EC135	€102,358	"
Bell 206 Helicopters	€33,332	Sloane
MD 500 Helicopters	€50,000	E. Atlantic
MD 600	€85,999	"
MD 902	€100,000	"
Schweizer 300 & 330:	None available	CSE
Robinson R44:	€30,800	London Heli Centre
Robinson R22	Floats cannot be retro-fitted.	

(Float equipped R22 helicopters are no longer manufactured).

Annual Costs: Floats must be test fired each year, have to be left inflated overnight and then repacked. There is a similar repacking error risk as in parachute repacking. The pressurised bottle has to be refilled, and all pipe and electrical connections inspected. There are considerable ongoing costs and aircraft down time incurred.

These costs are very substantial, and are out of all proportion to the risk exposure of private flights. The average helicopter probably crosses small stretches of water for only a few minutes on most domestic flights, whilst it might fly internationally perhaps once or twice a year. It would be surprising therefore if there was over water exposure for more than a few hours per year. The costs of the proposed equipment are out of all proportion to the risk, which as we have previously stated, is negligible.

comment *1440* comment by: *Mike Pascall*

Page 45 Over Water Equipment Requirements

Ops.Gen.425.H (b)

Reason for Objection

There is no safety case for the additional overwater helicopter requirements of emergency flotation equipment for private flight. The private fixed wing requirements would provide adequate safety for private helicopters. Helicopters are no less reliable than fixed wing. The proposed requirements are unnecessary, disproportionate, burdensome, costly and have no basis in accident history.

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access to other EU member states. Flight to the many islands around the UK coast would become illegal, as would flight across river estuaries such as the Severn, Thames, Mersey, Clyde, Firth or Forth, The Wash, and the Solent , as well as many lakes. Many helicopter types cannot be fitted with floats at all, or only at great cost, which is totally disproportionate to the risk of the occasional flight over water. There are over 1000 helicopters in the UK , most without floats.

There is no comparable UK CAA requirement for private flight, and the UK CAA agreed in their 2004 decision that emergency floatation equipment should not be mandated for private helicopter flight. The text of their decision said:

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Implementation of requirements for helicopter floatation equipment would mean that many owners would be unable to comply, and would in effect be prohibited from flying to many destinations in accordance with established custom and practice. For the types of helicopter where compliance is feasible, the costs of compliance may be considered to be unjustified, particularly where owners fly over water for only a few hours each year.

Having considered all of the foregoing, the CAA has decided that it would be inappropriate to mandate permanent or rapidly deployable means of floatation for General Aviation helicopter flights over water, although owners may of course continue to fit such equipment if they wish.

Suggested alternative wording

Ops.Gen.425.H (b) .

In addition, for Commercial flight, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in:

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land.

Otherwise the same regulation as fixed wing.

HCGB Comment

a) Floatation Devices

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float, severely impeding crew and passenger exit. In anything but a flat calm sea, small helicopters would quickly roll over. The very few ditching incidents show that crews do escape from ditched helicopters not fitted with floats, and that water contact slows and stops the rotor blades allowing that escape. Rotating rotor blades on a float equipped small helicopter, rocking with the waves would become a great impediment to escape.

The writer has personally experienced, over land, an in-flight helicopter emergency in which the helicopter's vibration was so severe that the pipe connections from the compressed air bottle to the floats were severed. Had the emergency occurred over water, the floats would not have functioned.

There are substantial performance and weight penalties when floats are fitted. They can reduce cruising speeds by around 10 knots, thus lengthening every flight, and thus risk exposure and fuel costs. Flying time based maintenance costs are also increased. Float installations typically weigh 30 - 50 kg. Such a decrease in payload could lead to unintentional overloading, which would be a safety hazard. Fuel efficiency is also reduced.

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Source

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Enstrom Piston Fixed floats only €11,280 E. Atlantic Helicopters

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Eurocopter AS350 and 355 Squirrel: €49,155. McAlpine Helicopters

Eurocopter EC120 €60,619."

Eurocopter EC135 €102,358"

Bell 206 €33,332 Sloane Helicopters

MD 500 €50,000 E. Atlantic Helicopters

MD 600 €85,999"

MD 902 €100,000"

Schweizer 300 & 330: None available CSE

Robinson R44: €30,800 London Heli Centre

Robinson R22 Floats cannot be retro-fitted.

(Float equipped R22 helicopters are no longer manufactured).

Annual Costs: Floats must be test fired each year, have to be left inflated overnight and then repacked. There is a similar repacking error risk as in parachute repacking. The pressurised bottle has to be refilled, and all pipe and electrical connections inspected. There are considerable ongoing costs and aircraft down time incurred.

These costs are very substantial, and are out of all proportion to the risk exposure of private flights. The average helicopter probably crosses small

stretches of water for only a few minutes on most domestic flights, whilst it might fly internationally perhaps once or twice a year. It would be surprising therefore if there was over water exposure for more than a few hours per year. The costs of the proposed equipment are out of all proportion to the risk, which as we have previously stated, is negligible.

comment *1452* comment by: *R Spiers*

Ops.Gen.425.H (b)

Reason for Objection

There does not appear to be any reason based on safety information to enfore all prviate or non complex helicopters to be retro fitted with floatation devices or for new helicopters in this category to be required to have these devices fitted. The cost of install and maintenance will be probitatory in many cases and in some not workable rendering the aircraft unusable.

Suggested alternative wording

Ops.Gen.425.H (b) .

In addition, for Commercial flight, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in:

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land.

Otherwise the same regulation as fixed wing.

comment *1469* comment by: *John Henshall*

These proposals for GA helicopters are not sensible or proportionate to the risk involved with flight over water.

Some helicopters cannot be float equipped, and the cost (for those that can be) is prohibitive.

For my machine enquiries show that the float bags will cost me US$60,000 plus additional costs for fitting (I am furtunate to have fixed parts for floats already installed). That cost is high given the risk involved in 2 or 3 channel crossings / Irish sea crossings. I have looked at the AAIB site record on-line and can find no helicopter accident record where the absence of floats was a factor in the accident risk.

How can this be a justifiable step?

comment *1477* comment by: *Philip GEORGE*

It is not practical to fit floatation equipment to my helicopter. There will be a weight and fuel penalty which does not not add a proportional margin of

safety. I occasionally fly to Ireland in my helicopter and am happy to continue with out the need for floatation equipment. I therefore dissagree with this proposal, the decision should be mine to make. I do not fly public transport.

comment *1524* comment by: *Chris Fox*

There is no basis for requiring light helicopters operated privately to be fitted with floation devices, and this requirement would in effect prohibit many operations that are presently conducted legally and safely.

The UK CAA considered this matter in 2004 and concluded that it was inappropriate to mandate the requirement of floats for private flight in light helicopters.

Fitment of floats to light helicopters, where it is possible at all, carries very significant costs both for initial installation and ongoing maintenance.

The requirements for light helicopters should be the same as those for aeroplanes.

comment *1552* comment by: *Des Russell*

Once again it is the private pilots decision

comment *1592* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

The criterion for operations in PC3 over water identifying when Emergency Floatation Equipment is needed and when Life Jackets are needed has to be harmonised:

- OPS.GEN.425.H.(b)(2) uses 'PC3 beyond a safe forced landing distance from land

- OPS.GEN.420(e)(2) uses 'PC3 on a flight over water beyond autorotational distance from land'

comment *1603* comment by: *Elitop*

This is crazy for a private owner!!

comment *1718* comment by: *Michael Cuttell*

I am writing to you as the safety concious owner of an Alouette helicopter. I

have just become aware of proposed changes in EASA documents NPA2009-2b and NPA2009-02g which in part refer to the mandatory fitment and use of floats and automatic ELT's for ANY flights carried out over water by privately owned light helicopters.

I find these proposals utterly astonishing and I fail to see how flight over water can be made any safer by the implemenation of either proposal. It is, apparently, an established fact that 50% of people who experience an emergency imersion in British waters will die of cold within 10 minutes whether they are wearing a lifejacket or not. So how will these proposals help them?

The skid width of all light helicopters is very narrow in proportion to its height and so even on one of those very rare calm sea days even the most skilled pilot will be unable to prevent his helicopter from overturning which, due to disorientation, will further reduce the risk of survival.

If the aircraft sinks your proposal guarantees that the ELT goes with it. It simply does not make sense. The correct place for any ELT is fastened to the jacket of floating survivors, who may well drift away.

Most light helicopters would be unable to carry the considerable weight of flotation equipment without seriously compromising their range and speed.

It is my belief that EASA should treat light helicopters in the same way as light aircraft for whom floats do not apply.

Surely part of EASA's duty is to consider whether ANY proposals are proportionate and whether ANY lives would be saved.

These proposals are even more surprising due to the fact that there has not been one single ditching fatality in a light helicopter operating areound The British Isles. A record that provides no justification whatsoever for the imposition of crippling expenditure for just one section of the private flying community without a shred of evidence that even one life will be saved.

The Helicopter Club of Great Britain, representing several hundred pilots and owners, have put together an exceeding well presented and balanced response to these new proposals. I would urge you to read it. It cannot be ignored.

Please prove to us all that you are not automatons. You have, each one of you, the ability to think and be reasonable and rational in your appraisal of these proposals and any counter proposals.

I am sure that you willl reach the inevitable conclusion that YOU MUST STRIKE THEM OUT.

M.J.Cuttell Alouetee ll G-BVSD

comment *1758* comment by: *Richard Dawson*

H Ditching (b)

There is no requirement currently within the UK for helicopters to be fitted with flotation equipment for flight over water. This requirement would

prevent my helicopter from crossing into mainland Europe and indeed many islands of the UK.

There would be a considerable additional cost to retrofit floats (if indeed it is possible) to my helicopter and many other helicopters in the UK. Further, these systems require regular maintenance to ensure their safe operation - this is an additional cost to the owner/operator. Given the reliability of non-complex helicopters any such cost would be disproportionate to the benefit that would be provided.

comment *1824* comment by: *Q Aviation Ltd*

I fly a Robinson R22 helicopter, which is a small two seater.

there is no room for a dingy when there are two people on board.

it is completely impactical to insist on a dingy being carried.

I also fly a R44 4 seat helicopter. The dingy would have to be carried in the back, and the chance of getting it out and successfully inflated is about zero in the event of an emergency.

Fitting floats is either prohibitively expensive or impractical or impossible or all three.

There is no evidence to prove that fitting floatation devices will save lives. I don't think there are any cases of fatalities from drowning in UK waters after a survivable crash landing in water in private helicopters.

Flying for leisure carries a risk, just like everything else in life and I choose to mitigate this risk over water by

- checking the engine and other guages even more dilligently prior to "coasting out"

- choosing the shortest practical route over water to reach my intended destination

- wearing a life jacket and warm clothes

- carrying a PLB

- maintaining radio contact with the appropriate ground based service.

I am capable of making my own decisions to mitigate the risks of flying, and would suggest that no more regulation is required.

The cost of compliance - if possible - would be utterly disproportionate with the perceived benefits gained.

In a typical year, a private pilot would fly between 30 and 75 hours. Of these, maybe 30 minutes would be over water. It doesn't make any sense to try and legislate against a problem that simply doesn't exist.

martin rutty

PPL with 2,500 TT and who regularly flies across the English Channel.

comment *1871* comment by: *Aeromega*

It is not proportionate to the risk of ditching to require flotation devices on small helicopters with limited space and weight restrictions. EASA must demonstrate a sufficient safety case to justify the requirement add these expensive and restrictive requirements to small helicopters. What statistics are there showing that following a successful small helicopter ditching, casulties have been suffered due to the helicopter sinking.

comment *1925* comment by: *Malcolm BIRD*

Install emergency floatation equipment - unfortunately a small helicopter needs very calm conditions for floats to be useful. The number of times that floatation equipment on small helicopters would actually help in an emergency is probably very small, whereas the extra weight involved would pose a much greater risk to safety on every flight. A small helicopter is very likley to be lost on a ditching, the best course is to accept this, let the pilot and passenger leave the aircraft with their lifejackets and PLB and allow the aircraft to go down. Small helicopters have an excellent safety record on water crossings and the pilot should be responsible for deciding the risks. Overflying water puts very few others, if any at risk. In addition, the cost of fitting emergency floats to a small helicopter is out of all proprtion to risks involved and the cost of the helicopter itself.

comment *1982* comment by: *Peter Waldron*

One of the paramount requirements of the helicopter is to quickly and easily travel to other countries as well as to journey within the UK and cross any water as necessary. The requirement of flotation, Life raft and ELT would adversely affect these activities due to the practicality, cost and weight issues. It would be clearly disproportionate to stipulate these requirements in order to cross estuaries, lakes, rivers and waterways. There is no accident data to support the safety case for this flotation proposal for helicopters.

comment *2256* comment by: *Ian MACDONALD*

Section (H) (b) is not only unnecessary but also dangerous. Whilst there has not been a fatality over water in a Robinson helicopter there have been several over land. The 5000 psi activation bottle for Clipper pop-out floats is located under the pilots seat, thereby reducing crash stroke protection. It follows that the mandatory fitting of such devices to the Robinson UK fleet would, therefore, result in more injuries.

In addition there is no possibility of fitting such devices to R22s, thus relegating many hundreds of machines to the status of toys.

comment *2388* comment by: *Denis Ferranti Meters*

Gen.425.H b(2) requires fittment of flotation equipment for flight out of autorotational distance from land.

This should be rejected as:

1. Class 3 hels have a good overall overwater safety record.

2. The weight addition to some of the smaller hels will reduce performance, challenge the Cof G limits and add drag reducing speeds and leading to longer overwater flights as a result.

3. Some hel types will not have a flotation system available for the type. Some types will be structurally unable to support flotation equipment.

4. Cost of the equipment will in many cases be prohibitively expensive especially if compared to a low risk of ditching. It will drive some GA private hel owners from the helicopter sector.

Recommendation: That private use VFR ac are exempted from the legal requirement to carry floatation equipment

comment *2533* comment by: *Aerocorp Limited*

We live on an island! We have been safely crossing water on private flights in helicopters for many years. Requiring the fitment of floats would lock us onto this island. We would no longer be able to travel freely to mainland Europe in our helicopters. There is no record of any R44s ditching, as far as we are aware. The cost of fitting floats (if it can be done at all) is out of all proportion to the risk of mechanical failure. In any event, the likelyhood of floats saving the helicopter is remote, in the extreme. This ICAO idea has surely been thought up by someone living in the USA, where you can fly for 4000 miles without crossing water. Europe can and should opt out of this absurd requirement.

comment *2540* comment by: *James Leavesley*

PPL pilots, do fly over water, but again a simple lefjacket would proportainaly give greater safety than floatation pods on my machine.

The extra drag casued by them would increade the cost of every flight I made. it reduces the weight I am able to carry, (passengers aren't getting smaller only heavier!!)

It will make the machine less fuel efficient, and we are having enough flack from thoes who opppose flying. It woudl also cost a great deal to install agan disproportinate to the benefits.

comment *3123* comment by: *Peter Waldron*

Helicopters are proven to be no less reliable than fixed wing planes and therefore the private fixed wing requirements would give adequate safety for private helicopters. The proposed requirements are unnecessary and costly with no supporting evidence through accident records.

This would prohibit the use of hundreds of private non-commercial helicopters in the UK and Ireland. Flights to the islands around the UK coast would become illegal as would flights across estuaries and lakes. There are over 1000 helicopters in the UK and most are without floats.

The UK CAA agreed in 2004 that emergency flotation equipment should not be mandatory for flights by private helicopters.

The installation of floats is costly and expensive to maintain. Small helicopters can be adversely affected if the floats do not inflate perfectly. If only one inflates the helicopter would instantly roll over and be suspended beneath the water severely impeding escape.

The cost of float installation for an R44 would be 30,800 Euros with high maintenance costs thereafter.

The approximate time that a private helicopter may be over water during a one year period is negligable and therefore the proposed equipment and associated costs are out of proportion to the risk.

comment *3159* comment by: *UK CAA*

Page No: 45

Paragraph No: OPS.GEN.425.H

Comment:

Commercial Air Transport helicopters operating overwater in a hostile environment should be equipped with an *automatic* float deployment system.

Introduce a new item in the CAT section to cater for this.

Justification:

There is sufficient evidence from recent accidents that this equipment is a vital aid to safety

Proposed Text (if applicable):

OPS.CAT.425 Ditching – Helicopters. Helicopters operating overwater in a hostile environment shall be equipped with an automatic deployment system for the emergency flotation equipment required by OPS.GEN.425.H.

comment *3161* comment by: *UK CAA*

Page No: 45

Paragraph No: OPS.GEN.425.H

Comment:

The UK CAA does not mandate the means of flotation (ditching) requirements of Annex 6 Part III Section III paragraph 4.3 for General Aviation operations and considers the proposal as unacceptably burdensome. The provision of flotation equipment for many light helicopters is impractical and not cost effective. The matter should be addressed by the risk assessment of the private operator and not regulated.

The proposal is based on Commercial Air Transport standards from JAR-OPS 3.843 and Annex 6 Part III Section II and is considered appropriate for those operations and the wider scope of all Commercial operations. It is recommended that the requirement is placed against Commercial operators only and that GM is used to advise private operators to consider compliance. A separate revised GM OPS.GEN.425.H has been provided (see UK CAA comment on that paragraph).

Justification:

Disproportionate regulatory requirement for non-commercial helicopter operations.

Proposed Text (if applicable):

OPS.GEN.425.H Ditching – Helicopters

HELICOPTERS INVOLVED IN COMMERCIAL OPERATIONS OVER WATER

(a) Helicopters ……

comment *3252* comment by: *Suffolk Helicopters*

(c) Helicopters shall be equipped with:

(1) at least one automatic ELT;

Comment

This is an unnecessary and excessive requirement. They would not work for light helicopters when ditching and add to weight and be extremely expensive to install for non commercial light helicopters.

comment *3253* comment by: *Suffolk Helicopters*

Comment

Floats are expensive and potentially hazardous. The only times I have known floats inflate (three occasions to my personal knowledge to colleague pilots) is when they were not required to do so - accidental,

uncommanded inflation - they create more hazard than potential safety.

In addition floats reduce cruising speed and add to weight - increasing fuel costs and energy consumption.

comment

3428 comment by: *SNEH Organisation representing all french commercial helicopters operators*

The criterion for operations in PC3 over water identifying when Emergency Floatation Equipment is needed and when Life Jackets are needed has to be harmonised :

- OPS.GEN.425.H.(b) (2) uses PC3 beyond a safe forced landing distance from land

- ops.gen.420 (e) (2) uses PC3 on a flight over water beyond autorotational distance from land

comment

3551 comment by: *Alexander Economou*

This rule would be a nightmare. Millions and millions of pounds are spent making helicopters light weight and fast. You want us to put floats on our machines? You've got to be kidding. And flying 10 per cent slower, have a weight penalty of 50kg.

"But you dont have to put floats on your machines", you might say. Then all helicopter pilots are bound by the UK borders. Great. No more trips for EVERYONE. Fuck you.

comment

3599 comment by: *Juliet Stocks*

Comments also relevant ot Ops.Gen.420(e).

Many helicopter types cannot be fitted with floats at all. I am a holder of a R22 licence to which floats cannot be retro-fitted, as such I would be prohibited from flying to France, Isle of Wight, across the Thames estaurary and along the Thames over London in a R22.

In addition the costs of fitting floatation devices is out of all proportion to the risks, given that the average helicopter in the UK crosses water for only a few minutes on most domestic flights. The addition of floatation devices would also impact the performance, reducing cruising speeds and increasing weight and fuel consumption. This reduced efficiency increases flight time and fuel consumption. As a non-owner, but frequent flyer from the UK and Spanish based companies this cost will ultimately be transferred the the end-user, i.e. the self flyer hirer.

comment *3615* comment by: *IAOPA Europe*

What is meant by a safe forced landing distance from land?

If it meant to be equivalent to gliding distance then there is absolutely no justification why for non-commercial flights a performance class 3 helicopter must be equipped with flotation device when flying beyond a safe forced landing distance from land.

A single engine fixed wing aircraft is allowed to fly beyond gliding distance from land even if the the outcome of ditching is more uncertain than for a helicopter. For non-commercial operations a performance class 3 helicopter should have the same option as a single engine fixed wing aircraft.

comment *3762* comment by: *Civil Aviation Authority of Norway*

Comment:

The CAAN does not mandate the means of flotation (ditching) requirements of Annex 6 Part III Section III paragraph 4.3 for General Aviation operations and considers the proposal as unacceptably over burdensome. The provision of flotation equipment for many light helicopters is impractical and not cost effective. The matter should be addressed by the risk assessment of the private operator and not regulated.

The proposal is based on Commercial Air Transport standards from JAR-OPS 3.843 and Annex 6 Part III Section II and is considered appropriate for those operations and perhaps the wider scope of all Commercial operations. It is recommended that the requirement is placed against Commercial operators only but that GM is used to advise private operators to consider compliance. A revised GM OPS.GEN.425.H has been provided.

Justification:

Disproportionate regulatory requirement for non-commercial helicopter operations.

Proposed Text

(if applicable):

OPS.GEN.425.H Ditching – Helicopters

HELICOPTERS INVOLVED IN COMMERCIAL OPERATIONS OVER WATER

(a) Helicopters ……

comment *4046* comment by: *PremiAir Aviation Servcies Limited*

(b)In addition, helicopters **undertaking commercial operations** shall comply with (a) or be fitted with emergency flotation equipment.....

comment *4154* comment by: *colin rosenberg*

I operate and run hotels. I travel frequently from Cardiff,to other hotels, about 10 in the west country. This involves me flying across the Bristol channel regularly,about 10miles. In order to achieve what you are proposing means a substantial diversion of some 80miles!!!! What a complete waste of fuel and time!!! And i have been flying these routes for about 13years.

comment *4215* comment by: *DGAC*

We consider that (a) and (b) are too demanding for general aviation and commercial aviation other than CAT.

Proposal:

Move (a) the CAT section

Rewrite the beginning of (b) as follows :

"(b) In addition, helicopters shall **be :**

(1) designed for landing on water; or

(2) certificated in accordance with ditching provisions in the relevant airworthiness code, or

(3) ~~comply with (a)~~ be fitted with emergency flotation equipment,

when operated in:

(4)~~(1)~~ Performance Class 1 or 2 on a flight over water ~~in a non-hostile environment~~ at a distance corresponding to more than 10 minutes flying time at normal cruising speed;"

(5)~~(2)~~ […]

comment *4216* comment by: *DGAC*

In COM it is not always possible to have the helicopter fitted with a floatation (because of the specific equipment). Alleviation should be given for helicopters in COM to reach the work area if a flight over water is needed.

comment *5343* comment by: *European Private Helicopter Alliance*

Page 45 **Ditching Requirements**

Ops.Gen.425.H (b)

Reason for Objection

There is no safety case for the additional overwater helicopter requirements of emergency flotation equipment for private flight. The private fixed wing requirements would provide adequate safety for private helicopters.

Helicopters are no less reliable than fixed wing. The proposed requirements are unnecessary, disproportionate, burdensome, costly and have no basis in accident history.

Especially for private non-commercial use, they would prevent the economic use of many hundreds of helicopters in Europe. In the case of the UK & Ireland, it would prevent access to other EU member states. Flight to the many islands around the European coast would become illegal, as would flight across river estuaries, channels, and lakes. Many helicopter types cannot be fitted with floats at all, or only at great cost, which is totally disproportionate to the risk of the occasional flight over water. There are over 1000 helicopters in the UK alone, most without floats.

In 2004 the UK CAA considered imposing a flotation device requirement for private helicopters but decided not to. The text of their decision said:

The CAA has considered comments … and information available from the UK accident record. It appears that, for small helicopters at least, ditchings may be generally survivable even without floatation equipment. Although the technical requirements of floatation equipment are common to all helicopters, irrespective of the purpose of the flight, it is accepted that the requirements for General Aviation do not have to be the same as for public transport operations.

Implementation of requirements for helicopter floatation equipment would mean that many owners would be unable to comply, and would in effect be prohibited from flying to many destinations in accordance with established custom and practice. For the types of helicopter where compliance is feasible, the costs of compliance may be considered to be unjustified, particularly where owners fly over water for only a few hours each year.

Having considered all of the foregoing, the CAA has decided that it would be inappropriate to mandate permanent or rapidly deployable means of floatation for General Aviation helicopter flights over water, although owners may of course continue to fit such equipment if they wish.

Suggested alternative wording

Ops.Gen.425.H (b) .

In addition, for Commercial flight, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in:

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land.

Otherwise the same regulation as fixed wing.

EPHA Comment

a) Floatation Devices

Whilst some helicopters are fitted with floats for CAT use, they are expensive to buy, install and maintain, and would be of strictly limited value should a water landing be required. The installation usually consists of a large inflatable 'balloon' attached to both the left and right skids of the helicopter, and a compressed air or other gas bottle installed in the body of the helicopter, together with electronics and buttons in the cockpit to 'fire' them.

Their effectiveness requires them to perform perfectly. Should one float fail to inflate, then the helicopter would immediately roll over in the water, and be suspended beneath the working float, severely impeding crew and passenger exit. In anything but a flat calm sea, small helicopters would quickly roll over. The very few ditching incidents show that crews do escape from ditched helicopters not fitted with floats, and that water contact slows and stops the rotor blades allowing that escape. Rotating rotor blades on a float equipped small helicopter, rocking with the waves would become a great impediment to escape.

There are substantial performance and weight penalties when floats are fitted. They can reduce cruising speeds by around 10 knots, thus lengthening every flight, and thus risk exposure and fuel costs. Flying time based maintenance costs are also increased. Float installations typically weigh 30 - 50 kg. Such a decrease in payload could lead to unintentional overloading, which would be a safety hazard. Fuel efficiency is also reduced.

b) The cost of Floatation Devices

The following is the year 2004 cost of fitment of floats to helicopters as quoted by UK maintenance organisations, excluding VAT and installation costs, are as follows:

			Source
Augusta 109 Helicopters		€73.333	Sloane
Enstrom Piston Helicopters	Fixed floats only	€11,280	E. Atlantic
Enstrom turbine		€26,460	"
Eurocopter AS350 and 355 Squirrel: Helicopters		€49,155.	McAlpine
Eurocopter EC120		€60,619.	"
Eurocopter EC135		€102,358	"
Bell 206 Helicopters		€33,332	Sloane
MD 500 Helicopters		€50,000	E. Atlantic
MD 600		€85,999	"
MD 902		€100,000	"
Schweizer 300 & 330:		None available	CSE
Robinson R44:		€30,800	London Heli Centre
Robinson R22		Floats cannot be retro-fitted.	

(Float equipped R22 helicopters are no longer manufactured).

Annual Costs:	Floats must be test fired each year, have to be left inflated overnight and then repacked. There is a similar repacking error risk as in parachute repacking. The pressurised bottle has to be refilled, and all pipe and electrical connections inspected. There are considerable ongoing costs and aircraft down time incurred.

These costs are very substantial, and are out of all proportion to the risk exposure of private flights. The average helicopter probably crosses small stretches of water for only a few minutes on most domestic flights, whilst it might fly internationally perhaps once or twice a year. It would be surprising therefore if there was over water exposure for more than a few hours per year. The costs of the proposed equipment are out of all proportion to the risk, which as we have previously stated, is negligible.

comment *5382* comment by: *David Chisnall*

In regard to this life raft proposal this is not practical in many instances. Many helicopters do not have open access between the cockpit and passenger seating areas (e.g. Jetranger) and therefore this proposal if made legislation would serve for no valuable purpose.

Floats on a helicopter will only be of value in a very calm sea. The amount of time that a small helicopter spends over water is low in comparison with its total flying hours. For small helicopters the addition of pop out floats is not only a considerable expense but also drives the AUW of the machine closer to its maximum on regular land based flights, increases fuel consumption and reduces cruising speeds.

These proposals are not reasonable and disproportionate.

In summary I must object strongly to these proposals as they discriminate against non complex private helicopters. ICAO should be changed so the private helicopters are treated the same as private fixed wing aircraft.

comment *5596* comment by: *James Tuke*

Once again the benefits derived from fitting emergency floats are without foundation. There is no evidence whatsover of this equipment being necessary for helicopters over and above fixed wing where it quite simply wouldn't be possible to fit them in any case. On and R22 for example, where there has only been one isnstance of ditching (to my knowledge) it is impossible to retro-fit floats and making them mandatory is a gross invasion of the freedom currently afforded to owners of non-float equipped machines which would prevent them visiting other countries or even flying over certain areas of water within the UK itself, plainly a ridiculous proposal.

comment *5682* comment by: *DON BURT*

(b) (2) Flying from Humberside this would mean fitting floats to cross the Humber as there is frequently insufficient cloud base to be able to obtain sufficient height to autorotate to land.

comment *5764* comment by: *Tim Virdee*

OBJECTIONS TO PROPOSED CHANGES - HELICOPTERS

OPS.GEN.425.H DITCHING

I wish to register an objection to this section on the basis of the fact that, to my knowledge, there has never been a ditching of a light, single engine helicopter over water in Europe.

it is difficult to see how this impeccable record could possibly be improved upon rendering the proposed changes to flying law utterly pointless!

Furthermore, in comparison to fixed wing aircraft, helicopter piston engines are significantly lower powered than the equivalent fixed wing installation and therefore this makes engine failure extremely unlikely. When considering that less than 0.5% of an average flying year will be spent over water, the proposed changes offer no significant increase in passenger safety to those rules already in place.

in addition to the above, landing a float-equipped helicopter in autorotation into the sea and resultant wave activity is highly likely to result in a roll-over situation (where the floats force the helicopter to become inverted), thus making it extremely difficult for the passengers to escape safely due to spatial disorientation. In these circumstances, floatation equipment would contribute to likely loss of life, not prevent it.

AUTOMATIC ELT's

I wish to object to the proposed changes on the basis of the fact that ditching of light helicopters into water are not likely to trigger an automatic ELT beacon. It would be inadvisable for the pilot to attempt to manually trigger a built-in ELT because his main concern should be exiting the the helicopter after evacuating his passengers. It is far better to have the device in the hands of the pilot who can activate as necessary and carry the beacon (PLB) it on his person. Saving the lives of people is far more important than being able to find the aircraft (see recent Air France accident off the coast of Brazil).

LIFE RAFTS

It seems unnecessary for a light, non-complex helicopter to be forced to carry a life raft where existing legislation ensures the occupants are wearing life jackets AND they are carrying a PLB. in addition, there is the practical issue of having enough luggage space to stow an adequately large life raft for the number of people on board.

PROPORTIONATE REGULATION

Proposed changes to helicopter rules and laws should only apply to

helicopters over 3,175Kg as per EASA definitions and guidelines - there is a significant difference between general aviation and commercial flights. Non-complex helicopters should enjoy a less stringent regulation which, as drafted, the changes would prevent.

It is my understanding that EASA are under direction form the European Parliament and the EU Commission to be proportionate in their regulation based on weight of helicopter. It is clear that the proposed changes are unreasonable, excessive and disproportionate in respect of non-complex helicopters.

i am prepared to discuss any of these and other proposed changes in regulations at any time on th enumbers supplied to you on my registration.

Sincerely

Tim Virdee

comment *5883* comment by: *Michael Taylor*

I wish to object to the proposal requiring light helicopters to be equipped with floats for flight over water. As far as I am aware there have been no light helicopter ditchings resulting from engine failures over water in Europe. Fitting floats can therefore not hope to improve safety.

Helicopter piston engines are de-tuned to derive less horse power than when installed in fixed wing aircraft. This makes helicopter engine more reliable than those in fixed wing aircraft.

Overwater operation accounts for less than 0.3% of annual use.

Floats are not an available option for my existing R44 Raven 1 helicopter and if this proposal was introduced into law it would prevent me from making use of my helicopter for cross channel trips.

Lightweight inflatable floats are unlikely to provide a safe landing in the normal weather of the English Channel, due to the probability of the helicopter overturning when auto-rotating to touchdown with forward momentum into waves. The result is highly likely to be an inverted helicopter with only the soles of the floats above water. Getting out of an inverted helicopter hampered by the floatation equipment would be very difficult.

Given the reduced failure risk and superb safety record in overwater operation, I believe that requiring floats to be fitted to small helicopters would provide no safety benefit and is unwarranted.

I understand that there is an EU requirement for proportionality in legislation. I believe that helicopters should be treated on a better than equal footing with fixed wing aircraft. The present proposals are poorly drafted and fail to distinguish between aircraft types. They dicriminate against light helicopters compared to fixed wing. This is clearly not proportionate legislation.

comment *6143* comment by: *ADAC Luftrettung GmbH*

In JAR-OPS 3.843 Amdt. 5, steht geschrieben:

(a) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water in hostile enviroment at a distance **from land** corresponding to more than 10 minutes flying time at normal cruise speed unless that helicopter is so disigned for landing on water or is certificated in accordance with ditching provisions.

In der NPA OPS.GEN.420(e) fehlt der Zusatz **from land. Dies ändert die Bedingungen elementar und die Vorschrift wird unnötig verschärft!** HEMS-Flüge nach Helgoland sind dannach nur noch mit entsprechend zertifizierten und ausgestatteten Hubschraubern möglich. Dies ist nicht verhältnismäßig!!

Vorschlag:

1. Der Text wird so übernommen, wie es in der JAR-OPS vorgesehen war:

Helicopter shall be equipped with (a)(1); when operated in:

(1) Performance Class 1 or 2 on a flight over water at a distance **from land** corresponding to more than 10 minutes flying time at normal cruising speed;

oder

2. HEMS-Flüge werden von dieser Regelung explizit ausgenommen.

comment *6464* comment by: *George Heritage*

425.H (b) - Impracticable and totally unrealistic, lifejackets serve a much safer alternative.

comment *6554* comment by: *Sloane Helicopters Ltd*

Ops.Gen.425.H (b)

Reason for Objection

Ditching – Helicopters appears to be incorrect or in contradiction to the table of reference as described below:

OPS.GEN.425.H Ditching - Helicopters

(a) Helicopters operated in Performance Class 1 or 2 on a flight over water in a hostile environment at a distance corresponding to more than 10 minutes flying time at normal cruising speed shall be: (1) designed for landing on water; or (2) certificated in accordance with ditching provisions in the relevant airworthiness code.

(b) In addition, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in: (1) Performance Class 1 or 2 on a flight over water in a non-hostile environment at a distance corresponding to more than 10 minutes flying time at normal cruising speed; (2) Performance

Class 3 on a flight over water beyond a safe forced landing distance from land; or (3) Performance Class 2 when taking off or landing over water, except in the case of Helicopter Emergency Medical Services (HEMS) operations, where for the purpose of minimising exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water.

TABLE OF REFERENCE FOR NPA 2009-02:

(52) 'Non-hostile environment' means an environment in which: (i) A safe forced landing can be accomplished; (ii) The helicopter occupants can be protected from the elements; (iii) Search and rescue response/capability is provided consistent with the anticipated exposure; and (iv) those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

Over water hostile environment is defined as:

(41) Hostile environment: (i) An environment in which: (A) A safe forced landing cannot be accomplished because the surface is inadequate; or (B) The helicopter occupants cannot be adequately protected from the elements; or (C) Search and rescue response/capability is not provided consistent with anticipated exposure; or (D) There is an unacceptable risk of endangering persons or property on the ground. (ii) In any case, the following areas shall be considered hostile: (A)

For overwater operations, the open sea areas North of 45N and South of 45S designated by the Authority of the State concerned; and (B) those parts of a congested area without adequate safe forced landing areas.

Comment:

The proposal places the whole of the UK in a hostile environment and therefore would severely prejudice private flights between the UK mainland, Ireland and all UK islands as compliance would be very expensive to achieve and in some cases impossible. We suggest that compliance for private flights can be achieved as detailed below.

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land when operating over open water.

comment *6759* comment by: *Kinetic Avionics Ltd*

425.H Comment

Fitting emergency floats would be very expensive for most helicopter types, if possible at all. The proposed requirements would in effect prevent most small helicopters from being able to cross between the UK and continental Europe, causing incovenience and economic disadvantage to their operators. The safety benefits of the proposal would appear to be minimal in comparison to the costs. Helicopters have high required standards of maintenance and are very reliable, and there have been very few incidents

involving helicopter flight over water, where floats would have been of any use. Emergency floats are also unlikely to prevent a helicopter capsizing when ditching on open sea.

Section 425.H should not apply to private helicopter operations.

comment *6767* comment by: *Clive Morrell*

'The requirement to be20fitted with emergency flotation equipment.'

Comment; This is disproportionate when compared with fixed wing. Accident statistics do not show a significant difference between the two. There are some small helicopters that cannot be fitted with emergency flotation equipment and would thus be severely restricted in their operation.The cost of fitting emergency flotation equipment is very considerable and would make many light helicopters uneconomical. The fitting of emergency flotation equipment should not be a requirement for private helicopter flight.

comment *7035* comment by: *John Carr*

Again a bias approach for this regulation. Whilst the protection of fare paying passengers is reasonable, inflicting this regulation on all helicopoters doesn't seem fair. This requirement which covers private sighle engined helicopters does not appear to be a something that is also required by private ingle engined aeroplanes

comment *7196* comment by: *Jennifer Murray*

I consider this requirement totally out of proportion to risk. I have over 3,500 hours in R44's and Bell 407 helicopters and have flown in excess of 30,000 nautical miles over the world's oceans without floatation gear. M decision was taken having studied accident/fatality records. I believe fatality incidences of controlled ditchings at sea of civilian helicopters to be negligable. Today's helicopters are extremely reliable and pilots treat water crossings with respect and preparaion.

I agree with all the comments made by the HCGB (of which I am a member)

Small helico0pters are severely discriminated against by the ICAO standards. Why are there no 'non-commercial air transport' equipment standards like there are for fixed wing aircraft?

The ICAO standards are unreasonable and disproportionate, unfair and excessive in the case of non commercial helicopters.

The EASA proposalsare poorly drafted and mix up airlines, balloons, gliders and helicopters all in one document.

Jennifer Murray

comment *7222* comment by: *DHV*

Ops.Gen.425.H (b) .

In addition, for Commercial flight, helicopters shall comply with (a) or be fitted with emergency flotation equipment when operated in:

Acceptable means of compliance

Wearing lifejackets whilst more than 10 minutes flying time from land.

Otherwise the same regulation as fixed wing.

HCGB Comment

a) Floatation Devices

Whilst some helicopters on the UK register are fitted with floats for public transport use, they are expensive to buy, install and maintain, and would be of strictly limited value should a water landing be required. The installation usually consists of a large inflatable 'balloon' attached to both the left and right skids of the helicopter, and a compressed air or other gas bottle installed in the body of the helicopter, together with electronics and buttons in the cockpit to 'fire' them. Their effectiveness requires them to perform perfectly. Should one float fail to inflate, then the helicopter would immediately roll over in the water, and be suspended beneath the working float,

severely impeding crew and passenger exit. In anything but a flat calm sea, small helicopters would quickly roll over. The very few ditching incidents show that crews do escape from ditched helicopters not fitted with floats, and that water contact slows and stops the rotor blades allowing that escape. Rotating rotor blades on a float equipped small helicopter, rocking with the waves would become a great impediment to escape.

The writer has personally experienced, over land, an in-flight helicopter emergency in which the helicopter's vibration was so severe that the pipe connections from the compressed air bottle to the floats were severed. Had the emergency occurred over water, the floats would not have functioned.

There are substantial performance and weight penalties when floats are fitted. They can reduce cruising speeds by around 10 knots, thus lengthening every flight, and thus risk exposure and fuel costs. Flying time based maintenance costs are also increased. Float installations typically weigh 30 - 50 kg. Such a decrease in payload could lead to unintentional overloading, which would be a safety hazard. Fuel efficiency is also reduced.

b) The cost of Floatation Devices

The following is the year 2004 cost of fitment of floats to helicopters as quoted by UK maintenance organisations, excluding VAT and installation costs, are as follows:

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Helicopters			
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MD 600		€85,999	"
MD 902		€100,000	"
Schweizer 300 & 330:		None available	CSE
Robinson R44:		RobinsonR44€30,800 London Heli Centre	
Robinson R22		Floats cannot be retro-fitted. (Float equipped R22 helicopters are no longer manufactured).	

Annual Costs: Floats must be test fired each year, have to be left inflated overnight and then repacked. There is a similar repacking error risk as in parachute repacking. The pressurised bottle has to be refilled, and all pipe and electrical connections inspected. There are considerable ongoing costs and aircraft down time incurred.

These costs are very substantial, and are out of all proportion to the risk exposure of private flights. The average helicopter probably crosses small stretches of water for only a few minutes on most domestic flights, whilst it might fly internationally perhaps once or twice a year. It would be surprising therefore if there was over water exposure for more than a few hours per year. The costs of the proposed equipment are out of all proportion to the risk, which as we have previously stated, is negligible.

comment *7302* comment by: *Richard Simpson*

OPS GEN 425 H Ditching

(b) For private flight over water there is no reason to make the restrictions imposed any different to Fixed wing. The stipulations for private fixed wing would serve perfectly adequately for private flights in rotorcraft. the proposals are unnecessary, disproportionate and would rule out private flying in unmodified rotorcraft between the uk and mainland Europe, as well

as many islands off the coast of the UK, as well as estuary crossing. Fitting such floats would cost tens of thousands of pound for the typical non-complex piston helicopter - at least £35000 for a Robinson R44 - and is not possible for some models, rendering them seriously restricted in their utility for private flying.

This has previously been considered, debated and rejected by the CAA and I see no reason to resurrect this idea under easa.

Fatal accidents cue to ditching over water do not figure in statistics over the last ten years. No lives would have been saved by this very expensive and disproportionate suggestion.

comment *7410* comment by: *DAvid Monks*

Life jackets would fulfill this requirement.

comment *7476* comment by: *Henry Pelham*

Ops. Gen 420 (e) & Ops. Gen 425.H (b)

There is no safety case for the fitting of Floatation equipment to non complex helicopters there have been considerably fewer accidents involving helicopters than fixed wing planes and the deaths and injuries in these have been many more than in helicopters, yet there is no requirement for fixed wing planes to carry floatation devices.

This requirement lacks proportionality bearing in mind the cost of fitting floatation devices in my case of the order of 50,000 euros! and there are many helicopters on which itis impossible to fit floatation devices in the case of the UK imprisoning them. UK helicopters would not be able to visit the rest of the EU or even parts of their own country. The whole of the UK and Europe has been open to helicopters for many years without the requirement of floatation devices without a single fatality and only 4 ditchings over a considerable period

comment *7489* comment by: *Arno Glover*

Over Water Equipment Requirements

Ops.Gen.420 (e) &Ops.Gen.425.H (b)

Again there appears to be inequality in these proposals when comparisons are made between helicopter and fixed wing aircraft. The safety record for private helicopter flights is no worse than fixed wing aircraft - hence the argument on safety grounds for the additional over water requirements of emergency flotation equipment for private helicopters is unnecessary

Most light helicopters cannot be cost effectively retro fitted with flotation

gear.

This matter has been recently investigated by the CAA (2004) in the past and there findings stated that it was not necessary to mandate for flotation gear to be fitted to all private helicopters for short flights across water.

comment *7501* comment by: *David George*

OPS.GEN.420 e and OPS.GEN.425 h:-

Requirement for Emergency Floatation Equipment to be fitted for over water helicopter operations.

I object to these proposals because:-

1. There is no safety case for these proposals.

2. These proposals would, effectively, prohibit helicopter flights over water without emergency floatation equipment.

3. Many helicopters cannot be fitted with floats.

4. The cost of fitting floats is very high - disproportionate to the risk.

5. There is a strong argument that ditching without floats is safer than ditching with floats.

6. Floats increase the operating costs and decrease the performance of helicopters - fuel efficiency is also reduced.

comment *7508* comment by: *Jonathan Palmer*

OPS.GEN.425H Ditching - Helicopters

I am extremely concerned about the proposed requirement in the above section for helicopters to be equipped with emergency floatation equipment as specified and object strongly to this.

Whilst I am in full agreement with a requirement for the carriage of life jackets and a life raft providing there is space to accommodate it safely, a requirement for private and corporate helicopters to be equipped with emergency floatation equipment is not justified on safety grounds, reasonable or proportionate in terms of cost and the environment in which such UK helicopters are used is such that the proposed regulation is inappropriate.

For non-commercial air transport there should be no mandatory requirement for Class 1 and 2 helicopters to be equipped with emergency floatation equipment for the following reasons:

There is no evidence that their absence creates a safety risk. I believe there have been no fatalities in the last 25 years at least from private or corporate helicopters ditching in UK waters. There have been only 4 cases of private helicopters ditching and these involved no fatalities or injuries, and none of

corporate helicopters ditching.

The pattern of use of the vast majority of private and corporate helicopters is very different from the circumstances for which the requirement for floats was conceived – intensive offshore operations. Clearly in such operations the risk exposure of ditching is relatively high. For most UK private and corporate helicopters the amount of time spent over water is a very small proportion – probably usually less than 1% - of total flight time.

The fitting of emergency floatation equipment has a number of major negative consequences:

High purchase cost.

For my AS355N the capital cost would be around €60,000 – a very substantial sum of money. And all for something that would be used for just 1% of the aircraft's operation. Other helicopters have proportionally similar high purchase cost.

Reduction in payload.

The AS355N loses about 60kg of payload with emergency floatation equipment fitted. Payload is always at a premium, and such reduced payload is at best a major inconvenience, either reducing passenger and baggage carrying capacity, fuel load and therefore range, or most likely both. A significant cause of aircraft accidents is related to low fuel status, either through exhaustion or more often poor decision making through stress at critically reducing levels. Another is high operating weights, which reduce performance and safety margins, even when within permitted MTOW.

Reduction in performance

With many helicopters such as the AS350 the EME is external not only adding substantial weight but drag too, typically loosing 10 kts cruise speed and also reducing range commensurately. Fuel burn and CO2 emissions will also be increased.

The UK Environment

The UK is a unique environment in that it is not only an island, but one whose coastline is riddled with large and small estuaries and inlets, as well as featuring many surrounding islands. In no other European country is there such a necessity to fly over water. Furthermore in order to fly to other European countries which many private and corporate helicopters do, we have to fly over water every time. In most of Europe no such requirement exists. Therefore any unjustified regulations that mean such transits require an onerous equipment burden is plainly unfair and prejudicial to the UK helicopter operators who occasionally wish to visit Europe, yet would be obliged to incur the substantial performance compromises of EFE unnecessarily for the potentially long duration of a European trip.

The UK environment nevertheless benefits from a highly developed SAR service and a relatively high level of shipping and general aviation air traffic, all of which provides increased safety in the extremely remote event of a ditching being necessary.

The limited benefits of EME

The circumstances when emergency floatation equipment will significantly

increase safety are very limited in a Class 1 or 2 twin engine helicopter.

It is possible to successfully ditch a light (under 3175kg) helicopter, without injury or loss life, and this has been the case in all four of the recorded ditchings of private helicopters.

The chance of both engines failing over water due to mechanical failure is extremely remote. I suspect this has never occurred within Europe. The least unlikely cause would be fuel exhaustion and the chances of this would be significantly increased by the reduction in payload available for fuel by the requirement to fit emergency floatation equipment.

There are very few circumstances that might require an immediate emergency ditching in a twin engine helicopter.

Any catastrophic aircraft failure of the rotor or transmission system is likely to lead to loss of a non-survivable crash regardless of floats.

Any rapidly developing problems such as lubricant loss or electrical failure are likely to provide either opportunity to land on a ship, or sufficient time for a controlled ditching, dropping off passengers with life rafts first, under power, before leaving the pilot to ditch the aircraft alone.

Risk assessment

It is onerous upon EASA to perform a reasonable risk assessment regarding the risk of a twin engined helicopter actually needing EME.

When an IFR helicopter is flying in IMC it is rightly and reasonably considered adequately safe even if IMC conditions extend below 1000ft AGL, and potentially to the ground. The risk of flying over land in such conditions is no less, and may be greater, than flying over water. The equipment levels required for IFR certification should therefore enable flight over water for at least 60 minutes without EME.

I hope these comments are helpful and will assist EASA in providing regulations that are reasonable and not unreasonably and unnecessarily burdensome for private and corporate use. It must be stressed that any operator whether private or corporate is quite able to (and some do) upgrade his aircraft equipment levels according to operational requirements, preferences and budget availability, and this is the way it should be.

comment *7510* comment by: *Tim Hall*

The fitting of floats and a life raft for small non commercial private helicopters when crossing the channel seems to be a disproportionate proposal given the amount of ditching .Flying to France once every year or so being over the water about five minutes out of 150 hours per year would be better odds than the lottery. R 44's such as mine cannot be retrofitted with floats and would effectively be stopped from flying to France as I also believe many other models would to. The weight and space would also restrict what else could be carried. I believe the current law allowing the pilots discretion is sufficient.

While I welcome changes to safety regulation light non complex helicopters

are struggling for weight without equipment that will rarely be used by even one helicopter in the U K .Would it not make more sense to treat small private helicopters separately from the larger ones as with fixed wing?

comment *7511* comment by: *Bruce Hall*

I feel that the the changes that have been proposed are extremely disproportionate to the amount of ditching's that occur while crossing water. The extra weight would not only drastically cut gross weight but would take up limited cargo space that would be used for luggage. Also Our make of helicopter and many others others cannot have floats retro fitted this would mean not being able to carry on flying France for holidays.

comment *7544* comment by: *DR SMITH*

Attachment #7

The attached quantified risk assessment argues the case that neither ELT nor flotation equipment are necessary in order to meet current risk targets. It shows that, not only are risk targets met without them but, that their cost is grossly disproportional to the benefit. If you have any queries concerning the methodology please contact the undersigned."

comment *7654* comment by: *Felix Baumgartner*

We strongly oppose to the proposed regulations commented upon the proposed rules for Air-Ops.

It is simply grossly unreasonable to impose such a heavy burden of compliance when no safety case exists.

It would be completely unreasonable and disproportionate to demand immediate compliance, especially when there is no immediate perceived safety need, not to talk about the added costs.

Being a private pilot of an R22 I just want to pick an example of the requested changes: Life rafts

Furthermore, floats cannot be retro-fitted. Float equipped R22 helicopters are no longer manufactured.

Floats must be test fired each year, have to be left inflated overnight and then repacked. There is a similar repacking error risk as in parachute repacking. The pressurised bottle has to be refilled, and all pipe and electrical connections inspected. There are considerable ongoing costs!!

As mentioned above, we strongly oppose the adaptations that ought to be agreed upon.

Regulations have to be proportionate!!

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.430 Emergency Locator Transmitter (ELT) p. 45-46

comment *622* comment by: *Mc Murdo*

I would like to place comment on the above document following discussions with EASA representatives at Aero Expo Freidrikshaven, and, discussions with the Helicopter Club of Great Britain. I am not an Aviator, but, a manufacturer of 406 MHz Personal Location Beacons - Mc Murdo.

I would ask you to consider the following points surrounding the mandatory fit of ELT & ELT(S) to General Aviation Aircraft.

1: If the intention of the legislation is to save lives rather than locate wreckage I would suggest that a 'Body or, Life Jacket worn' location device would be a great benefit. Surely it should be the Pilot and his / her passengers who are the primary consideration - not the airframe?

2:A fixed ELT is of very little benefit to an Aircraft which has ditched in water - broken Airframes (according to Newtons Law) do not float - nor do the ELT's attached to them. The vast majority of controlled ditchings are reportedly survivable. It is therefore essential that the survivors can be rapidly located and recovered. If the ELT has sunk with the Aircraft this is impossible.

3:Similar comments apply to forced landings. If the Pilot / Passengers survive the event the first thing they will do is move well away from the Aircraft. ELT antennas are usually mounted underside of the fuselage and, are often ripped off on ground impact. So, potentially there no means of sending a distress alert once evacuated.

4: Speed of rescue response is always a critical factor. (The Golden Hour). With a conventional 406 / 121.5MHz ELT positional accuracy on initial activation is no better than 2oo-300 sq kilometers at best. This accuracy improves with additional transmissions as Dopler shift calculations are made. After approx 1 hour the loction accuracy is around 40 sq kilometers.

Details are available on the COSPAS-SARSAT web site www.cospas-sarsat.org

5: In the past 5 years substantial advances have been made in Marine 406MHz EPIRB, and 406MHz Personal Location Beacon technologies. By far the greatest advance has been the inclusion of GPS technology to give an almost instant high accuracy position fix from the point of activation. This technology does not have appeared to have reached the ELT market.

6: New generation 406 / GPS equipped Personal Location Beacons have been adopted by several national aviation authorities for G.A. including the UK's C.A.A. in deferrence to ELT / ELT(S) carriage. I find it very disturbing that the GPS benefit is not a mandatory requirement for any GA ELT or, ELT(S),

and, that PLB carriage is not included in the scope of your consultation document. It may well be that the ELT term is being applied generically and, might actually include PLB's, but, unless this is made clear it is a very grey area and, a good deal of confusion surrounds this nuance.

In summary, I would ask that EASA give serious thought to the benefits of GPS equipped PLB carriage, and, to embrace GPS technologies in all ELT / ELT(S) and PLB units to give the Aviator the maximum chance of rescue / survival should the worst occur.

I attach for your information a link to our GPS equipped PLB which is being purchased by 1000's of GA pilots Europe wide.

www.fastfindplb.com

Kindest Regards,

Steve Rogers - UK Area Sales Manager

Mc Murdo

Portsmouth

England.

comment *1364* comment by: *Helicopter Club of Great Britain*

Page 46

Ops.Gen 430 (ELT)

Reason for Objection

Fitment of ELT should be voluntary for private, non-commercial aircraft and helicopters. Automatic ELTs have a poor record of working correctly e.g. Air France.

There is no safety case for the additional ELT helicopter requirements over fixed wing. If mandatory ELT fitment becomes law, the fixed wing requirements should apply to helicopters, including the pre July 1 2008 certificate of airworthiness provision.

There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is currently the case in France.

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Suggested alternative wording

Ops.Gen 430 (ELT)

AEROPLANES and HELICOPTERS

(a) Aeroplanes and Helicopters first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

HELICOPTERS

(c) Helicopters used in commercial flight shall be equipped with:

Acceptable means of compliance

For private flights, carriage of a Personal Locator Beacon or ELT(S) with GPS position information. This is currently an acceptable alternative in France and the UK. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

HCGB Comment

Fixed automatic Emergency locator transmitter installation.

A fixed automatic ELT is expensive to install and maintain, and many light helicopters do not have the physical space, within an acceptable C of G envelope, to install it.

There is also little practical value in such an installation over water. Either the helicopter will quickly sink, and the equipment will not work under water, or if a soft touchdown on floats is achieved, the automatic ELT will not activate, as it requires a substantial G force to do so. Such a force will often break off the tail boom where the ELT or its antenna is often situated, and the boom sinks, making the automatic ELT useless, e.g Bond Helicopters North Sea 2009.

It is unnecessary to carry an additional ELT in the life raft if the pilot already carries a portable one.

The UK CAA, in their year 2004 decision about ETL carriage in helicopters said;

Since the implications for survival after ditching are similar, irrespective of the class of aircraft flown, the disparities between the ICAO standards for aeroplanes and helicopters seem unjustified. Therefore it is proposed that the circumstances in which aeroplanes and helicopters will be required to carry an ELT will be the same. In assessing the likelihood of ditching it seems that the most important factor to be considered is the amount of time that will be spent exposed to the risk of flying over water and this is more significant than any perceived differences between different classes of aircraft. The revised proposal gives responsibility for the commander to decide if an ELT is to be carried, e.g. on shorter flights when the prescribed distances will not be exceeded and the time exposed to the risks of flight over water may be limited.

This decision was subsequently modified by deciding that carriage of a PLB would satisfy the ELT requirement, the principal being that the location of the survivors is more important than location of the aircraft. Consequently few private UK General Aviation aircraft are fitted with an ELT or any sort.

Portable Emergency locator transmitter (PLB or ELT(S))

There is an obvious safety benefit if pilots carry a portable ELT about their person. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

Cost

An automatic ELT would cost around €5,000 to install. A PLB can be

purchased for around €300.

comment *1441* comment by: *Mike Pascall*

Page 46

Ops.Gen 430 (ELT)

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There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is currently the case in France .

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Suggested alternative wording

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break off the tail boom where the ELT or its antenna is often situated, and the boom sinks, making the automatic ELT useless, e.g Bond Helicopters North Sea 2009.

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There is an obvious safety benefit if pilots carry a portable ELT about their person. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

Cost

An automatic ELT would cost around €5,000 to install. A PLB can be purchased for around €300.

comment *1453* comment by: *R Spiers*

Ops.Gen 430 (ELT)

Reason for Objection

Fitting an ELT of any type should be voluntary for private, non-commercial aircraft and helicopters. Automatic ELTs have a poor record of working correctly e.g. recent Air France incident.

There is no evidence to suggest helicopter shoud be treated differenty to fixed wing. If mandatory ELT fitment becomes law, the fixed wing requirements should apply to helicopters, including the pre July 1 2008 certificate of airworthiness provision.

There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is

currently the case in France.

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Suggested alternative wording

Ops.Gen 430 (ELT)

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For private flights, carriage of a Personal Locator Beacon or ELT(S) with GPS position information. This is currently an acceptable alternative in France and the UK. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

comment *1470* comment by: *John Henshall*

For small GA helicopters I am fairly sure that there is no space / weight for an ELT.

comment *1478* comment by: *Philip GEORGE*

I am happy to carry a hand held elt. I do not agree with having to have an automatic version. There is no safety reason I can see for it either.

comment *1527* comment by: *Chris Fox*

The evidence for the additional requirements for helicopters is poor - a ditching is unlilely to trigger the ELT, and it will rapidly sink along with the aircraft.

The UK CAA considered this matter in 2004 and concluded that there was no basis for additional requirements for helicopters over as compared with fixed wing aircraft.

Fitment of a fixed automatic ELT is difficult (for reasons of space and weight) in many light helicopters. It should not be mandated for private operations.

The carriage of Personal Locator Beacons provides a much greater safety benefit at far lower cost.

comment *1620* comment by: *Luftfahrt-Bundesamt*

The ELT rule does not include the frequency requirement, asking for 121,5 and 406 MHz capability. This, however, is included in AMC OPS.GEN.430 No.2, which is not acceoptable

comment *1661* comment by: *Netcopter*

I am not against the carraige of an ELT however I ask that ICAO reflect on the practicalities that may prevent, due to weight and space, the fitting of automatic ELT equipment.

comment *1669* comment by: *JSLEE*

Page 46

Ops.Gen. 430 (ELT)

Why should helicopters be treated any different from fixed wing? I can fly my C310 to France and elsewhere carrying a PLB fitted with a 121.5 homing signal and global alerting. This surely makes more sense than one fitted to the aircraft which would be useless at the bottom of the sea. I am assuming that commercial aircraft such as the Airbus have some form of ELT fitted, if so it did not seem to help in locating the one that went down recently. Maybe if some of the Air France passengers or crew had been carrying a PLB they may have been located quicker.

Surely it is more important to locate the passengers and crew than the aircraft.

I have been quoted £5000.00 to fit an ELT to a B206 which in my opinion would serve no more purpose than a PLB which would cost £300.00.

The UK CAA regulations only require a PLB or a ELT to be carried for flights longer than 10 minutes from land. I can see no reason why EASA should require anything different.

comment *1759* comment by: *Richard Dawson*

P46 ELT Helicopters

ELT's should not be mandatory for private, non-commercial helicopters:

- Recent experience (Air France Airbus) has demonstrated that even the most expensive and sophisticated aircraft will not benefit from them when ditching - once the aircraft sinks it provides no further function. Light helicopters generally sink immediately!
- There is no requirement in the UK for ELTs

- There is no provision for this to be fitted non-complex helicopters.

A better solution would be to require that the pilot carries a Personal Locator Beacon attached to their person and additionally mandate the use of lifejackets for all onboard

comment *1825* comment by: *Q Aviation Ltd*

I fly a Robinson R22 helicopter, which is a small two seater.

there is no room for a dingy when there are two people on board.

it is completely impactical to insist on a dingy being carried.

there is no benefit to having a ELT transmitter fitted to a helicopter that will sink immediately on landing on the sea. It will not go off if the landing is successful and it will be of no use if it is on the sea bed.

A PLB is what is needed.

I also fly a R44 4 seat helicopter. The dingy would have to be carried in the back, and the chance of getting it out and successfully inflated is about zero in the event of an emergency.

Fitting floats is either prohibitively expensive or impractical or impossible or all three.

There is no evidence to prove that fitting floatation devices will save lives. I don't think there are any cases of fatalities from drowning in UK waters after a survivable crash landing in water in private helicopters.

Flying for leisure carries a risk, just like everything else in life and I choose to mitigate this risk over water by

- checking the engine and other guages even more dilligently prior to "coasting out"

- choosing the shortest practical route over water to reach my intended destination

- wearing a life jacket and warm clothes

- carrying a PLB

- maintaining radio contact with the appropriate ground based service.

I am capable of making my own decisions to mitigate the risks of flying, and would suggest that no more regulation is required.

The cost of compliance - if possible - would be utterly disproportionate with the perceived benefits gained.

In a typical year, a private pilot would fly between 30 and 75 hours. Of these, maybe 30 minutes would be over water. It doesn't make any sense to try and legislate against a problem that simply doesn't exist.

martin rutty

PPL with 2,500 TT and who regularly flies across the English Channel.

comment *1872* comment by: *Aeromega*

A hand-held ELB is a sensible precaution when flying over hostile terrain, particularly water, but it is neither necessary nor justified when flying over populated areas. It would be expensive, contrary to EASA's opinion that the cost of compliance is negligible and may not be practical in some small helicopter types. It would also reduce usable load, restricting fuel reserves. Fitting every helicopter with a fixed ELB is dispropotionate to the risk. It should be the pilot's discretion what equipment to carry on any given flight. It is not EASA's place to regulate to a degree which makes it impractical to comply with legislation.

comment *1921* comment by: *Tony Castro*

A fixed ELT on a light helicopter ditching (over water) is useless because the impact can be very smooth and will not trigger the ELT. So why spend money, add weight ???? . Better to carry a portable one as I have been doing for years.

comment *1926* comment by: *Malcolm BIRD*

Install an automatic ELT - may seem a good idea but if an emergency causes an autorotation it is very likely that the landing would not trigger the ELT. If the landing was into water it is a great concern that the ELT would soon be underwater and useless. Far better to have the pilot carry a PLB which will stay on their person and operate for far longer. Surely better to allow the pilot to choose between an ELT or PLB? It is also interesting to note that PLBs are far more competitively prociced and can be maintained at lower cost.

comment *1986* comment by: *Helifly (UK) Ltd*

Objection to OPS.GEN.430

It is the opinion of Helifly that automatic ELTs have yet to prove their worth in helicopters, especially in operations over water where the machine may be lost, but the occupants survive. It is felt that an ELT(S) or a Personal Locator Beacon (PLB) with GPS position information is a more appropriate requirement for private operations. These PLBs also transmit a homing signal on 121.5 making rescue quicker.

Given that a PLB gives greater flexibility to the occupants of the aircraft, particularly in relation to flights over water, it seems disproportionate to require an ELT to be fitted at a cost circa £3,000 when a PLB can be purchased for around £250.

comment *2036* comment by: *Ulrich Baum*

OPS.GEN.430 (b) requires an automatic ELT for newer airplanes. Since such an ELT must be permanently installed in the aircraft with a cockpit control unit, this is much more expensive than a non-automatic ELT. For small airplanes used in non-commercial operations, this results in an undue cost burden. I suggest to drop this requirement for small aiplanes (e.g. up to 2000kg MTOW) used in non-commercial operations.

comment *2257* comment by: *Ian MACDONALD*

In the event of a successful autorotation an automatic ELT is not going to activate. Furthermore such a device, mounted centrally in the aircraft is unlikely to be accessible after ditching and as such is simply going to show the location where the helicopter sank. With currents in the Irish sea of up to 4 knots a survivor could be 4 nm away from crash site by the time a rescue helicopter or lifeboat arrived on scene. The rescue services themselves have stated that the need to be within a MAXIMUM of 1 nm to spot a person in the water. A PLB on the other hand, secured to a life jacket, would direct a rescue helicopter to within 10m of the object of the recue, namely the person in the water.

comment *2290* comment by: *Austro Control GmbH*

HELICOPTERS

(e) Helicopters shall be equipped with (a)(1), when operated in: (1) Performance Class 1 or 2 on a flight over water at a distance corresponding to more than 10 minutes flying time at normal cruising speed; (2) Performance Class 3 on a flight over water beyond autorotational distance ***from the land***; or

change wording "***to the land***"

comment *2291* comment by: *Austro Control GmbH*

OPS.GEN.430 Emergency Locator Transmitter (ELT)

AEROPLANES

(a) Aeroplanes first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of ***any type***.

Type shall be defined otherwise there will be different regulations in the

member states.

comment *2392* comment by: *Denis Ferranti Meters*

Ops.Gen.430 (ELT) Helicopters (c) (1) refers.

ELTs are not particulaly reliable. They are very expensive to fit (11000 euros for an AS350) and because they are designed to remain in the ac then should survivors leave the crash site then location information is lost. Additioanally, a water impact/landing may not trigger the ELT in any case thus rendering it useless.

Recommendation: That the CAA guidance be followed which allows for the carriage of a PLB instead of the proposed ELT. This also falls into line with the French viewpoint.

Sub para (2) (i) also states that a second ELT should be carried for overwater flights. This may be suitable for commercial concerns but is a step too far for the small private helicopter on grounds of cost and redundancy.

Recommendation. The requirement be dropped. A requirement for all private hels to carry one PLB on board at all times overland and sea would be sufficient.

comment *2534* comment by: *Aerocorp Limited*

An automatic ELT, fitted to a helicopter, is not likely to activate if the machine is autorotated into water. It would also sink with the helicopter or be immersed when the helicopter inverted, which is most likely if the helicopter is fitted with floats. Personal location beacons remain with the floating survivors - a far more sensible scenario.

comment *2541* comment by: *James Leavesley*

I accept the intention of this proposed legislation but do not believe that currently the technology exists that is reliable enough to achieve the desired outcome.

The carrying to personal beacons should be encouraged or made manditor, which would provide an acceptable cost to benefit outcome. The fitting of the ELT on the machine would be very expensive woudl not provide an acceptable cost to benefit outcome.

comment *2673* comment by: *British Gliding Association*

<![endif]-->

ELT's are designed to alert the SAR/emergency services of an aircraft crash and are permanently installed. An ELT installation, whether or not aircraft modification is required, is a relatively expensive purchase for sporting clubs, and clearly a disproportional requirement when they do not operate aeroplanes in areas designated by member states as those in which search and rescue would be especially difficult. Sailplane towing aeroplanes, for example, invariably operate in sight of and within a few km's of the base airfield.

The BGA supports a proportional approach to flight safety improvements. Therefore we propose that the wording of OPS.GEN.430 Emergency Locator Transmitter (ELT) as applicable to aeroplanes should be modified as follows;

AEROPLANES

(a) Aeroplanes operated in areas designated by member states as those in which search and rescue would be especially difficult and first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

(b) Aeroplanes operated in areas designated by member states as those in which search and rescue would be especially difficult and first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT.

comment *2798* comment by: *jack froggatt*

ELT's are already carried in the GPS on board the Robinson R44 helicopter which I own. Fixed automatic ELTs are expensive to install and maintain and I do not have the space to fit such a device. In water the equipment would be of little value as the helicopter would quickly sink and the equipment would not work. If a soft touchdown is achieved the automatic ELT would not work as it requires G force. Such force may break off the tail boom where the ELT or its antenna may be situated and the boom sinks rendering the automatic ELT useless. For example Bond Helicopters in the North Sea in 2009.

comment *2915* comment by: *Pietro Barbagallo ENAC*

Comment: please consider to show on this paragraph the operational frequencies (121.5, 406.0 MHz) shown on AMC2 OPS.GEN.430 item 4 only.

comment *3162* comment by: *UK CAA*

Page: 45

Paragraph No: OPS.GEN.430

Comment:

Carriage of an approved ELT at all times in light aircraft operated for private purposes is seen to be too onerous and the requirement would impose a large and very costly retrofit programme. Carriage should only be required by law in situations where the device would aid search and rescue significantly i.e. over water and hostile areas. The UK CAA files a difference against the ICAO Standards in Annex 6 Parts II and III accordingly.

Furthermore, it is considered that:

a) The installation of a fixed ELT in light aeroplanes and helicopters can be difficult or in some cases impossible due to lack of available space and availability of auxiliary power.

b) The installation of a fixed ELT must be conducted as a minor modification approved in accordance with the Part M airworthiness standards. This results in considerable additional complication and cost.

c) A fixed ELT is likely to be ineffective in the event that a light aircraft ditches because the aircraft will sink very quickly, taking the ELT below the surface where its signal will be interrupted.

d) The impact forces experienced during a survivable light aircraft accident are thought to be below that required to activate an automatic ELT when compliant with ED-62 specifications.

For the reasons highlighted above, it is the opinion of the UK CAA that portable ELT devices i.e. (ELT(S)) or (ELT(AP)) are the most appropriate device for use in light aircraft. However, there are few products on the market that are approved to EUROCAE Document ED-62 specifications, suitable and affordable for use in light aircraft. Availability of such equipment is not expected to improve in the short term due to the cost of demonstrating compliance.

There are a growing number of portable devices available that have not been demonstrated to comply with the ED-62 specifications but operate in accordance with the same transmission standards as an approved ELT and in many cases have identical functionality. Those operating non-complex aircraft on non-commercial flights should not be required to carry approved ELT equipment all the time but have available the option of carrying an alternative non-approved survival locator beacon instead. Those who wish to have the additional assurance that an approved device offers will continue to have the option of voluntarily equipping with such a device. This is in line with the policy for other items of survival equipment such as life jackets which do not need to be approved (OPS.GEN.400(c) and GM OPS.GEN.400(c))

In order to prevent interference with other emergency transmissions, non-approved devices used in aircraft should at least conform to ITU Standards (as specified by ICAO) and be Type Approved by Cospas-Sarsat.

The text of OPS.GEN.430 should be deleted and replaced with that below. A new AMC OPS.GEN.430 and an amendment to GM OPS.GEN.430 are also proposed.

Justification:

Disproportionate approach toward light aircraft operated for non-commercial purposes.

Proposed Text (if applicable):

Delete existing OPS.GEN.430. Insert new text as follows:

OPS.GEN.430 Emergency Locator Transmitter (ELT)

COMPLEX MOTOR-POWERED AEROPLANES USED IN NON-COMMERCIAL OPERATIONS AND AEROPLANES USED IN COMMERCIAL OPERATIONS

~~*(a) Aeroplanes first issued with a certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.*~~

~~*(b) Aeroplanes first issued with a certificate of airworthiness after the 1 July 2008 shall be equipped with an automatic ELT (ELT(A)).*~~

NON-COMPLEX MOTOR-POWERED AEROPLANES USED IN NON-COMMERCIAL OPERATIONS

(c) Aeroplanes operating at a distance corresponding to more than 10 minutes flying time at normal cruising speed away from land suitable for an emergency landing shall be equipped with an ELT of any type.

COMPLEX MOTOR-POWERED HELICOPTERS USED IN NON-COMMERCIAL OPERATIONS AND HELICOPTERS USED IN COMMERCIAL OPERATIONS

(d) Helicopters shall be equipped with:

(1) at least one automatic ELT (ELT(A)); and

(2) one Survival ELT (ELT(S)) in a life-saving raft or life jacket when the helicopter is operated in:

(i) Performance Class 1 or 2 on a flight over water at a distance corresponding to more than 10 minutes flying time at normal cruising speed away from land; or

(ii) Performance Class 3 over water at a distance beyond autorotational of safe forced landing from land.

NON-COMPLEX MOTOR-POWERED HELICOPTERS USED IN NON-COMMERCIAL OPERATIONS

(e) Helicopters shall be equipped with one ELT of any type when operating away from land suitable for an emergency landing at a distance corresponding to:

1) in the case of a helicopter operating in Performance Class 1 or 2, more than 10 minutes flying time at normal cruising speed; or

(2) in the case of a helicopter operating in Performance Class 3, more than 3 minutes flying time at normal cruising speed.

AMC OPS.GEN.430 Emergency Locator Transmitter (ELT)

NON-COMPLEX MOTOR-POWERED AIRCRAFT USED IN OTHER THAN COMMERCIAL OPERATIONS

Non-complex aircraft operating for other than commercial purposes may, in place of an approved ELT, carry a transmitter device that incorporates a GNSS receiver, operates on 121.5Mhz and 406Mhz, that is of a type approved by COSPAS-SARSAT and operates in accordance with ITU-R Recommendation M.690-1.

GM OPS.GEN.430 Emergency Locator Transmitter (ELT)

DEFINITION

1. An Emergency Locator Transmitter (ELT) …..

USE OF NON-APPROVED EQUIPMENT

2. ELT devices that have been manufactured and approved in accordance with EUROCAE Document ED-62 "Minimum operational performance specification for aircraft emergency locator transmitters" are demonstrably capable of continuing to operate at optimum levels despite being subjected to severe adverse conditions such as immersion in water, impact shock and fire that may be experienced following an accident. It is therefore strongly recommended that operators carry an approved ELT at all times.

comment *3407* comment by: *George Knight*

It is not clear why aeroplanes issued with a C of A **AFTER** 1 July 2008 do **NOT** need to be fitted with an ELT.

This retrospective rule is an expensive and disproportionate rule for e.g aircraft used to tow gliders. These aircraft rarely travel more than a few km from their base.

The rule should be changed to require aircraft to carry an ELT only when flying over areas where SAR would be difficult or over water when more than 30 km from the nearest shore. Portable devices should be permitted to eliminate the cost of modifications, and to avoid adding weight to very light aircraft.

comment *3429* comment by: *Peter Waldron*

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Fitting of an ELT should be voluntary for private non-commercial helicopters; automatic ELT's have a poor record of working correctly, i.e. Air France. Should the fitting of an ELT become mandatory the fixed wing requirements should apply to helicopters, including the pre July 1st 2008 Certificate of Airworthiness provision.

An acceptable Means of Compliance should be that carriage of a PLB with GPS position information would meet the requirement as is the case in France.

An automatic ELT would cost approximately 5,000 Euros to install whereas a PLB would cost around 300 Euros.

There is a clear safety benefit if pilots carry a portable ELT and this is likely to be of greater benefit as these personal beacons also transmit a homing signal on 121.5.

comment *3468* comment by: *Aero-Club of Switzerland*

We think installation of ELT on aircraft used for private flight should remain voluntary.

We invite the Agency to make a proportionate approach to the ELT and to modify its proposal by taking into account the nature of the environment in which a rescue operation will take place:

Our proposal:

~~AEROPLANES~~ AIRCRAFT

(a) Aircraft operated on other than private flights in areas designated by the Member State to be difficult to undertake search and rescue operations in and first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an ELT of any type.

(b) Aircraft operated on other than private flights in areas designated by the Member State to be difficult to undertake search and rescue operations in and first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT of any type.

Justification: We think our proposal fits better with the missions operated by aeroplanes and helicopters, we see no need for additional requirements for helicopters.

(c) can be deleted.

Additional remark: We know of different accidents in mountain areas where victims were found because their mobile phone was switched on or because of their Breitling Emergency watch

comment *3564* comment by: *Walter Gessky*

OPS.GEN.430 Emergency Locator Transmitter (ELT)

Comment:

The minimum standards are not regulated (406 MHz, according Annex 10). This shall be added under d) according EU-OPS 1.820(c) or included in the AMC.

comment *3631* comment by: *IAOPA Europe*

It should possible to satisfy the ELT requirement by carrying a PLB (Personal Locator Beacon) approved by Cospass Sarsat and coded for aviation use.

The PLB has several advantages over the ELT. First of all it stays with the crew/person carrying it allowing search and rescue to find the pilot and passengers instead of the aircraft wreck. Secondly - in case of a survivable crash on water - it will remain useful even if the aircraft with a fixed ELT installation sinks and is made useless.

The automatic activation of the fixed ELT installation has a long track record for not activating on impact making the pilot activated PLB also here a good option.

For the same reasons PLB should be able to replace both requirements c(2) I and II for helicopters

comment *3742* comment by: *Civil Aviation Authority of Norway*

Comment: Carriage of an approved ELT at all times in light aircraft operated for private purposes is seen to be too onerous. Carriage should only be required by law in situations where the device would aid search and rescue significantly i.e. over water and hostile areas. The UK CAA files a difference against the ICAO Standards in Annex 6 Parts II and III accordingly.

Furthermore, it is considered that:

a) The installation of a fixed ELT in light aeroplanes can be difficult or in some cases impossible due to lack of available space and availability of auxiliary power.

b) The installation of a fixed ELT must be conducted as a minor modification approved in accordance with the Part M airworthiness standards. This results in considerable additional complication and cost.

c) A fixed ELT is likely to be ineffective in the event that a light aircraft ditches because the aircraft will sink very quickly, taking the ELT below the surface where it's signal will be interrupted.

d) The impact forces experienced during a survivable light aeroplane accident are thought to be below that required to activate an automatic ELT.

For the reasons highlighted above, it is the opinion of the CAA-N that portable ELT devices i.e. (ELT(S)) or (ELT(AP)) are the most appropriate device for use in light aircraft. However, there are few products on the market that are approved to ED-62 specifications, suitable for use in light aeroplanes and affordable for light aircraft operators. Availability of such equipment is not expected to improve in the short term due to the cost of demonstrating compliance.

There are a growing number of portable devices available that have not been demonstrated to comply with the ED-62 specifications but operate in accordance with the same transmission standards as an approved ELT and in many cases have identical functionality. It is felt that those operating light aeroplanes on private flights should not be required to carry approved ELT equipment all the time but have available the option of carrying an

alternative non-approved survival beacon instead. Those who wish to have the additional assurance that an approved device offers will continue to have the option of voluntarily equipping with such a device. This is in line with the policy for other items of survival equipment such as life jackets which do not need to be approved (OPS.GEN.400(c) and GM OPS.GEN.400(c))

In order to prevent interference with other emergency transmissions, non-approved devices used in aircraft should at least conform to ITU Standards (As specified by ICAO) and be Type Approved by Cospas-Sarsat.

Justification:

Disproportionate approach toward light aircraft operated for private purposes.

Proposed Text

(if applicable):

OPS.GEN.430 Emergency Locator Transmitter (ELT)

AEROPLANES

(a) Aeroplanes operating at a distance corresponding to more than 10 minutes flying time away from land suitable for an emergency landing shall be equipped with:

(1) in the case of an aeroplane first issued with a certificate of airworthiness before and including 1 July 2008, an ELT of any type; or

(2) in the case of an aeroplane first issued with a certificate of airworthiness after 1 July 2008, an automatic ELT (ELT(A))

HELICOPTERS

(b) Helicopters operating at a distance corresponding to more than 10 minutes flying time away from land suitable for an emergency landing shall be equipped with one ELT of any type

(c) In addition to (b) helicopters over water shall:

(1) in the case of a helicopter operating Performance Class 1 or 2 at a distance corresponding to more than 10 minutes flying time away from land suitable for an emergency landing; or

(2) in the case of a helicopter operating Performance Class 3 at a distance corresponding to more than 3 minutes flying time away from land suitable for an emergency landing,

be equipped with one Survival ELT (ELT(S)) in a life-saving raft or life jacket.

AMC OPS.GEN.430 Emergency Locator Transmitter (ELT)

OTHER THAN COMMERCIAL OPERATIONS

Aircraft with a Maximum Take-off Mass of 5700kg or less operating for other than commercial purposes may, in place of an approved ELT, carry a transmitter device that incorporates a GNSS receiver, operates on 121.5Mhz and 406Mhz, that is of a type approved by COSPAS-SARSAT and operates in accordance with ITU-R Recommendation M.690-1.

GM OPS.GEN.430 Emergency Locator Transmitter (ELT)

USE OF NON-APPROVED EQUIPMENT

ELT devices that have been manufactured and approved in accordance with EUROCAE Document ED-62 "Minimum operational performance specification for aircraft emergency locator transmitters" are demonstrably capable of continuing to operate at optimum levels despite being subjected to severe adverse conditions such as immersion in water, impact shock and fire that may be experienced following an accident. It is therefore strongly recommended that operators carry an approved ELT at all times.

comment *4152* comment by: *colin rosenberg*

i cannot see the point ofsuch piece of equipment here in ther u.k. as being so populated, there is rarely a place so isolated that warrants a locator. I have flown in both Australia and New Zealand, where the terrain is hostile and barren. But certainly not here in the u.k.

comment *5081* comment by: *Trevor Wilcock*

Para a: What is the safety case that justifies every aeroplane having an ELT? Many flight operations are conducted in areas where an ELT will provide little additional benefit, and the more ELTs there are the more likelihood there is of inadvertent operation and a nuisance workload on S&R organisations.OPS.GEN.435 seems a more realistic requirement, taking into account the likely benefit of an ELT.

If an ELT "of any type" is acceptable, is the aircraft "equipped" if an ELT(S) is carried by the pilot?

comment *5307* comment by: *Light Aircraft Association UK*

ELTs are expensive items of equipment that have arguable safety benefits in normal operation. The LAA therefore proposes that the wording for OPS.GEN.430 should read as follows, to make the rule appropriate and proportional for light aircraft:

"a) Aeroplanes first issued with an individual certificate of airworthiness before and including 1 July 2008 and operated over areas where Search and Rescue cover is limited or difficult shall be equipped with an Emergency Locator Transmitter (ELT) or Personal Locator Beacon (PLB) of any type.

b) Aeroplanes first issued with an individual certificate of airworthiness after 1 July 2008 and operated over areas where Search and Rescue cover is limited or difficult shall be equipped with an automatic ELT or PLB."

Also, this requirement only applies to aeroplanes and helicopters: presumably there should be similar requirements for other aircraft types, e.g. gyroplanes, and so the requirement should be amended accordingly.

comment

5328 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(b) Aeroplanes first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT.

Comment:

The requirement in Annex 10 Vol V about the remote control in cockpit for ELT (in order to switch between OFF, ARM an ON) should be clarified in this paragraph or in an AMC.

comment

5346 comment by: *European Private Helicopter Alliance*

Page 46

Ops.Gen 430 (ELT)

Reason for Objection

Fitment of ELT should be voluntary for private, non-commercial aircraft and helicopters. Automatic ELTs have a poor record of working correctly.

There is no safety case for the additional ELT helicopter requirements over fixed wing. If mandatory ELT fitment becomes law, the fixed wing requirements should apply to helicopters, including the pre July 1 2008 certificate of airworthiness provision.

There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is currently the case in France and the UK.

Suggested alternative wording

Ops.Gen 430 (ELT)

AEROPLANES and HELICOPTERS

(a) Aeroplanes and Helicopters first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

HELICOPTERS

(c) Helicopters used in commercial flight shall be equipped with:

Acceptable means of compliance

For private flights, carriage of a Personal Locator Beacon or ELT(S) with GPS position information. This is currently an acceptable alternative in France and the UK. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

EPHA Comment

Fixed automatic Emergency locator transmitter installation.

A fixed automatic ELT is expensive to install and maintain, and many light helicopters do not have the physical space, within an acceptable C of G envelope, to install it.

There is also little practical value in such an installation over water. Either the helicopter will quickly sink, and the equipment will not work under water, or if a soft touchdown on floats is achieved, the automatic ELT will not activate, as it requires a substantial G force to do so. Such a force will often break off the tail boom where the ELT or its antenna is often situated, and the boom sinks, making the automatic ELT useless, e.g Bond Helicopters North Sea 2009.

It is unnecessary to carry an additional ELT in the life raft if the pilot already carries a portable one.

The UK CAA, in their year 2004 decision about ETL carriage in helicopters said;

Since the implications for survival after ditching are similar, irrespective of the class of aircraft flown, the disparities between the ICAO standards for aeroplanes and helicopters seem unjustified. Therefore it is proposed that the circumstances in which aeroplanes and helicopters will be required to carry an ELT will be the same. In assessing the likelihood of ditching it seems that the most important factor to be considered is the amount of time that will be spent exposed to the risk of flying over water and this is more significant than any perceived differences between different classes of aircraft. The revised proposal gives responsibility for the commander to decide if an ELT is to be carried, e.g. on shorter flights when the prescribed distances will not be exceeded and the time exposed to the risks of flight over water may be limited.

This decision was subsequently modified by deciding that carriage of a PLB would satisfy the ELT requirement, the principal being that the location of the survivors is more important than location of the aircraft. Consequently few private UK General Aviation aircraft are fitted with an ELT or any sort.

Portable Emergency locator transmitter (PLB or ELT(S))

There is an obvious safety benefit if pilots carry a portable ELT about their person. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

Cost

An automatic ELT would cost around €5,000 to install. A PLB can be purchased for around €300.

comment *5384* comment by: *David Chisnall*

It is reasonable that small helicopters carry a PLB but not reasonable for it to be required to be fitted with an ELT. ELTs are expensive to purchase, maintain and are of dubious value when compared with a PLB. If a smooth autorotation is made onto water there is no guarantee that an ELT will be

triggered. The ELT will go down with the Helicopter whereas the PLB remains with the crew.

In summary I must object strongly to these proposals as they discriminate against non complex private helicopters. ICAO should be changed so the private helicopters are treated the same as private fixed wing aircraft.

comment *5595* comment by: *DGAC*

Proposal:

Insert AMC OPS.GEN.430

"For non-commercial operations of non-complex-motor-powered-aircraft, a PLB emitting on the same frequencies, can be used as qualified means for emergency localisation applicable to operate with these aircraft, instead of an ELT".

Justification:

French national regulation for light aircraft.

comment *5602* comment by: *James Tuke*

My previous comments to this also apply here. Also there is no guarantee that following a ditching an ELT will start to operate. The proposal to fit a PLB to a life jacket is perfectly sufficient but once again, due to the absence of any relevant evidence of ditching in single engined piston machines, seems to me to be totally unnecessary. Simply put, it will not contribute to the saving of lives.

comment *5685* comment by: *DON BURT*

Helicopters.

This requirment appears to be over the top for the limited amount of time spent flying over water.

I would suggest that one portable device should be sufficient similar to the requirments of light fixed wing aircraft.

comment *5722* comment by: *Avon CAYZER*

Personel ELT are fine, (only £300-500) against £1,000's and should only be needed if the flight time is over ten minutes over water. Why fit more systems that may fail when one or two portable units per 10 seat aircraft will work. The pilot has been taking with airtraffic crossing boundies so can get

a mayday call out on position prior to ditching.

comment *5885* comment by: *Michael Taylor*

I wish to object to the proposal to mandate the fitting of a fixed ELT to light helicopters. I believe that the existing regulation requiring a PLB is sufficient to provide for the rescue of passengers. A fixed ELT would be unlikely to be triggered by a soft water landing and manual triggering of such a device would delay egress from the helicopter. On the other hand, a PLB stays on the surface with the crew or passengers to assist in their rescue.

comment *5972* comment by: *DGAC*

Proposal:

Add AMC.OPS.GEN.430 (a) & (b)

"The ELT installed on aircraft used for aerobatic flights will be deactivated for such flights, unless it can be demonstrated it cannot be triggered by the load factors met during these flights".

Justification:

There is a risk of false alarms with an active ELT during aerobatic flights.

comment *6468* comment by: *George Heritage*

(c) - There is no case for the additional ELT safety requirements for helicopters against that of fixed wing aircraft. A PLB may be useful.

comment *6534* comment by: *TG WHITING*

A permanently fitted ELT appears a disportionate requirement in sailplanes, particularly for sailplane clubs where the majority of aeroplanes and sailplanes are operated locally to the club, and not in areas deemed difficult for search and rescue. A large proportion of the club owned sailplane training fleet will never leave the vicinity of the club. In addition, sailplane pilots are generally equipped with parachutes and in the event of a mid air accident they are likely to abandon the sailplane, so having the ELT fitted to the aircraft may not be of assistance. It would seem preferable to make an ELT mandatory in those areas where the member states deem that serach and rescue would be very difficult, and to recommend that a PLB be carried with the pilot in preference.

comment *6540* comment by: *European Gliding Union (EGU)*

OPS.GEN.430 Emergency Locator Transmitter (ELT)

ELT's were designed to alert the SAR/emergency, but are not reflecting the fast improvement in communications. Modern mobile communication i.e. by mobile phone, satellite phone etc. make ELTs superfluous as modern communication means are more useful and definitely cheaper. The ICAO requirement has no certified background. No numbers are in Germany available to proof the affectivity of ELT. What is known is the high amount of false alarms due to poor design and mishandling and the costs involved.

ELT installation, whether or not aircraft modification is required, is a relatively expensive purchase for sporting clubs, and clearly a disproportional requirement when they do not operate aeroplanes in areas in which search and rescue would be especially difficult. Tow aeroplanes and parachutist drop planes for example, invariably operate in sight of and within a few km's of the base airfield.

Recommendation: No requirement for an ELT for any small aircraft i.e up to 2000kg

comment *6555* comment by: *Sloane Helicopters Ltd*

Ops.Gen 430 (ELT)

Reason for Objection

Fitment of ELT should be voluntary for private, non-commercial aircraft and helicopters.

There is no safety case for the additional ELT helicopter requirements over fixed wing. If mandatory ELT fitment becomes law, the fixed wing requirements should apply to helicopters, including the pre July 1 2008 certificate of airworthiness provision.

There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is currently the case in France.

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Acceptable means of compliance

For private flights, carriage of a Personal Locator Beacon or ELT(S) with GPS position information. This is currently an acceptable alternative in France and the UK. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

Portable Emergency locator transmitter (PLB or ELT(S))

There is an obvious safety benefit if pilots carry a portable ELT about their person. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5. The cost of a personal ELT is significantly cheaper.

comment *6568* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.430

Wording in the NPA

(a) Aeroplanes first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

(b) Aeroplanes first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT.

Our proposal

This requirement should be optional for aeroplanes not used commercially

Issue with current wording

This requirement is not appropriate for many operations in non commercial operations

Rationale

Apart from cost and possible weight and space issues many operations experience no additional safety by ELT e.g. tow planes or parachute lifting operating in close vicinity to the base airport. In these cases the danger of false alarms is much higher than the danger of not being found. Germany is so densely populated that any accident will almost always be noticed. Not that many aeroplanes are used for extensive traveling in other countries. Therefore it also is inappropriate to burden every aeroplane holder with the costs for installing and maintaining an ELT.

comment *6772* comment by: *Clive Morrell*

'Requirement for an automatic ELT to be fitted to the aircraft'.

Comment; An automatic ELT in a helicopter is of less use than one carried on the person. In a controlled autorotation onto water, it probably would not activate as there would be insufficient G. In a violent impact it would go down with the wreckage and be useless. One carried by the pilot or one of the occupants could be activated at will, and it would remain with the survivors.

In the case of non complex helicopters engaged in private flight, one portable ELT should be carried by an occupant of the helicopter.

comment *6783* comment by: *Kinetic Avionics Ltd*

Section 430 - comment

ELTs are costly to fit and carry a weight penalty that might adversly affect operations of small helicopter types. Once again there appears to be no justification for the different treatment of aeroplanes and helicopters, for example regarding the 1 July 2008 date. For most private flights the additional cost and weight are not proportionate to any increased safety benefit over carrying a PLB.

comment *6791* comment by: *simon lichtenstein*

I have flown many times over water in Robinson helicopters and in a weightshift microlight. I have even been on the helicopter dunker course. I wear a life jacket and carry a PERSONAL locator beacon, far more useful than something attached to the aircraft from which you may well get separated if you did ditch. It would be daft to attach a fixed locator beacon to a Robinson 22, which already struggles with its payload, and for which there is no room anyway. The cost of certifying it would totally be out of proportion to the problem and effectively ban legal cross channel flights. It really is a case of a solution being found to a problem that does not exist. It is essential that the law reflects common sense.

comment *6816* comment by: *EFLEVA*

It is the EFLEVA view that ELTs have arguable safety benefits in normal operation. The EFLEVA therefore proposes that the wording for OPS.GEN.430 should be revised to read:

"a) Aircraft first issued with an individual certificate of airworthiness before and including 1 July 2008 and operated over areas where Search and Rescue cover is limited or difficult shall be equipped with an Emergency Locator Transmitter (ELT) or Personal Locator Beacon (PLB) of any type.

b) Aircraft first issued with an individual certificate of airworthiness after 1 July 2008 and operated over areas where Search and Rescue cover is limited or difficult shall be equipped with an automatic ELT or PLB.

comment *6888* comment by: *Luftsport-Verband Bayern*

zu: AEROPLANES

(a) Aeroplanes first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

(b) Aeroplanes first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT:

Es wird eine grundsätzliche Forderung nach einem ELT aufgestellt.

Vorschlag Neuformulierung: AEROPLANES

(a) Aeroplanes with a certified take off mass of 2000 kg and higher first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

(b) Aeroplanes with a certified take off mass of 2000 kg and higher first issued with an individual certificate of airworthiness after 1 July 2008 shall be equipped with an automatic ELT.

Bezogen auf den nicht kommerziellen Hubschrauberflug von dieser Seite der Kommentar: "

…Mitführen eines automatischen Notsenders…

Der spektakuläre kürzliche Unfall eines Air France Luftfahrzeuges (Brasilien-Frankreich) hat die Schwachstellen eines automatischen ELT gezeigt.

Das Mitführen eines Personal Locator Beacon mit GPS Information – getragen durch ein Besatzungsmitglied – bei „längeren Flügen über See" bei Einzelflug kann als Kompromiss akzeptiert werden. Dies wäre auch finanziell vertretbar.

comment *7043* comment by: *John Carr*

Again, bias against helicopters. Pre 1 July 08 aeroplanes are allowed any type of ELT however helicopters of the same age are required to at least one automatic ELT plus a survival ELT. The later not being required for aeroplanes.

comment *7265* comment by: *DHV*

Ops.Gen 430 (ELT)

Reason for Objection

Fitment of ELT should be voluntary for private, non-commercial aircraft and helicopters. Automatic ELTs have a poor record of working correctly e.g. Air France.

There is no safety case for the additional ELT helicopter requirements over fixed wing. If mandatory ELT fitment becomes law, the fixed wing requirements should apply to helicopters, including the pre July 1 2008 certificate of airworthiness provision.

There should also be an acceptable Means of Compliance that carriage of a PLB with GPS position information would satisfy the requirement, as is currently the case in France.

There is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT.

Suggested alternative wording

Ops.Gen 430 (ELT)

AEROPLANES and HELICOPTERS

(a) Aeroplanes and Helicopters first issued with an individual certificate of airworthiness before and including 1 July 2008 shall be equipped with an Emergency Locator Transmitter (ELT) of any type.

HELICOPTERS

(c) Helicopters used in commercial flight shall be equipped with:

Acceptable means of compliance

For private flights, carriage of a Personal Locator Beacon or ELT(S) with GPS position information. This is currently an acceptable alternative in France and the UK. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

HCGB Comment

Fixed automatic Emergency locator transmitter installation.

A fixed automatic ELT is expensive to install and maintain, and many light helicopters do not have the physical space, within an acceptable C of G envelope, to install it.

There is also little practical value in such an installation over water. Either the helicopter will quickly sink, and the equipment will not work under water, or if a soft touchdown on floats is achieved, the automatic ELT will not activate, as it requires a substantial G force to do so. Such a force will often break off the tail boom where the ELT or its antenna is often situated, and the boom sinks, making the automatic ELT useless, e.g Bond Helicopters North Sea 2009.

It is unnecessary to carry an additional ELT in the life raft if the pilot already carries a portable one.

The UK CAA, in their year 2004 decision about ETL carriage in helicopters said;

Since the implications for survival after ditching are similar, irrespective of the class of aircraft flown, the disparities between the ICAO standards for aeroplanes and helicopters seem unjustified. Therefore it is proposed that the circumstances in which aeroplanes and helicopters will be required to carry an ELT will be the same. In assessing the likelihood of ditching it seems that the most important factor to be considered is the amount of time that will be spent exposed to the risk of flying over water and this is more significant than any perceived differences between different classes of aircraft. The revised proposal gives responsibility for the commander to decide if an ELT is to be carried, e.g. on shorter flights when the prescribed distances will not be exceeded and the time exposed to the risks of flight over water may be limited.

This decision was subsequently modified by deciding that carriage of a PLB would satisfy the ELT requirement, the principal being that the location of the survivors is more important than location of the aircraft. Consequently few private UK General Aviation aircraft are fitted with an ELT or any sort.

Portable Emergency locator transmitter (PLB or ELT(S))

There is an obvious safety benefit if pilots carry a portable ELT about their person. It is of greater safety benefit than a fixed ELT, as these personal beacons also transmit a homing signal on 121.5.

Cost

An automatic ELT would cost around €5,000 to install. A PLB can be purchased for around €300.

comment *7414* comment by: *DAvid Monks*

A PLB with GPS would be more suitable in a non complex helicopter. Each passenger could have their own in case the pob became separate. A GPS PLB will guide the rescue services within 45 mins to a position unlike an ELB.

comment *7462* comment by: *Richard Simpson*

OPS GEN 430 ELT

It is very expensive to fit and maintain a fixed ELT. In the event of an accident, a hand-held ELT with GPS and locator beacon would be much more effective , the fixed ELT having sunk to the bottom of the sea. There is no practical location for a fized ELT i many light rotorcraft. Carrying a fixed ELT should not be mandatory.

This has already been considered by the CAA and the decision to allow the captain to decide on ELT usage was sensibly made. Portable ELTs are inexpensive and can be shared between more than one aircraft as and when required.

comment *7468* comment by: *David ROBERTS*

(a) Aeroplanes. ELTs are not the only solution, and having a fixed ELT in an aeroplane is costly, particularly with the attendant certification costs. Many pilots prefer to have a PLB, for reasons of cost and also they would prefer the SAR to find them rather than the aeroplane, if the pilot(s) / crew become separated from the aeroplane on crashing.

There is a variety of requirements for ELT / PLB in member states at present, which is creating confusion and unneccesary cost.

Proposal: Allow either PLBs or ELTs

(a) Aeroplanes and (b) Helicopters. There should not a blanket requriement for ELTs (or PLBs) as there is no proven safety case in many habited parts of the EU. However, it may be reasonable to require either the fitting of ELTs or carriage of PLBs in areas designated by Member States as those in whcih search and rescue would be difficult.

Proposal: Limit the requirement for ELTs / PLBs to flights over areas designated by Member States as those in which search and rescue would be difficult.

comment *7478* comment by: *Henry Pelham*

Ops. Gen. 430 Emergency locator Transmitters.

It is my understanding that automatic locator transmitters have a poor record of functionality. They are impossible to fit to some helicopters and are very expensive to fit to others (3000 euros in the case of an Enstrom 480). In a ditching they will be of no use if as is probable the helicopter sinks - a PLB. In addition this would provide a homing signal to rescuers. The regulation as drafted lacks proportionality when there is better cheaper and more useful equipment available.

comment *7502* comment by: *David George*

OPS.GEN.430 ELT:-

"Helicopters shall be equipped with: (1) at least one automatic ELT; and (2) one Survival ELT (ELT(S)).....

A fixed automatic ELT is very expensive (approximately €5,000) and is of little use over water. In the event of an emergency landing on water, a helicopter without floats will sink very quickly and the ELT does not work under water. A helicopter equipped with floats landing on water will probably not activate the automatic ELT.

I support the proposal for the carriage of an ELT(S) - Personal Locator Beacon. There is a brilliant new product called "buddi" (www.buddi.co.uk) which is a Personal Locator Beacon with a voice facility.

comment *7514* comment by: *John Castle*

ELT's are of limited usefulness in sailplanes and of absolutely no use in the tow planes used for aerotow launching.

Sailplanes raely operate in inaccessible regions in Britain and Europe other than mountain areas. It would be more practical to specify those areas where ELT's should be carried by the pilot and passenger (if a 2 seater). They should also be attached to the persons rather than the aircraft because a parachute escape may be made and therefore the persons may not be near crash wreckage. Tow planes normally operate within visual range of airfields and only go cross country to execute an aerotow retrieve following an out landing. This could be the case for an ELT to be carried by the pilot.

comment *7524* comment by: *Deutscher Aero Club E.V.*

... Mitführen eines automatischen Notsenders ...

Der spektakuläre kürzliche Unfall eines Air France Luftfahrzeuges (BrasilienFrankreich) hat die Schwachstellen eines automatischen EL T gezeigt.

Das Mitführen eines Personal Locator Beacon mit GPS Information-getragen durch ein Besatzungsmitgfied-bei "längeren Flögen öber See" bei EInzeiflug kann als Kompromiss akzeptiert werden.Dies ist finanziell vertretbar.

comment *7545* comment by: *DR SMITH*

The attached quantified risk assessment argues the case that neither ELT nor flotation equipment are necessary in order to meet current risk targets. It shows that, not only are risk targets met without them but, that their cost is grossly disproportional to the benefit. If you have any queries concerning the methodology please contact the undersigned."

(see also attachment to comment 7544)

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.435 Survival equipment – Motor-powered aircraft p. 46

comment *1461* comment by: *keith TOLLEY*

As helicopter pilot/owner my previous machine was fitted with floats,and having flown over water, English channel, Irish sea etc I always felt that in a true emergency I would not have the expertise to deploy the floats correctly. There is no way of training to use them safely other than theory. Correct procedures appear complicated and if not done correctly can cause far more danger and problems than they solve, especially for a private pilot. I have just purchased a new helicopter and purposely did not have floats fitted. I am far happier flying over water now than I was with the extra problems floats can bring, as in the few emergency situations I have had everything happens so fast even a mayday call is not always possible. I also think the cost of maintenance far out ways any benefits, especially when I am told by the manufacturer than the machine will sink anyway. On a similar note I was a passenger in a Bell 206 at Wolverhampton airfield when the pilot set off the floats by mistake when lifting off, this was both dangerous and expensive.

One extra I did have with the new machine was a night kit, this works very well and is used regularly. I do not however see what use adjustable lights can be as who will operate them as most of my night flying is solo? When landing at night the cockpit is very busy and all my hands and feet are in use. One switch is enough.

Pitot heat is pointless as flying in icing conditions is not permitted.

comment *1686* comment by: *Dassault Aviation*

Technical comment.

Page 46 OPS.GEN.435: §(b)(2) is applicable to complex motor powered aircraft, so does it means that §(b)(1) is applicable to non-complex motor powered aircraft, since an operator has to comply with §(b)(1) OR (§(b)(2)? If yes, it should be written that §(b)(1) is applicable to non-complex motor powered aircraft.

comment *1737* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *2057* comment by: *Ulrich Baum*

The title of OPS.GEN.435 obviously applies to motor-powered aircraft only. For additional clarity, please explicitly state in text of regulation that it applies to motor-powered aircraft only.

comment *2324* comment by: *heliswiss ag, belp*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment | *2619* | comment by: *John Matchett*

Emergency locators should concentrate on finding people not a helicopter has sunk and that people have escaped from.

PLB's are already in general use and are considered more effective as a location device

comment | *3276* | comment by: *British Gliding Association*

The occupants of motor powered sailplanes carry emergency parachutes. In the event of an accident, whether or not in areas in which search and rescue would be especially difficult, the occupants may well abandon the aircraft. An ELT would be of little assistance in this case. CS22 motor powered sailplanes are not designed with ELT installation in mind. In addition, an ELT installation, whether or not aircraft modification is required, is a relatively expensive purchase for an owner, and clearly a disproportional requirement where they do not operate the aircraft in areas in which search and rescue would be especially difficult.

The BGA propose that the wording of OPS.GEN 435 Notor-powered aircraft (b) should be modified as follows;

Sailplanes

(c) Powered sailplanes shall comply with (a) (1) and (3). Additionally, each occupant shall each carry a personal locator beacon (PLB)

comment | *3408* | comment by: *George Knight*

Because glider pilots wear parachutes they may well abandon their glider. For this reason PLBs are a more appropriate solution than ELTs in gliders.

Most gliders do not fly in areas where SAR is difficult frequently.

Furthermore gliders are not designed with ELT installation in mind and would result in expensive modifications with increased drag from external antennae on carbon fibre fuselages.

Please change to allow PLBs as an alternative in sailplanes.

comment | *3412* | comment by: *Peter SCHMAUTZER*

If you fly over the alps you have to be equipped with signalling equipment. This will interfere with security regulations. If a pilot carries a signal device to his aircraft he will have problems with the police.

comment *3476* comment by: *Aero-Club of Switzerland*

An ELT in powered sailplanes would be of little help. Please add

SAILPLANES

(c) Powered sailplanes shall comply with (a) (1) and (3).

Justification: Occupants of powered sailplanes carry parachutes, the locator has to be where the occupants are, not were the aircraft is.

Additional remark: In mountain areas Breitling Emergency watches and switched-on mobile phones helped in serveral cases to locate victims.

comment *6289* comment by: *EUROPEAN GLIDING UNION*

If this requirement set in OPS.GEN 435 (a)(2) is applied to powered sailplanes, then we see that this is a disproportional requirement. It would be better for a voluntary choise.

comment *6703* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

Requirement set in OPS.GEN.435 (a)(2) is applied to powered sailplanes also. CS22 motor powered sailplanes are however not designed with ELT installation in mind. Furthermore, gliding in rarely populated areas is not common at all and such would now require also substantially expensive costs for an owner.

We see that it is essential to rationalize the requirement not to require ELT for powered sailplanes; having such may be left for a voluntary choice for a pilot making gliding activity in such areas.

comment *6927* comment by: *Christian Hölzle*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *7053* comment by: *John Carr*

Again bias against helicopters. Aeroplanes allowed to not carried the required survival equipment subject to the stipulated clauses which allow fllight in some cases up to 90 minutes from an area suitable for an emergency landing. No such clauses for helicopters which must carry the equipment even if they are just inside the area.

comment *7177* comment by: *Paul Monahan*

Ops.Gen 430 (ELT). I object to this proposal. Automatic ELTs have a poor record of working correctly and fitment should be voluntary. A PLB is of greater safety benefit.

comment *7454* comment by: *European Sailplane Manufacturers*

If this requirement set in OPS.GEN 435 (a)(2) is applied to powered sailplanes, then we see that this is a disproportional requirement. It would be better for a voluntary choice.

comment *7459* comment by: *European Sailplane Manufacturers*

The occupants of motor powered sailplanes carry emergency parachutes. In the event of an accident, whether or not in areas in which search and rescue would be especially difficult, the occupants may well abandon the aircraft. An ELT would be of little assistance in this case. CS22 motor powered sailplanes are not designed with ELT installation in mind. In addition, an ELT installation, whether or not aircraft modification is required, is a relatively expensive purchase for an owner, and clearly a disproportional requirement where they do not operate the aircraft in areas in which search and rescue would be especially difficult.

The manufacturers propose that the wording of OPS.GEN 435 Notor-powered aircraft (b) should be modified as follows;

Sailplanes
(c) Powered sailplanes shall comply with (a)

(1) and (3). Additionally, each occupant should each carry a personal locator beacon (PLB) and/or the aircraft should be fitted with an ELT.

comment *7469* comment by: *David ROBERTS*

sub para (a) 'across areas in which SAR would be expecially difficult' is open to interpretation, and therefore lacks legal certainty.

Proposal; specify 'over areas designated by Member States as especially difficult for SAR'.

sub para (a) (2) should not apply to CS 22-designed powered sailplanes, for two reasosns: (1) they are not designed for the carriage of a fixed ELT installation (2) sailplane pilots wear emergency parachutes, and therefore a PLB is more appropriate, if any requriement is needed at all.

Further, ELTs and their associated modification / certification costs are expensive and therefore this proposal is disproportionate, and not justified

by an objective safety case.

Proposal: CS22-designed powered sailplanes shall comply with (a) (1) and (3) (only).

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.440 High altitude flights - Oxygen p. 46-47

comment *33* comment by: *George Knight*

-(b) "…shall use breathing oxygen continuously…". This phrase should not exclude use of electronic pulse demand systems that are widely used in GA and gliding.

comment *34* comment by: *George Knight*

-(c) (a) portable systems as used in GA and gliding should not be excluded.

comment *35* comment by: *George Knight*

SAILPLANES & POWERED SAILPLANES

Should be exempt from the requirement to have available and use oxygen for short flights between 10,000' and 13,000' of less than 30 minutes. Usually flights in this altitude range are short duration to achieve an FAI GOLD gliding badge and as soon at the required gain of height has been achieved (3,000 metres above low point) the glider will descend. 20 minutes would be an acceptable alternative to 30 minutes if 30 is thought to be too long.

comment *68* comment by: *Air Southwest*

OPS.GEN.440(a) doesn't read correctly. Suggest "When an aircraft is operated such that the pressure altitude of the passenger compartment is above 10 000ft, enough breathing oxygen shall be carried to supply:"

comment *359* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.440(a2ii): change as follows:

(ii) all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25

000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within four minutes; ~~**and**~~

comment *418* comment by: *EHOC*

General

This is a mix of an equipment and operational rule. The text should be divided (as it is in most operational codes and in ICAO) and put into respective parts.

Paragraph (b)

The original rule contained an instruction to provide a supply of oxygen; this clause is an operation instruction which might better be contained in the Operational Procedures (Section II). A suitable text for Section II might be:

"OPS.GEN.XXX Use of supplemental oxygen

A pilot-in-command shall ensure that flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever cabin altitude exceeds 10 000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13 000 ft"

This is also in line with ICAO which has two Chapters 'Oxygen supply' and 'Use of oxygen'.

comment *826* comment by: *Reto Ruesch*

Alleviation for short periods up to 16'000 ft shall be possible due to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *990* comment by: *REGA*

The originally JAR *(JAR-OPS 3.385)* rules for high altitude helicopter (e.g. hems) operations take into account the performance decline due to the increased weight of oxygen equipment (=less power available) at higher altitudes.

Experience did not show any incident or accident during HEMS operations in relation to oxygen supply. Many ski, hiking and climbing areas within the Alps are situated above 10’000 ft. To be able to continue HEMS operations - guarantee rescue service - in the mountains, duration of maximum 30 minutes between 10’000 ft and 13’000 ft without supplemental oxygen shall be allowed.

Proposal (a) (1) (ii) (12)

Use of supplemental oxygen. With prior approval of the authority, HEMS operations between 10 000 ft and 13 000 ft for a duration of maximum 30 minutes may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the HEMS operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided).

comment *1127* comment by: *Heli Gotthard*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1175* comment by: *Stefan Huber*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1245* comment by: *Air Zermatt*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1296* comment by: *Air-Glaciers (pf)*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1793* comment by: *Heli Gotthard AG Erstfeld*

Ops gen 440 Use of oxygen

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1861* comment by: *SHA (AS)*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *1937* comment by: *Berner Oberländer Helikopter AG BOHAG*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2044* comment by: *Ulrich Baum*

Gliders and small single-engine airplanes in non-commercial operations frequently fly at altitudes in the range of 10.000-12.000 feet. Today, these aircraft are not equipped with supplementary oxygen, and current regulations (at least in Germany) do not require them to. Requiring oxygen for flights over 30 minutes over 10.000 feet would practically make flights above 10.000 feet impossible for non-commercial operators since the cost of oxygen systems is prohibitive and in many small aircraft there is insufficient cockpit space for installing such systems. On the other hand, I am not aware of any evidence that hypoxia at altitudes of 10.000-12.000 feet is a significant contributing factor to small-aircraft accidents.

I therefore suggest not to require any oxygen supply for non-commercial operations up to an altitude of 12.000 feet.

comment *2095* comment by: *Dirk Hatebur*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2127* comment by: *Heliswiss*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2134* comment by: *Heliswiss NV*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2264* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

High altitude flights - Oxygen

Comment / Proposal:

Alleviation needed for flight in the mountains up to 16'000 ft (limited time).

Modify text:

(a)(1)(ii): With prior approval of the authority, excursions between 10 000 ft and 16 000 ft for a short duration may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided.

comment *2355* comment by: *Dassault Aviation*

Technical comment:

Page 47 OPS.GEN.440 §(b) High Altitude Flights Oxygen: the reference to §(a) may be misinterpreted, as one could interpret the "circumstances specified in (a)" as being a requirement to breath oxygen continuously above 10,000 ft because actions of the flight crew are essential to the safe operation and a cabin decompression will lead to a cabin altitude above the 10,000 ft criteria. This is not the intent of the proposed requirement. To avoid misinterpretation, we suggest to replace (b) by text of JAR/EU-OPS1.385: "A commander should ensure that flight crew member engaged in performing duties essential to the safe operation of an aeroplane in flight use supplemental oxygen continuously whenever cabin altitudes exceeds 10,000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13,000 ft".

comment *2419* comment by: *Jan Brühlmann*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2451* comment by: *Catherine Nussbaumer*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2505* comment by: *Royal Aeronautical Society*

The reason for having oxygen supplied in the manner described is to *supplement* oxygen that is naturally available, and is distinct from oxygen that may be required for *emergency* or for *therapeutic* reasons. It is suggested that the heading be amended to read, **'High altitude flights – Supplemental oxygen'** so that this distinction is clear. See also and contrast with OPS.CAT.447 A 'First aid oxygen – Aeroplanes', and GM CAT.447 A General, paragraph 2 where this description is already used: 'supplemental oxygen as calculated in accordance with Table 1 OPS.CAT 440 and Table 2 OPS CAT 440 … etc'.

comment *2551* comment by: *Walter Mayer, Heliswiss*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2665* comment by: *AOPA-Sweden*

(a): Should be 12,500 ft just to be harmonized with most third country rules.

comment *2667* comment by: *AOPA-Sweden*

(c): Not an OPS-requirement, should be moved to Part 21! It is also a requirement impossible to retro-fit on small GA airplanes.

comment *2668* comment by: *AOPA-Sweden*

(a) (1) (j): Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *2748* comment by: *AOPA Switzerland*

Aircraft in parachute operation are exepted from OPS.GEN.440. It is up to the PIC to determine whether oxygen should be carried on board or not.

comment *2839* comment by: *Philipp Peterhans*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *2929* comment by: *Pascal DREER*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *3163* comment by: *UK CAA*

Page No: 47

Paragraph No: OPS.GEN.440(a)(3)

Comment:

Sub-paragraphs (a)(2) and sub-paragraph (a)(3) contain the same text.

Justification:

Repetition of requirement/consistency

Proposed Text (if applicable):

ALL AIRCRAFT

(a) Aircraft flying above altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft (feet) shall carry enough breathing oxygen to supply:

(1) in the case of non-pressurised aircraft:

(i) all crew members and at least 10% of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartments will be between 10 000 ft and 13 000 ft; and

(ii) all crew members and passengers for any period that the pressure altitude in passenger compartments will be above 13 000 ft.

(2) in the case of pressurised aeroplanes:

(i) all crew members and a proportion of the passengers, for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment would be above 10 000 ft; and

(ii)all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within four minutes; and

(3) in the case of pressurised helicopters, ~~all crew members and a proportion of the passengers, for any period when, in the event of loss of pressurisation~~

~~and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment would be above 10 000 ft.~~ ***(2)(i) above.***

comment *3164* comment by: *UK CAA*

Page No: 47

Paragraph No: OPS.GEN.440(d)

Comment:

The requirement for all pressurised aeroplanes used for commercial air transport to be fitted with a warning device should be moved to OPS.CAT.440.

Justification:

Continuity

Proposed Text (if applicable):

OPS.GEN.440(d)

Pressurised aeroplanes operated at flight altitudes above 25 000 ft, ~~*or pressurised aeroplanes used in commercial air transport*~~, shall, in addition, be equipped with a device to provide a warning indication to the flight crew of any loss of pressurisation.

OPS.CAT.440

AEROPLANES

(b) …..

(c) Notwithstanding OPS.GEN.440(d) pressurised aeroplanes used in commercial air transport shall, in addition, be equipped with a device to provide a warning indication to the flight crew of any loss of pressurisation.

Renumber subsequent paragraphs.

comment *3263* comment by: *Aero-Club of Switzerland*

Please add:

ALL AIRCRAFT

(a) (1) (iii) The PiC of aircraft engaged in parachute operations and high altitude aerial work decides on the use of oxygen for his own supply and for the supply of the other occupants.

Justification: Crews and passengers are well treined prepared for this kind of mission, therefor, it should be the PiC who decides.

comment *3591* comment by: *PPL/IR Europe*

The 10,000ft altitude should be increased to 12,500ft for non-commercial flights, in accordance with common aviation practice worldwide, and in Europe until recent years. The 10,000ft limit is unnecessarily restrictive given terrain in some parts of Europe, and the relatively high bases of the low level airway system in many other parts where terrain is not a factor.

Many pilots use supplemental oxygen below 10,000' (eg. at night), and many general health and physiological factors determine the requirement for supplemental oxygen under different circumstances. Nevertheless, we are not aware of any safety case for mandating oxygen at the more restrictive 10,000' level. We are aware of the argument for "higher European standards" and the reluctance to use the FAA as pointer towards European regulation. However, we do not believe that there can be any systematic requirement, due either to pilot physiology in Europe or the oxgen content of the atmosphere in Europe, to impose a standard more restictive than 12500', which has been, and continues to be, effective and safe in the majority of private GA operations worldwide.

We do support most of the regulatory work of EASA, but this is an example of "higher standards" which creates the negative impression that GA is over-regulated in Europe by authorities willing to impose restrictions that have the "appearance" of enhancing safety without evaluating the practical safety cost-benefits that are an essential part of good aviation regulation.

comment *3644* comment by: *IAOPA Europe*

The rigid limit to 10.000 ft for flights without supplemental oxygen is a recipe for disaster.

Particularly in mountaineous regions it will make flying less safe since it will force pilots to cross mountain tops with less clearing than what is advicable. It will give the pilot less options in case of an engine failure over hostile terrain and it will force the pilot to fly into potential dangerous down-drafts and weather which could be avoided if the pilot was allowed to climb to a higher and more safe altitude for a short duration of time.

As pointed out by EASA CFIT accidents account for a relatively high percentage of accident and this limitation will increase that number. There is no doubt that a persons skill and faculty is affected at high altitudes, but this is a matter of balancing risks and choosing the safest flight path and the safest decision may well be to climb to a higher altitude for a short duration of time.

As far as IAOPA Europe is aware there is not a high rate of accidents in Europe where hypoxia was the cause. Specially not when compared to the number of CFIT accidents.

It therefore shoud remain possible to climb to higher altitudes for short durations best on the pilots assessment on what is the safest flight path.

It is noted that ICAO allows for operations up to 13.000 ft for up to 30

minutes without the use of supplemental oxygen.

comment *3875* comment by: *M Wilson-NetJets*

Original text:

(a) (2) (i) all crew members and a proportion of the passengers, for any period when, in the event of loss of pressurization and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment would be above 10 000 ft; and

Suggested new text:

No suggested text

Comment/suggestion:

Proportion of passengers must be more clearly defined.

comment *3892* comment by: *FOM ANWB MAA*

RMk: Insert the deleted text from JAR-OPS 3.385. Rescue operations in the mountains have been safely performed under this regulation, we are not aware of any accidents cuased by hypoxia in HEMS mountain rescue.

comment *3940* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

RMK: Insert the deleted text from JAR-OPS 3.385. Rescue operations in the mountains have been safely performed under this regulation, we are not aware of any accidents cuased by hypoxia in HEMS mountain rescue.

comment *3959* comment by: *HDM Luftrettung gGmbH*

OPS GEN 440: Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *4111* comment by: *Benedikt SCHLEGEL*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *4217* comment by: *DGAC*

Proposal : Amend the firs sub heading and (a)(1) as follows :

"~~ALL~~ **NON PRESSURISED** AIRCRAFT

(a) Aircraft flying above altitudes at which the pressure altitude in the passenger compartments is above ~~10000 ft~~ **12500 ft** (feet) shall carry enough breathing oxygen to supply **at least a pilot** :

(1) ~~in the case of non-pressurised aircraft:~~

~~(i) all crew members and at least 10% of the passengers~~ for any period in excess of 30 minutes when the pressure altitude in the passenger compartments will be between ~~10 000 ft~~ **12500 ft** and ~~13 000 ft~~ **14500 ft**; and

(2) ~~(ii) all crew members and passengers~~ for any period that the pressure altitude in passenger compartments will be above ~~13 000 ft~~ **14500 ft**."

Justification : (a)(1)(i) providing for oxygen for passengers should only be applicable for CAT operations and is already covered by OPS.CAT.440 and Table 2 OPS.CAT.440 page 79. This provision should not be in GEN. Besides (a) as written is not achievable for sailplanes or parachutes droppings that encounter high altitude incursions (e.g. mountain areas). Therefore alleviation has been granted by national authorities replacing the thresholds of 10000ft and 13000ft by FL125 and FL 145)

Proposal : Move § (a)(2) and (a)(3) in the subheading "PRESSURISED AEROPLANES".

Justification : § (a)(2) and (a)(3) address pressurised aeroplanes and there is actually a subheading "PRESSURISED AEROPLANES" just below.

Proposal : due to the preceding modifications, insert and rename § (2) (i) (ii) and (3) as follows :

PRESSURISED AEROPLANES :

§ (2) (i) & (ii) becomes § (d) (i) & (ii)

§ (3) becomes § (e)

§ (d) becomes § (f).

comment *4403* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

There should be an exemption for HEMS operation, due to the short time nature of missions in high mountain area, where such flights will need only a few minutes and oxygen will be an additional weight for those flights. Less

than 2% of HEMS flights are conducted above 10 000 feet and all of these flights are conducted under local operation

comment *4526* comment by: *Christophe Baumann*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *4586* comment by: *ADAC Luftrettung GmbH*

RMk: Insert the deleted text from JAR-OPS 3.385.

"

Use of supplemental oxygen. With prior approval of the authority excursions between 10 000 ft and 13 000 ft for a short duration may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that passengers are informed before departure that supplemental oxygen will not be provided.)

Rescue operations in the mountains have been safely performed under this regulation, we are not aware of any accidents cuased by hypoxia in HEMS mountain rescue.

comment *5427* comment by: *ALFA-HELICOPTER*

Insert the deleted text from JAR-OPS 3.385. Rescue operations in the mountains have been safely performed under this regulation, we are not aware of any accidents cuased by hypoxia in HEMS mountain rescue.

comment *5774* comment by: *Norsk Luftambulanse*

Insert the deleted text from JAR-OPS 3.385. Rescue operations in the mountains have been safely performed under this regulation, we are not aware of any accidents cuased by hypoxia in HEMS mountain rescue.

comment *5801* comment by: *Ph.Walker*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment | *6022* | comment by: *Fédération Française Aéronautique*

OPS.GEN.440 "Oxygen",

§ (a) (1) (i) flight between 10,000 ft and 13,000 ft :

French FFA believes that requirement of oxygen equipment between 10,000 ft and 13,000ft for all non pressurised aircrafts is disproportionate. We think that this requirement is not adapted and not justified for non commercial operations on non complex aeroplanes, and particularly on aeroplanes below 2,000 kg MTOW.

Justifications : Experience accumulated in mountainous areas by sports and recreational flying operations on non complex aeroplanes shows no actual problems up to FL125. Present regulation asks for oxygen for more than 30 minutes flights between FL 125 and FL 145 only. Then oxygen is required for all persons on board when flying above FL145.

Nothing in flight safety asks for a change.

Additionally, this requirement will induces costs and technical problems on many non complex aeroplanes, mainly for small aeroplanes with 2,000 kg MTOW.

FFA proposal :

For non commercial operations, on non complex aeroplanes, and at least for small aeroplanes with 2,000 kg MTOW.

- Up to FL125, delete this oxygen requirement.
- From FL125 to FL145, oxygen supply equipment is required only if it's a more than 30 minutes flight at this block of altitude.
- Above FL145, oxygen supply equipment is required for all persons on board.

comment | *6130* | comment by: *Hans MESSERLI*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment | *6300* | comment by: *Heliswiss International*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment | *6360* | comment by: *Trans Héli (pf)*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *6604* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

Remark: Insert the deleted text from JAR-OPS 3.385 as rescue operations in the mountains have been safely performed under this regulation, and we are not aware of any accidents caused by hypoxia in HEMS mountain rescue.

comment *6889* comment by: *Luftsport-Verband Bayern*

zu: ALL AIRCRAFT (a) Aircraft flying above altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft (feet) shall carry enough breathing oxygen to supply: (1) in the case of non-pressurised aircraft: (i) all crew members and at least 10% of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartments will be between 10 000 ft and 13 000 ft; and (ii) all crew members and passengers for any period that the pressure altitude in passenger compartments will be above 13 000 ft:

Klarstellung ob "Passengercompartment" ein abgetrenter Raum ist und damit z.B. doppelsitzige Segelflugzeuge nicht darunter fallen. Ansonsten müsste auch für jeden Gastsegelflug über diesen Höhen Suerstoff in der beschriebenen Menge mitgeführt werden. Bislang lag die Höhe bei 12.000ft (30 Minuten) und 13.000 ft. Die 10.000 ft Regelung betraf nur dne kommerziellen Bereich.

Vorschlag zur Neuformulierung: ALL AIRCRAFT (a) Aircraft flying above altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft (feet) shall carry enough breathing oxygen to supply: (1) in the case of non-pressurised aircraft: (i) all crew members and at least 10% of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartments will be between 10 000 ft and 13 000 ft; and (ii) all crew members and passengers for any period that the pressure altitude in passenger compartments will be above 13 000 ft. For non comercial operations: (a) Aircraft flying above altitudes at which the pressure altitude in the passenger compartments is above 12 000 ft (feet) shall carry enough breathing oxygen to supply: (1) in the case of non-pressurised aircraft: (i) all crew members and at least 10% of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartments will be between 10 000 ft and 13 000 ft; and (ii) all crew members and passengers for any period that the pressure altitude in passenger compartments will be above 13 000 ft.

comment *6904* comment by: *Swiss Helicopter Group*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *6973* comment by: *Eliticino SA*

Oxygen : Alleviation for short periods up to 16,000 ft shall be possible according to the kind of work and the training of the crew flying in mountain area. Alleviation shall be approved by the National Authority.

comment *7237* comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU is of the opinion that requirement of oxygen supply in all non pressurized aeroplane above 10,000 ft is non proportionate to the risk on non commercial operations with non complex aeroplanes.

Justification : there is not special concerns about the present situation, at least for non commercial organisations on non complex aeroplane, especially for small aeroplane with 2,000 kg MTOW. So, in the present situation, why the agency push for a change?

Action proposed : Keep the requirements of oxygen supply as they are presently and remove new oxygen requirements between 10,000 ft and 13,000 ft.

comment *7471* comment by: *David ROBERTS*

The generally accepted height above which O2 is required in sailplanes is 12,000ft. To have this requirement set at 10,000ft would be unnecessary, and particualrly inconvenient in Alpine flying where much activity takes place up to FL120.

Proposal: Amend to 12,000ft for sailplanes.

comment *7578* comment by: *AOPA UK*

(a) Should be 12,500 ft just to be harmonized with most third country rules.

comment *7579* comment by: *AOPA UK*

(a)(1)(i) Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *7580* comment by: *AOPA UK*

(c) Not an OPS-requirement, should be moved to Part 21! It is a requirement that is impossible to retro-fit on small GA airplanes.

comment *7636* comment by: *Cirrus Design Corporation*

This rule has not been harmonized with the FAA. Is there a reason as to why these altitudes were selected to be more restrictive than the FAA operational requirements? Cirrus recommends this rule be harmonized with the FAA to minimize the difference between authorities and reduce the burden on industry.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.445 Operations in icing conditions at night p. 47

comment *419* comment by: *EHOC*

General

See the comment on OPS.GEN.100 above (the absence of an objective requirement for flight in expected or actual icing conditions).

comment *670* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.445: <![endif]-->add following text as para (a), change original text to paragraph (b):

a. (a) An operator shall not operate an aeroplane in expected or actual icing conditions unless it is certified and equipped to operate in icing conditions.

(b) Aircraft flying in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice. Such illumination shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

Justification:

The proposal brings into line with JAR-OPS and not just at night.

comment *1348* comment by: *AECA helicopteros.*

See our comment to OPS GEN 100

comment *1917* comment by: *Ingmar Hedblom*

Corresponding text in CS 23.1419(d) is : (d) When monitoring of the external surfaces of the aeroplane by the flight crew is required for proper operation of the ice protection equipment, external lighting must be provided which is adequate to enable the monitoring to be done at night.

Proposal: Introduce the text from CS 23.1419(d)

comment *5282* comment by: *DGAC*

Proposal : **introduce AMC OPS.GEN 445** :

"For non complex aircraft (excluded CAT and COM) a portable light can be used to illuminate or detect the formation of ice."

Justification :This requirement is applicable for CAT and COM but not in non complex aircraft.

comment *5308* comment by: *Light Aircraft Association UK*

This requirement is covered in the aircraft airworthiness Certification Specification (CS-23.1419d)). There is therefore no need to duplicate requirements in the OPS rules, especially when they differ from the CS. The CS should be modified if the wording is deemed insufficient.

comment *5603* comment by: *DGAC*

Proposal:

Amend the title:

OPS.GEN.445 IN-FLIGHT Operations in icing conditions

at night

Justification:

Equipment designed to cover the **in-flight part of the flight only**, not the ground (i.e.taxiing) part of it .

comment *5606* comment by: *DGAC*

Proposal: Add subtitle "AEROPLANE AND HELICOPTER"

Justification: No other category of aircraft is certified to fly in icing conditions

comment *6758* comment by: *Greger Ahlbeck*

Paragraph text: Aircraft flying in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice. Such illumination shall not cause glare or reflection that would handicap flight crew members in the performance of their duties

Comment: Corresponding text in CS 23.1419(d) is: (d) When monitoring of the external surfaces of the aeroplane by the flight crew is required for proper operation of the ice protection equipment, external lighting must be provided which is adequate to enable the monitoring to be done at night.

***Proposal** (including **new text**):*

Introduce the text from CS 23.1419(d)

comment *6819* comment by: *EFLEVA*

The EFLEVA notes that "a means to illuminate or detect the formation of ice" is included in CS 23. 1419(d)., although in a different form of words. EFLEVA suggests that EASA either removes this paragraph from OPS GEN or uses the same wording as CS 23.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.450 Marking of break-in points p. 47

comment *797* comment by: *French SAMU using helicopters for medical transport*

After approved operating sites add " and a HEMS operating site"

A HEMS operating site even in a congested area does not need to be approved if used for a single operation but should be approved if scheduled to be used several times

In E(2) insert "except for hospital site where special approval has been grantedby the Authority " after public interest site or

Add a new point (4)

For hospitals approved operating sites where economic or technical reasons do not permit to upgrade the site to the level of an aerodrome, HEMS operations will be permitted to continue with the approval of the authority. On those approved sites the non accountability of an engine failure shall be limited to the vertical climb segment, up to the rotating point.

Justification :

In France a large number of small hospitals have a very limited number of flights and it will be non economical to create an aerodrome.

In addition the back- up protection area introduced recently in the HFM may

preclude the use of a category A flight profile on heliports already in service. It should be left to the national Authority to decide if the site is safe enough to continue to operate with the conditions mentioned here above.

In (e) (3) at the end of the sentence after performance Class 1 add" CAT A Helipad" this is the minimum level required, leaving performance Class 1 alone means that OEI OGE is imposed . Some helicopters do not have such a performance level with an acceptable take off mass.

Add a new section:

"OPS SPA036 Helicopter HEMS Additional equipment

HEMS helicopter operating with an exposure time in a congested hostile environment shall be equipped with pilots crash absorbing seats and crash resistant fuel cells if introduced into service after the 8 April 2008"

Improve the safety for in case of a crash landing

Justification:

The new generation of helicopters operating in HEMS operations is fitted with crash absorbing seats and crash resistant fuel cells.

Older one should be equipped or be removed from the HEMS operations

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The new generation of helicopters operating in HEMS operations is fitted with crash absorbing seats and crash resistant fuel cells.

Older one should be equipped or be removed from the HEMS operations

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The new generation of helicopters operating in HEMS operations is fitted with crash absorbing seats and crash resistant fuel cells.

Older one should be equipped or be removed from the HEMS operations

comment *2669* comment by: *AOPA-Sweden*

Also not an OPS-requirement, please, keep design requirements within appropriate documents

comment *7581* comment by: *AOPA UK*

Also not an OPS-requirement, please, keep design requirements within appropriate documents

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.455 First-aid kits p. 48

comment *36* comment by: *George Knight*

Powered sailplanes should be excluded. It's not clear if they are aeroplanes or sailplanes in this NPA.

comment *555* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.455(d): change as follows:

(d) First-aid kits shall be maintained **and replenished at regular intervals**.

Justification:

In line with JAR-OPS.

comment *1337* comment by: *Southern Cross International*

For ferry flights, especially those ferry flights from an aircraft storage location to a maintenance facility, it is an undue burden to require one maintained first aid kit for every 100 seats. For ferry flights of aircraft with 100 or more seats no more than 1 maintained and accessible first aid kit should be required.

It is suggested to add:

In exceptional cases, such as test or ferry flights, the competent Authority may grant exemptions.

comment *1918* comment by: *Ingmar Hedblom*

DIN is a German norm. What about other norms?

Proposal: Introduce all other accepted norms in the AMC

comment *3166* comment by: *UK CAA*

Page No: 48

Paragraph No: OPS.GEN 455 (a) Table 1

Comment:

The number of kits does not match the ICAO SARPS in Annexe 6, Chapter 6 that will be applicable from November 2009.

Justification:

The proposal will be sub-ICAO from November 2009 unless amended.

Proposed Text (if applicable):

Number of passenger seats installed	Number of first–aid kits required
0 – 100	1
101 – 200	2

201 – 300	3	
301 – 400	4	
401 – 500	5	
More than 500	6	

comment *6034* comment by: *Fédération Française Aéronautique*

French FFA believes that equipment of all aeroplanes with at least one "first aid kit" is disproportionate as this kit is of poor utility on small non complex aeroplanes flying non commercial operations.

Justifications : No flight safety statistics shows any problem in that field.

Additionally, installation and **maintenance**of this "first aid kit" will be very difficult for non commercial sports and recreational flying organisations as aero-clubs and associations, without clear improvement in flight safety. One more time, costs will be increased without any clear necessity.

FFA proposal : Delete this requirement of a "first aid kit" on non commercial and non complex aeroplanes operations, and at least on non commercial, non complex aeroplanes below 2,000 kg MTOW.

comment *6542* comment by: *European Gliding Union (EGU)*

OPS.GEN.455 First-aid kits

A requirement for a First-Aid Kit in an aircraft where each occupant is forced to stay in their seats (size of aircraft) does not make any sense. In an Aircraft flown by a single pilot/person there is anyhow no way to perform any kind of first aid, as it would mean to let the flight controls unattended.

As this requirement was not foreseen up to now, the installation of a first aid kit in safe manner does require sufficient space which is not easily available in smaller aircraft and a minor change is required for all affected aircraft.

Recommendation: no requirement for a first-aid-kit in small air planes and single seat aircraft.

comment *6569* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.455 First-aid kits(a)

Wording in the NPA

(a) Aeroplanes and helicopters. Aeroplanes and helicopters shall be equipped with first-aid kits in accordance with Table 1 of OPS.GEN.455:

Our proposal

(a) Aeroplanes and helicopters. Aeroplanes and helicopters when carrying more than 2 people shall be equipped with first-aid kits in accordance with Table 1 of OPS.GEN.455:

Issue with current wording

The requirement is not appropriate small aeroplanes or aeroplanes involved in aerobatic flying or tow operations

Rationale

Small aeroplanes with only 2 seats will have space and weight problems especially if now required to additionally carry a fire extinguisher, an ELT and a first aid kit. If only 1 or 2 people are on board an in flight use of the first aid kit is hardly possible. On the ground at an airport first aid kits must be available and in the more rare case outside of an airport there will be cars with first aid kits. In the case of small airplanes or airplanes used for aerobatic flying or tow flights with only a single pilot on board the advantage of the availability of a first aid kit on board is non existent versus the burden to find a sensible location for it and to maintain it.

comment *6753* comment by: *Greger Ahlbeck*

Paragraph text: OTHER THAN COMPLEX MOTOR-POWERED AIRCRAFT AND BALLOONS

First-Aid Kits (FAKs) according to DIN 13164 or DIN 13157 are considered to meet the objective of OPS.GEN.455.

Comment: DIN is a German norm. What about other norms?

Comment: *DIN is a German norm. What about other norms?*

comment *6823* comment by: *EFLEVA*

Comment on OPS.GEN 455 and AMC1 OPS.GEN 455 (page 206)

EFLEVA suggests the removal of the reference to a German Standard for first aid kits, and replacement with reference to an International Standard

comment *7245* comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

EPFU is of the opinion that a "First aid kits" is not usefull in the small cockpit of a small aeroplane. In addition the control and replacement of too old medical products and medicines of the kit will be very difficult for our non commercial organisations. This is an example of disproportionate and unadapted requirement for the sports and recreational aviation organisations

as aero-clubs.

EPFU proposes to delete this requirement for "small aeroplanes" operated by non commercial organisations.

comment *7472* comment by: *David ROBERTS*

I am pleased that my advice that there is often insufficient room in a sailplane cockpit to accommodate a first aid kit has been taken on board by EASA in final the drafts, and therefore excluded!

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.460 Airborne Collision Avoidance System (ACAS) II p. 48

comment *67* comment by: *Air Southwest*

OPS.GEN.460(a) This paragraph doesn't read very well.

OPS.GEN.460(b) Typographical error: 'an RA' should be 'a RA'. The abbreviation should be treated in the same manner as the noun etc....

OPS.GEN.460(b) grammar: ' is in conflict with' should be 'conflicts with'

OPS.GEN.460(b) the last sentence doesn't read well. Suggest: "When the situation is resolved the aircraft will thereafter be flown in accordance with the previously received and acknowledged ATC instructions or clearance."

comment *420* comment by: *EHOC*

These are clearly operational instructions and should therefore be contained within Operational Procedures (Section II). This is adequate text already and only needs to be put into an appropriate rule. This could be:

"OPS.GEN.XXX Use of Airborne Collision Avoidance System

(a) Whenever an Airborne Collision Avoidance System (ACAS) II is installed, it shall be used in normal conditions during flight in a mode that enables Resolution Advisories (RAs) to be produced for the pilot flying when undue proximity to another aircraft is detected.

(b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

(c) Operators of aircraft equipped with ACAS shall establish standards of training and operation before authorising crews to use ACAS."

comment *992* comment by: *REGA*

(b) To do not delay urgent HEMS-missions, Helicopters usually are allowed to cross center-line or approach-/landing sectors during IFR traffic on the aerodrome. ATC advises all aircraft crew about the helicopter traffic within their approach or take-off sectors to avoid unessential ACAS advices. Following the rule (b) hems-mission are forced to make a detour and will be unacceptable delayed.

Proposal (b)

When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. Except in the vicinity of an aerodrome and under VFR conditions, when visual contact between all involved aircraft is established and controlled by ATC, the RA could used as an traffic information. ~~The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.~~

comment *3046* comment by: *AEA*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *3313* comment by: *UK CAA*

Page No: 48

Paragraph No:OPS.GEN.460

Comment:

Paragraphs (a) and (b) are operational rules and not equipment requirements and they should be transferred to Subpart A Section II under Operational Procedures.

Justification:

Incorrect equipment requirements.

comment *3634* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

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(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *3877* comment by: *M Wilson-NetJets*

Original text:

(b) When an RA is produced by ACAS II, the pilot flying shall immediately

take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Suggested new text:

When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved. **If during corrective action, indicated by the ACAS II RA, a warning or alert is generated by TAWS equipment in order to avoid terrain or obstacles, the TAWS warning or alert corrective action takes precedence over ACAS II generated RA corrective action.**

Comment/suggestion:

To further increase safety, a clause should be added that TAWS alerts or warnings to avoid terrain or obstacles take precedence over ACAS II RA instructions.

comment *4218* comment by: *DGAC*

The text is different from the text of EU-OPS though we can not find any related explanation in the Explanatory note in NPA 2009-02-a.

The highlighted text is missing, where can we find this very important material?

EU-OPS

OPS 1.398

Use of airborne collision avoidance system (ACAS)

An operator shall establish procedures to ensure that:

(a) when ACAS is installed and serviceable, it shall be used in flight in a mode that enables resolution advisories (RA) to be produced unless to do so would not be appropriate for conditions existing at the time.

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication.

(c) prescribed ACAS ATC communications are specified.

(d) when the conflict is resolved the aeroplane is promptly returned to the

terms of the ATC instructions or clearance.

comment *4280* comment by: *KLM*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *4494* comment by: *TAP Portugal*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *4569* comment by: *Bristow Helicopters*

ACAS II has been certified on helicopters. For commercial operations helicopters should have the same requirement to carry ACAS II as aeroplanes. Unless this is implemented, helicopters will have a lower standard of collision avoidance than aeroplanes of a similar weight when flying in the same IFR airspace.

comment *4660* comment by: *British Airways Flight Operations*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

The text should changed to that in EU-OPS 1.398, since the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with

the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4885* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *5460* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *6784* comment by: *Icelandair*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes p. 48-49

comment *1015* comment by: *Michael Kroell*

Why is this for aeroplanes only??

TAWS Systems are available for helicopters;

NOTE:

FAA supports the voluntary implementation of TAWS systems, however the FAA concluded that there is a number of unique issues to VFR helicopter operations that must be resolved before the FAA considers mandating the use of TAWS in these areas.

comment *1431* comment by: *British Parachute Association*

We suggest that an additional paragraph (d) be added with the following wording....

"A TAWS need not be fitted to aircraft manufactured before January 2010 which are routinely used in parachute operations in VFR conditions, provided that no persons other than flight crew are carried when the aircraft is engaged on flights other than parachute operations and provided that such other flights only take place in daylight and VFR conditions."

Many older aircraft are used solely for parachute operations which only take place in VFR conditions. To retro fit TAWS systems could be prohibitively expensive and would be pointless in this particular role. The amendment is worded to prevent abuse by prohibiting any other use for the aircraft apart from ferry flights in VFR conditions. New aircraft will anyway have to be fitted with TAWS which means that there will be a historical evaporation of none TAWS aircraft, but existing operators/parachute clubs will be able to continue without the possibility, in some cases, of having to cease operations or scrap their aircraft altogether.

comment *1983* comment by: *Pilatus Aircraft MRO*

Comment

Small airplanes certified to regulations preceding FAR 23 and CS 23, should be exempted from this requirement even if they have more than nine seats.

Justification

Due to the limitations stated in the requirement, it seems that FAR/CS 23 small airplanes in the Normal, Utility and Acrobatic category are excluded from this requirement, and it is rather aimed at the Commuter category airplane.

Small airplanes designed and certified to different regulations i.e. CAR-3 (preceding FAR/CS 23) were only limited to a MTOW of 12 500 lbs with **no** limitation on the number of seats. It is therefore unreasonable to mandate airplanes designed and certified to these earlier regulations which may have a seating capacity of one more than is required in the modern regulations to also comply with the latest regulatory requirements purely based on the number of seats.

END OF COMMENT

comment *2506* comment by: *Royal Aeronautical Society*

The list of warnings that a TAWS shall provide, listed in subparagraph (c), cannot be fulfilled by *basic* TAWS Class B equipment which is limited to: excessive descent rate; excessive altitude loss after take-off or go-around; and unsafe terrain clearance. It is suggested that EASA should:

either

remove the clauses 'that meets the requirements for Class A (subparagraph (a)) equipment' or 'Class B (subparagraph (b)) equipment', and leave the contents of subparagraph (c) unchanged;

or

amend subparagraph (c) to read, '**A TAWS Class A equipment shall provide … etc**' and add a new subparagraph (d) that begins, '**A TAWS Class B equipment shall provide … etc**', then list the capabilities associated with Class B equipment.

comment *2749* comment by: *AOPA Switzerland*

Point (a) and (b): The limitation should be 5700 kg or a maximum PAX seating configuration of more than NINETEEN (and not nine).

comment *2916* comment by: *Pietro Barbagallo ENAC*

Comment: new requirement introduced for reciprocating-engined-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or a maximum passenger seating configuration of more than nine and used in CAT . Please consider a proper implementation date.

comment *3047* comment by: *AEA*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off

mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *3283* comment by: *Aero-Club of Switzerland*

(a): We think the correct MPSC figure must be 19, not 9, in words nineteen, not nine.

Justification: This would bring the text in line with analogue texts in this NPA.

comment *3314* comment by: *UK CAA*

Page No: 48

Paragraph No:

OPS.GEN.465.A

Comment:

This rule requires a higher standard of TAWS equipment than is required by ICAO Annex 6 Part II. The requirement in OPS.GEN should be Class B TAWS as the basic standard applicable to non-CAT operations. Class A TAWS is restricted to OPS.CAT and therefore the requirement should be moved to Subpart B.

Justification:

Incorrect equipment standard.

Proposed Text (if applicable):

OPS.GEN.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes

(a) Turbine-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or maximum passenger seating configuration of more than nine, shall be equipped with a TAWS that meets the requirements for Class ***B*** equipment.

(b) ~~(b) Reciprocating-engined-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or a maximum passenger seating configuration of more than nine and used in commercial air transport, shall be equipped with a TAWS that meets the requirement for Class B equipment.~~ ~~(c)~~ A TAWS Class B shall provide, automatically, a timely and distinctive warning to the pilot flying, of:

(1) sink rate;

(2) ground proximity; and

(3) altitude loss after take-off or go-around.

~~(4) incorrect landing configuration; and~~

~~(5) downward glide-slope deviation.~~

OPS.CAT.465.A Terrain Awareness Warning System (TAWS) – Aeroplanes

(a) Turbine-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or maximum passenger seating configuration of more than nine, shall be equipped with a TAWS that meets the requirements for Class A equipment.

(b) Notwithstanding (a) reciprocating-engined-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg, or a maximum passenger seating configuration of more than nine and used in commercial air transport, shall be equipped with a TAWS that meets the requirement for Class B equipment.

(c) A TAWS Class A shall provide, automatically, a timely and distinctive warning to the pilot flying, of:

(1) sink rate;

(2) ground proximity;

(3) altitude loss after take-off or go-around;

(4) incorrect landing configuration; and

downward glide-slope deviation.

comment *3413* comment by: *Peter SCHMAUTZER*

There has to be an exemption for Airplanes like AN2 which falls under OPS GEN. 465 A (b).

comment *3635* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *4282* comment by: *KLM*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *4495* comment by: *TAP Portugal*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *4815* comment by: *Pilatus*

Comment

Small airplanes certified to regulations preceding FAR 23 and CS 23, should be exempted from this requirement even if they have more than nine seats.

Justification

Due to the limitations stated in the requirement, it seems that FAR/CS 23 small airplanes in the Normal, Utility and Acrobatic category are excluded from this requirement, and it is rather aimed at the Commuter category airplane.

Small airplanes designed and certified to different regulations i.e. CAR-3 (preceding FAR/CS 23) were only limited to a MTOW of 12 500 lbs with **no** limitation on the number of seats. It is therefore unreasonable to mandate airplanes designed and certified to these earlier regulations which may have a seating capacity of one more than is required in the modern regulations to also comply with the latest regulatory requirements purely based on the number of seats.

comment *4886* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *5172* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.

Comment:

Suggest aligning the text with the EU-OPS 1.398 text, as the EU-OPS is not only clearer, but also contains an important prerequisite for initiating any corrective action indicated by the RA, that is "*unless doing so would jeopardise the safety of the aeroplane*".

Proposal:

Realign with EU-OPS 1.398

(b) when undue proximity to another aircraft (RA) is detected by ACAS, the commander or the pilot to whom conduct of the flight has been delegated must ensure that any corrective action indicated by the RA is initiated immediately, unless doing so would jeopardise the safety of the aeroplane.

The corrective action must:

(i) never be in a sense opposite to that indicated by the RA;

(ii) be in the correct sense indicated by the RA even if this is in conflict with the vertical element of an ATC instruction;

(iii) be the minimum possible to comply with the RA indication

comment *5174* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off

mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Revert to EU-OPS 1.665

comment *5461* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

comment *5658* comment by: *Austro Control GmbH*

Change the headline text *to "Terrain Awareness Warning System (TAWS) - Aeroplanes **and Helicopters**"*

Justificiation:

TAWS Systems are also available for helicopters. This should be considered and a new paragraph (d) should be added.

NOTE:

FAA supports the voluntary implementation of TAWS systems, however the FAA concluded that there is a number of unique issues to VFR helicopter operations that must be resolved before the FAA considers mandating the use of TAWS in these areas.

comment *6785* comment by: *Icelandair*

Relevant Text:

(a) Turbine-powered aeroplanes with a maximum certificated take off mass exceeding 5700 kg or a MAPSC of more than 9 shall be equipped with a TAWS that meets the requirements for Class A equipment.

Comment:

This requirement for Class A equipment is not line with EU-OPS 1.665

Proposal:

Stick to EU-OPS 1.665

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.470.A Means for emergency evacuation - Aeroplanes p. 49

comment *69* comment by: *Air Southwest*

OPS.GEN.470.A (b) something seems to be missing after "Notwithstanding"!

Inconsistency: 'feet' and 'ft'

Paragraph (b) is cumbersome and needs revision to make more readable.

Paragraph (d): 'Assisting means' suggest replace with 'Means of assistance'

comment *365* comment by: *ECA - European Cockpit Association*

Comment on paragraph (c): delete paragraph and replace with the following text:

The heights mentioned in (a) shall be measured when the aeroplane has its landing gear extended

The distinction in (c) is nonsense, as it is less strict for the aeroplanes certificated after that date.

comment *1674* comment by: *Dassault Aviation*

Editorial comment.

Page 49 OPS.GEN.470.A §(b): there should be a reference to §(a) after "Notwithstanding".

comment *2376* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Delete this requirement:

This is a certification issue that is also more stringent than the corresponding CS-25 requirement.

CS-25 cannot be amended retro-actively. This subject should be addressed by a safety directive -if required.

comment *3316* comment by: *UK CAA*

Page No: 49

Paragraph No:

OPS.GEN.470.A(b)

Comment:

The word 'Notwithstanding' is unnecessary and should be removed.

Justification:

Unnecessary word

Proposed Text (if applicable):

(b) ~~Notwithstanding,~~ Such means need not be provided at …

comment *5675* comment by: *ERA*

European Regions Airline Association Comment

When considering the phrase 'for aircraft certificated after 31 march 2000', is this a new requirement or is this already part of today's certification? Will this also impact existing aircraft types/ There needs some clarification on this point.

comment *6267* comment by: *Lufthansa CityLine GmbH*

When considering the phrase 'for aircraft certificated after 31 march 2000', is this a new requirement or is this already part of today's certification? Will this also impact existing aircraft types/ There needs some clarification on this point.

comment *7050* comment by: *IACA International Air Carrier Association*

This is a certification issue that is also more stringent than the corresponding CS-25 requirement. Delete this requirement. CS-25 can not be amended retro-actively. This subject should be addressed by a Safety Directive, if required.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.475 Emergency lighting - Aeroplanes and Helicopters p. 49-50

comment | *37* | comment by: *George Knight*

-(c) (a) (2) (i), (a) (2) (ii) and (a) (2) (iii) do not exist.

comment | *38* | comment by: *George Knight*

-(d) (a) (2) (i) does not exist, but is assumed to mean (b) (2) (i).

This bullet point seems to conflict with the intention of bullet point (a). Point (a) suggests that only a/c with more than 19 seats need an emergency lighting system. Bullet point (d) then extends the requirement to all aircraft – even those that are day VFR and may not even have a lighting system. Light aircraft and sailplanes should be exempt from the requirement to have emergency lighting – especially those not used for night or IFR flight and those not approved for night flight!

comment | *421* | comment by: *EHOC*

Paragraph (f)

This text is too loose as it makes a requirement (flight over water - what does that mean exactly?) without setting any discriminants. The requirement is already contained in OPS.CAT.420 and therefore doesn't need to be repeated here.

It should be removed!

comment | *556* | comment by: *ECA - European Cockpit Association*

Change text as follows:

(c) For aeroplanes with a maximum passenger seating configuration of 19 or less and issued with a type certificate in accordance with the European Aviation Safety Agency's (hereinafter referred to as the Agency) airworthiness codes, the emergency lighting system shall include ~~**(a)(2)(i), (a)(2)(ii) and (a)(2)(iii)**~~ **(b)(2) and (b)(3)**.

Justification:

References in current text are wrong; they are the JAR-OPS references. Proposed text references correctly to OPS.GEN.475 (b).

comment | *557* | comment by: *ECA - European Cockpit Association*

Change text as follows:

(d) For aeroplanes with a maximum passenger seating configuration of 19 or less and not issued with a type certificate in accordance with the applicable airworthiness codes, the emergency lighting system shall include ~~**(a)(2)(i)**~~ **(b)(1)**.

Justification:

References in current text are wrong; they are the JAR-OPS references. Proposed text references correctly to OPS.GEN.475 (b).

comment *941* comment by: *Aersud*

Comment

The requirement asks for CAT operations the "emergency exit illumination" which means "the exit should be illuminated".

Comparing CS29 and CS27 concerning this requirement there is a big difference.

The CS 29.811 Emergency exit marking and CS 29.812 Emergency lighting reports specific requirements as requested by this paragraph of EU.OPS. In case of CS27 we do not have any requirements about Emergency illumination neither in "CS 27.807 Emergency exits".

So it is an inconsistency that in the Operative requirements foresees to add the exit illumination not requested in the CS.

For light helicopter the exit it's very close to the passengers, so it's not necessary an illumination of the exit, but it's maybe enough an emergency exit marking. A different and acceptable proposal could be a fluorescent sticker.

Consider also that this topic was discussed also in a JAA HSST meeting held between Monday 14th June - Wednesday 16th June 2004. It emerged the same problems and Authorities agreed that this requirement could be applied only for helicopters with Maximum Certified Take-off Mass greater than 3.175 kg.

Proposal

Change: (f) Helicopter operating over water in commercial air transport operation, *with a Maximum Certified Take-off Mass greater than 3.175 kilograms (kg) and up to 7.000 kilograms (kg), shall be equipped with emergency exit illumination marking. Helicopter over 7.000 kilograms (kg)* shall be equipped with emergency exit illumination.

Note

Priority: **H**

comment *1228* comment by: *EUROCOPTER*

Comment on § (f) (Emergency exit illumination):

This requirements states that it only concerns 'commercial air transport operations'. It should be transferred to Part CAT. Moreover the requirement is already covered by OPS.CAT.420 (c). **Proposal is to delete OPS.GEN.475 (f)**

comment *1776* comment by: *Dassault Aviation*

Editorial comment.

Page 50 OPS.GEN.475 §(c) and §(d): reference to (a)(2)(i), (a)(2)(ii), and (a)(2)(iii) are in error and should be respectively replaced by (b)(1), (b)(2), and (b)(3).

comment *2670* comment by: *AOPA-Sweden*

(c): Shall include what?? The references seem not to be valid.

comment *2671* comment by: *AOPA-Sweden*

(d): Shall include what?? The references seem not to be valid.

comment *2917* comment by: *Pietro Barbagallo ENAC*

Comment (editorial): references in (c) and (d) paragraphs are not correct: (a)(2)(i), (a)(2)(ii) and (a)(2)(iii) and (a)(2)(i)

comment *2971* comment by: *REGA*

Over water needs to be clarified, use definitions in OPS.GEN.420.

comment *3317* comment by: *UK CAA*

Page No: 49/50

Paragraph No:

OPS.GEN.475(c) and (d)

Comment:

Contains references to an unknown requirement/document:

(c) For aeroplanes with a maximum passenger seating configuration of 19 or less and issued with a type certificate in accordance with the European

Aviation Safety Agency's

(hereinafter referred to as the Agency) airworthiness codes, the emergency lighting system shall include **(a)(2)(i), (a)(2)(ii) and (a)(2)(iii)**.

(d) For aeroplanes with a maximum passenger seating configuration of 19 or less and not issued with a type certificate in accordance with the applicable airworthiness codes, the emergency lighting system shall include **(a)(2)(i)**.

Justification:

Clarification of references required.

comment *3319* comment by: *UK CAA*

Page No: 49/50

Paragraph No: OPS.GEN.475

Comment:

The requirement should be moved to OPS.CAT.

There is no requirement for Emergency Lighting in ICAO Annex 6 Part II or Part III section III

Justification:

Consistency of rulemaking.

Proposed Text (if applicable):

OPS.~~GEN~~***CAT***.475 Emergency lighting - Aeroplanes and Helicopters

comment *3322* comment by: *UK CAA*

Page No: 50

Paragraph No:

OPS.GEN.475(f)

Comment:

The rule applies to helicopters operating over water in "commercial air transport operations".

This should be moved to OPS.CAT.475.

Justification:

Rules applicable to commercial air transport should appear within Sub Part B, OPS.CAT.

Proposed Text (if applicable):

OPS.CAT.475 Emergency Lighting – Helicopters

Helicopters operating over water shall be equipped with emergency exit

illumination

comment *3741* comment by: *Civil Aviation Authority of Norway*

Comment:

The requirement should be moved to OPS.CAT.

There is no requirement for Emergency Lighting in ICAO Annex 6 Part II or Part III section III

Justification:

Consistency of rulemaking.

Proposed Text

(if applicable):

OPS.~~GEN~~***CAT***.475 Emergency lighting - Aeroplanes and Helicopters

comment *3894* comment by: *FOM ANWB MAA*

OPS.GEN.475 Emergency lighting - Aeroplanes and Helicopters

HELICOPTERS

~~(f) Helicopters operating over water in commercial air transport operations shall be equipped with emergency exit illumination.~~

RMK:

Over water needs to be clarified, use definitions in OPS.GEN.420 or delete completely.

comment *3941* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(f) Over water needs to be clarified, use definitions in OPS.GEN.420.

comment *4639* comment by: *ADAC Luftrettung GmbH*

According OPS GEN 420 (e) or simply when over water?

Over water needs to be clarified, use definitions in OPS.GEN.420.

Will a fluorescent emergency exit illumination will be accepted? This illumination will be seen under water an there will be no short circuit.

comment *5290* comment by: *DGAC*

Proposal:

In (c) and (d), **replace** (a)(2)(i), (a)(2)(ii) and (a)(2)(iii) by (b)(1), (b)(2) and (b)(3).

Justification:

Erroneous referencing

comment *5291* comment by: *DGAC*

Proposal:

Delete (f)

Justification:

Already covered by OPS.CAT.420 (c)

comment *5309* comment by: *Light Aircraft Association UK*

The cross-references in paras c) and d) don't seem to make sense (cross-referencing problem).

comment *5430* comment by: *ALFA-HELICOPTER*

(f) Over water needs to be clarified, use definitions in OPS.GEN.420.

comment *5626* comment by: *Peter Moeller*

475(f) what is meant by over water operation? onshore lakes and rivers should not be included.

comment *5775* comment by: *Norsk Luftambulanse*

(f) Over water needs to be clarified, use definitions in OPS.GEN.420.

comment *5958* comment by: *HSD Hubschrauber Sonder Dienst*

475 (f) The definition "over water" is not clear enough, use the same definition as in OPS.GEN.420.

comment *6605* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.475 Emergency lighting - Aeroplanes and Helicopters

HELICOPTERS

~~(f) Helicopters operating over water in commercial air transport operations shall be equipped with emergency exit illumination.~~

Remark: Over water needs to be clarified, use definitions in OPS.GEN.420 or deleted completely.

comment *6827* comment by: *EFLEVA*

The EFLEVA notes that cross-references to (a)(2)(i), (a)(2)(ii), and (a)(2)(iii), in paragraphs c) and d) are incorrect as no such references exist.

comment *6866* comment by: *PremiAir Aviation Servcies Limited*

(f) helicopters with a maximum passenger seating configuration of more than 12.

comment *7049* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

The referred items ((a)(2)(i), (a)(2)(ii), and (a)(2)(iii)) do not exist. The correct reference should be (b)(1), b(2), and b(3).

comment *7582* comment by: *AOPA UK*

(c)Shall include what?? The references seem not to be valid.

comment *7583* comment by: *AOPA UK*

(d) Shall include what?? The reference seems not to be valid.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.480 Seat belts and harnesses p. 50

comment *422* comment by: *EHOC*

General

It is not clear why the previously single rule for seats, safety belts and harnesses has been divided between a number of rules (GEN.405, GEN.480 GEN.545, CAT.406); it might be more appropriate to put all of the elements concerned with seats into a single rule in GEN.480.

Paragraph (a)(2)

This text, which is not modified for CAT, does not meet the previous requirement because of the discriminant that comes from Annex 6 Part II. Either the text should be modified to be applicable only to aeroplanes or a separate rule provided for CAT.

comment *1471* comment by: *John Henshall*

The requirement to have a diagonal shoulder strap on the seat-belt should be a minimum not an absolute requirement. Machines fitted with "H" belts offer superior protection but would be required to down-grade by this rule.

comment *1687* comment by: *Dassault Aviation*

Technical comment.

Page 50 OPS.GEN.480 Seat belts and harnesses: Our comment is to highlight the different terms used between "*safety belt with shoulder harness*", "*safety harness*", "*safety belt with diagonal shoulder strap*" since it may cause confusion. Our understanding is that a " *safety belt with shoulder harness*" equals a "*safety belt with diagonal shoulder strap*" because the word harness is singular (plural is harnesses). Clarification that "*safety belt with shoulder harness*" and "*safety belt with diagonal shoulder strap*" have only one band on the torso should be part of an AMC or GM. This AMC or GM should also provide some more clarification on what a "*safety harness*" is compared to the two other terms.

comment *1919* comment by: *Ingmar Hedblom*

Why no requirements for non commercial flights and why not for passengers?

Proposal: Expand the text to include requirements also for non commercial operation and also for passengers.

comment *2672* comment by: *AOPA-Sweden*

Seems to be a design requirement, doesn't fit in here.

comment *4078* comment by: *PremiAir Aviation Servcies Limited*

(c). Except for flight crew seats, the date should be 31 July 2009 and not 1999.

comment *4193* ☐ comment by: *DGAC*

General comment regarding (a)(3) & (a)(4) & (e)(2) ::

Those provisions deal with seat belts and restraining devices. As there is a paragraph dedicated to seat belts and harnesses (OPS.GEN.480 Seat belts & harnesses), move the provisions of (a)(3) & (a)(4) & (e)(2) to OPS.GEN.480).

comment *4194* ☐ comment by: *DGAC*

General comment n°2 on (a)(3) & (a)(4) & (e)(2) ::

To avoid any misunderstanding, there should be

- a definition in OPS.GEN.010 for seat belt, seat belt with shoulder strap or harness, harness, in terms of anchorage points, and
- an AMC to these definitions explaining that, unless otherwise provided, a safety harness (5 points) is deemed to be compliant to the requirement for safety belt with shoulder harness (4 points), deemed to be compliant with safety belt with diagonal shoulder strap (3 points), deemed to be compliant with safety belt (2 points)

comment *4219* comment by: *DGAC*

The wording "safety belt with shoulder harness", "safety harness", "safety belt with diagonal shoulder strap" is very confusing. It is not clear whether "safety belt with shoulder harness" = "safety belt with diagonal shoulder strap".

Therefore we propose to harmonize the wording by using the word "x point-harness", "x" being the number of points of anchorage

comment *4220* comment by: *DGAC*

Proposal : At the end of (c) add "on each passenger seat"

Justification : this provision is inapplicable in the case of parachutists carriage when no seat is required according to OPS.GEN.405 (f).

comment *5628* comment by: *DGAC*

Proposal: ALL AIRCRAFT EXCEPT BALLOONS

Add a new (b) as follows and renumber "(b)" into "(c)" :

All non-complex motor-powered aeroplane lightweight aeroplanes to carry harnesses, for those light weight aeroplanes first issued with an individual certificate of airworthiness **after April, 1st 1989**

Justification:

This provision is deemed applicable in France only for lightweight airplanes first issued with an individual certificate of airworthiness **after April, 1st 1989 (Arrêté 24/07/91 § 2.4.3)**.

comment *5676* comment by: *ERA*

European Regions Airline Association Comment

There is some confusion regarding the references to safety Harnesses and all other similar references: The NPA states many times safety belts, safety belts with shoulder harness and safety harness. Seat belt and seat belt with shoulder harness seems well defined. However, what is considered as a safety harness? Does a diagonal shoulder strap count? Some clarification is required as to safety harness is acceptable

comment *5702* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

ALL AIRCRAFT EXCEPT BALLOONS

(a) All aircraft, excluding balloons, used in commercial operations and complex motor-powered aircraft shall be equipped with.

Comment:

From a safety point of view, a balloon used in commercial operations should be equipped with a life-line for the commander.

Proposal (including ***new text***):

ALL AIRCRAFT EXCEPT BALLOONS

(a) All aircraft, excluding balloons, used in commercial operations and complex motor-powered aircraft shall be equipped with.

BALLOONS

(d) Balloons used in commercial operations should be equipped with a life-line for the commander. The life-line shall be used during

landing.

comment

5708 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a)(2) a safety harness on the seats for the minimum required cabin crew of all aircraft with a maximum passenger seating configuration of more than 19, which were first issued with an individual certificate of airworthiness after 31 December 1980.

Comment:

The term 'safety harness' should be replaced with 'shoulder harness'.

Proposal (including ***new text***):

(a)(2) a ~~safety~~ ***shoulder*** harness on the seats for the minimum required cabin crew of all aircraft with a maximum passenger seating configuration of more than 19, which were first issued with an individual certificate of airworthiness after 31 December 1980.

comment

5711 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(c) Helicopters used in commercial operations and complex motor-powered helicopters first issued with an individual certificate of airworthiness after 31 July 1999, shall be equipped with a safety belt with diagonal shoulder strap or safety harness for each passenger over the age of 24 months.

Comment:

The term 'safety harness' should be replaced with 'shoulder harness'.

Proposal (including ***new text***):

(c) Helicopters used in commercial operations and complex motor-powered helicopters first issued with an individual certificate of airworthiness after 31 July 1999, shall be equipped with a safety belt with diagonal shoulder strap or ~~safety~~ ***shoulder*** harness for each passenger over the age of 24 months.

comment

5879 comment by: *Danish Powerflying Union*

We are uncertain of the interpretation of "Single point release" and therefore we recommend following text:

(b) Safety belts with shoulder harnesses **shall be easy to release. Seatbelts with shoulder harness which are allowed according to the national regulations shall have grandfather**

rights untill date of expire.

Justification:

This to prevent aircraft owners to come into a situation where they are forced to have an unnecessary expense replacing seatbelts which are presently approved.

comment *6276* comment by: *Lufthansa CityLine GmbH*

There is some confusion regarding the references to safety Harnesses and all other similar references: The NPA states many times safety belts, safety belts with shoulder harness and safety harness. Seat belt and seat belt with shoulder harness seems well defined. However, what is considered as a safety harness? Does a diagonal shoulder strap count? Some clarification is required as to which safety harness is acceptable.

comment *6749* comment by: *Greger Ahlbeck*

Paragraph text: (a) All aircraft, excluding balloons, used in commercial operations and complex motor-powered aircraft shall be equipped with.

(1) a safety belt with shoulder harness …..

Comment: Why are there no requirements for non commercial flights and why not for passengers?

Proposal *(including* ***new text****):*

Expand the text to include requirements also for non commercial operation and also for passengers.

comment *6883* comment by: *Flybe*

This section does not include a definition of the required shoulder harness. Some aircraft (Dash 8 series) are equipped with a 3 point hrness on the jump seat for crew members and this is approved within the aircraft certification.

An additional definition of the type of harness should be include.

"Safety belts with shoulder harnesses shall have a single point release. The harness shall be a four point harness for operatring crew; however, flight deck jump seats may be equipped with a three point diagonal shoulder strap"

comment *7263* comment by: *ANE (Air Nostrum) OPS QM*

There is some confusion regarding the references to safety Harnesses and all other similar references: The NPA states many times safety belts, safety belts with shoulder harness and safety harness. Seat belt and seat belt with shoulder harness seems well defined. However, what is considered as a safety harness? Does a diagonal shoulder strap count?

Some clarification is required as to safety harness is acceptable

comment *7584* comment by: *AOPA UK*

Seems to be a design requirement, does not fit in here.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.485.A Crash axes and crowbars - Aeroplanes p. 50

comment *2378* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Further elaboration by EASA is required on the balance between security risks and safety benefits of a Crash axe being located with access by Passengers

comment *2674* comment by: *AOPA-Sweden*

(a):

Seems to be a design requirement, doesn't fit in here.

comment *2675* comment by: *AOPA-Sweden*

(b):

Seems to be a design requirement, doesn't fit in here. Does this requirement comply with the security rules?

comment *3323* comment by: *UK CAA*

Page No: 50

Paragraph No:

OPS.GEN.485.A(b)

Comment:

The text must refer to CAT aeroplanes requirement and therefore should be moved to OPS.CAT.

Justification:

Consistency

Proposed Text (if applicable):

OPS.CAT.485.A Crash axes and crowbars - Aeroplanes

When the aeroplane has a maximum passenger seating configuration of more than 200, an additional crash axe or crowbar shall be carried and located in or near the most rearward galley area.

comment *5701* comment by: *Irish Aviation Authority*

Paragraph (b)

Comment:

Requirement to conceal 2nd axe or crowbar in the cabin area should be included/retained

Justification:

Security

comment *7052* comment by: *IACA International Air Carrier Association*

(b)

Further elaboration by EASA is required on the balance between security risks and safety benefits of a Crash axe being located with access by Passengers.

comment *7338* comment by: *FAA*

1. OPS.GEN.485.A, (b)

Comment:

The requirement for crash axe or crowbar in rearward galley could create safety/security hazard. The requirement would add risk, because passengers could broach the cockpit using a crash axe or crowbar. There could be a potentially serious impact on safety/security of flight if axe or crowbar is available in the passenger compartment, even when not visible to passengers.

Recommendation:

Justify the risk of making an axe or crowbar available to passengers versus not having one available in the event of an emergency, or provide a means of locking the compartment where axe/crowbar will be stored.

comment *7585* comment by: *AOPA UK*

(a) Seems to be a design requirement, does not fit in here.

comment *7586* comment by: *AOPA UK*

(b) Seems to be a design requirement, does not fit in here. Does this requirement comply with the security rules?

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.490 Flight data recorder - Aeroplanes and Helicopters p. 50-51

comment *1621* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *2676* comment by: *AOPA-Sweden*

Seems to be a design requirement, doesn't fit in here.

comment *2750* comment by: *AOPA Switzerland*

Flight data recorder equipment shall only be mandatory in those aircraft mentioned in OPS.GEN.495 "Cockpit voice recorder", as flight data recorder are not in direct relation with flight safety.

comment *3325* comment by: *UK CAA*

Page No: 50

Paragraph No:

OPS.GEN.490(a)(1) and (c)(1)

Comment:

The compliance date in OPS.GEN.490(a)(1) and AMC1 OPS.GEN.490.A and OPS.GEN.490(c)(1) and AMC1 OPS.GEN.490.H should be the same. OPS.GEN states 2005 while the AMC states 2010.

Justification:

Compliance dates to be the same.

Proposed Text (if applicable):

(a) Aeroplanes: (1) with a maximum certificated take-off mass exceeding 5 700 kg and first issued with an individual certificate of airworthiness after 1 January ~~2005~~***2010***;

(c) Helicopters: (1) with a maximum certificated take-off mass exceeding 3 175 kg and first issued with an individual certificate of airworthiness after 1 January ~~2005~~***2010***.

comment *3326* comment by: *UK CAA*

Page No: 51

Paragraph No: OPS.GEN.490(c) and (d)

Comment:

The FDR requirements listed are those for helicopters undertaking CAT. OPS.GEN should reflect the requirements published in ICAO Annex 6 Part III Section III.

Justification:

Incorrect rules for helicopter FDRs under OPS.GEN.

Proposed Text (if applicable):

HELICOPTERS

(c) Helicopters:

(1) with a maximum certificated take-off mass exceeding 3 175 kg and first issued with an individual certificate of airworthiness after 1 January 2005;

~~(2) with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 1 August 1999 up to and including 31 December 2004; and~~

(2) with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 31 December 1988 ~~up to and including 31 July 1999~~,

shall be equipped with an FDR which uses a digital method of recording and storing data and has a method of retrieving that data from the storage

medium available.

(d) The FDR for helicopters shall be capable of retaining data recorded during at least ***the last 10 hours***:

~~(1) the last eight hours, for helicopters referred to in (c)(1) and (c)(2);~~

~~(2) the last five hours, for helicopters referred to in (c)(3); and~~

~~the last 10 hours, for helicopters with a maximum certificated take-off mass exceeding 3 175 kg and first issued with an individual certificate of airworthiness after 31 December 2009.~~

comment *3586* comment by: *Aero-Club of Switzerland*

Please bring the FDR requirement in line with the CVR requirement!

Justification: We see no need for FDR requirements differing from CVR requirements.

comment *3759* comment by: *Civil Aviation Authority of Norway*

Paragraph No:

OPS.GEN.490(c) and (d)

Comment:

The FDR requirements listed are those for helicopters undertaking CAT. OPS.GEN should reflect the requirements published in ICAO Annex 6 Part III Section III.

Justification:

Incorrect rules for helicopter FDRs under OPS.GEN.

comment *4903* comment by: *BEA*

OPS.GEN.490 (a)

The wording "FDR which uses a digital method of recording and storing data and has a method of retrieving that data from the storage medium available" is not precise enough:

- Does digital storing of the data implies that a non magnetic FDR is referred to ? ICAO is planning to issue shortly a new version of Annex 6 which deals with discontinuing the use of magnetic tape FDR after 2016, but until this date some airplanes will still be using magnetic tape FDR.
- The FDR does not usually contain a method to fully retrieve data from its storage medium, some additional information is needed, in

particular the parameters frame layout.

comment *5983* comment by: *DGAC*

Proposal:

For GEN: apply dates and weights according to ICAO Annex 6 (2nd part for aeroplanes and 3rd part for helicopters)

For CAT: apply dates and weights from EU-OPS / JAR-OPS3

Justification:

Avoid costly retrofit.

comment *6171* comment by: *Air Accidents Investigation Branch*

This rule does not address the possibility of using a combined recorder (CVR and FDR) as permitted by ICAO. Could be included in AMC material.

comment *7587* comment by: *AOPA UK*

Seems to be a design requirement, does not fit in here.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.495 Cockpit voice recorder - Aeroplanes and Helicopters p. 51-52

comment *423* comment by: *EHOC*

Paragraph (c)

This requirement does not include ICAO Annex Part III Section 4.7.5.2

Recommendation.— All helicopters of a maximum certificated take-off mass of over 3 175 kg, up to and including 7 000 kg, should be equipped with a CVR, the objective of which is the recording of the aural environment on the flight deck during flight time. For helicopters not equipped with an FDR, at least main rotor speed should be recorded on one track of the CVR.

We therefor have the anomalous situation in OPS.GEN.490(c)(1) that for a helicopter with a CofA after 2005 an FDR is required but not a CVR.

It might be a good idea to reconcile the ICAO Recommendation and the lack of a requirement in Part OPS by specifying a CVR from the date of the requirement for a Type IVA recorder. This is particularly relevant as most recorders fitted to helicopters are combination recorders.

Second paragraph (c) and (d) - numbering error (might be (e) and (f)).

comment *1622* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *2677* comment by: *AOPA-Sweden*

Seems to be a design requirement, doesn't fit in here.

comment *3327* comment by: *UK CAA*

Page No: 51

Paragraph No:

OPS.GEN.495(b) AEROPLANES

Comment:

The times for retaining data recorded by a CVR as drafted should be transposed. The type of recorder required by the rule, requires a minimum of 30 minutes recording time. The two hours refers to CVRs of a later period.

Justification:

Clarity.

Proposed Text (if applicable):

AEROPLANES

(a) Aeroplanes with a maximum certificated take-off mass exceeding 27 000 kg and first issued with an individual certificate of airworthiness after 31 December 1986, shall be equipped with a Cockpit Voice Recorder (CVR).

(b) The CVR shall be capable of retaining data recorded during at least:

(1) ~~the preceding two hours, for aeroplanes when the individual certificate of airworthiness has been issued after 1 January 2003; or~~ ***the preceding 30 minutes; or***

(2) ~~the preceding 30 minutes, for all other aeroplanes.~~

the preceding two hours, for aeroplanes when the individual certificate of airworthiness has been issued after 1 January 2003.

comment *3328* comment by: *UK CAA*

Page No: 51

Paragraph No:

OPS.GEN.495(d) HELICOPTERS

Comment:

The times required for retaining data recorded by a CVR are incorrect and should reflect those in ICAO Annex 6 Part III Section III.

In addition the recorder times as drafted should be transposed. The type of recorder required by the rule, requires a minimum of 30 minutes recording time. The ~~one~~ two hours refers to CVRs of a later period.

Justification:

Clarity.

Proposed Text (if applicable):

HELICOPTERS

(c) Helicopters with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 31 December 1986, shall be equipped with a CVR.

(d) The CVR shall be capable of retaining data recorded during at least:

(1) ~~the preceding one hours, for helicopters when the individual certificate of airworthiness has been issued after 31 July 1999; or~~ ***the preceding 30 minutes; or***

(2) ~~the preceding 30 minutes, for all other aeroplanes.~~

the preceding ~~*one*~~ ***two hours, for helicopters when the individual certificate of airworthiness has been issued after 1 January 2003.***

comment *3329* comment by: *UK CAA*

Page No: 52

Paragraph No:

OPS.GEN.495 AEROPLANES AND HELICOPTERS

Comment:

The paragraph numbering does not follow convention.

Justification:

Formatting.

Proposed Text (if applicable):

HELICOPTERS

(c) Helicopters with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 31 December 1986, shall be equipped with a CVR.

(d) The CVR shall be capable of retaining data recorded during at least:

(1) the preceding one hour, for helicopters when first issued with an individual certificate of airworthiness after 31 July 1999; or

(2) the preceding 30 minutes, for all other helicopters.

AEROPLANES AND HELICOPTERS

~~(c)~~ ***(e)*** The CVR shall start to record automatically prior to the aircraft moving under its own power and shall continue to record until the termination of the flight when the aircraft is no longer capable of moving under its own power.

~~(d)~~ ***(f)*** The CVR shall have a device to assist in locating it in water.

comment *3744* comment by: *Civil Aviation Authority of Norway*

Comment:

The paragraph numbering does not follow convention.

Justification:

Formatting.

Proposed Text

(if applicable):

HELICOPTERS

(c) Helicopters with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 31 December 1986, shall be equipped with a CVR.

(d) The CVR shall be capable of retaining data recorded during at least:

(1) the preceding one hour, for helicopters when first issued with an individual certificate of airworthiness after 31 July 1999; or

(2) the preceding 30 minutes, for all other helicopters.

AEROPLANES AND HELICOPTERS

~~(c)~~ ***(e)*** The CVR shall start to record automatically prior to the aircraft moving under its own power and shall continue to record until the termination of the flight when the aircraft is no longer capable of moving under its own power.

~~(d)~~ ***(f)*** The CVR shall have a device to assist in locating it in water.

comment *3751* comment by: *Civil Aviation Authority of Norway*

Comment:

The times required for retaining data recorded by a CVR are incorrect and should reflect those in ICAO Annex 6 Part III Section III.

In addition the recorder times as drafted should be transposed. The type of recorder required by the rule, requires a minimum of 30 minutes recording time. The ~~one~~ two hours refers to CVRs of a later period.

Justification:

Clarity.

Proposed Text

(if applicable):

HELICOPTERS

(c) Helicopters with a maximum certificated take-off mass exceeding 7 000 kg and first issued with an individual certificate of airworthiness after 31 December 1986, shall be equipped with a CVR.

(d) The CVR shall be capable of retaining data recorded during at least:

(1) ~~the preceding one hours, for helicopters when the individual certificate of airworthiness has been issued after 31 July 1999; or~~ **the preceding 30 minutes; or**

(2) ~~the preceding 30 minutes, for all other aeroplanes.~~

the preceding ~~one~~ **two hours, for helicopters when the individual certificate of airworthiness has been issued after 1 January 2003.**

comment *5983* ☐ comment by: *DGAC*

Proposal:

For GEN: apply dates and weights according to ICAO Annex 6 (2nd part for aeroplanes and 3rd part for helicopters)

For CAT: apply dates and weights from EU-OPS / JAR-OPS3

Justification:

Avoid costly retrofit.

comment *6172* comment by: *Air Accidents Investigation Branch*

This rule does not address the possibility of using a combined recorder (CVR and FDR) as permitted by ICAO. Could be included in AMC material.

comment *7588* comment by: *AOPA UK*

Seems to be a design requirement, does not fit in here.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.500 Data link recording - Aeroplanes and Helicopters p. 52

comment *915* comment by: *CAA-NL*

Comment regarding:

(a) Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April 2012,

Comment CAa-NL:

Data 2012.: Respond time for operators in too short.

comment *1688* comment by: *Dassault Aviation*

Technical comment.

Page 52 OPS.GEN.500 Data link recording aeroplanes and helicopters: OPS.GEN.500 requires data ling recording for aircraft with first individual certificate of airworthiness on or after 08-apr-2012 depending on described conditions. Our comment is to highlight that this date of 08-apr-2012 does not match the mandate given by the European Commission through (EC)29/2009 where the European Commission requires aircraft first issued with an individual certificate of airworthiness on or after 01-jan-2011 to be equipped with data link CPDLC ATN (see Article 3 §2 of (EC)29/2009). There will be actually a period during which there are no mandate to actually record the data link messages, this period being the period staring 01-jan-2011 and ending 08-apr-2012. We suggest that both dates are aligned. Otherwise, there may be aircraft equipped with data link but without its recording which may be very burdensome for investigation in case of incident or accident, because the crew oral communications to ATC (and vice versa) will not have been recorded in the CVR.

comment *2293* comment by: *Austro Control GmbH*

(a) Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications and are required to be equipped ....

Suggestion:

this date should be extended anyway

Justification:

an early date will provoke a lot a of exemptions, since industry might not be ready at this time.

comment

2379 comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Commment:

Dates are not aligned with **EC Regulation 29/2009** Data link services Article 3 requiring data link services defined in Annex II as from February 2015

comment

2678 comment by: *AOPA-Sweden*

Seems to be a design requirement, doesn't fit in here.

comment

3048 comment by: *AEA*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment

3330 comment by: *UK CAA*

Page No: 52

Paragraph No:

OPS.GEN.500

Comment:

The date for the introduction of the requirement (C of A on or after 8 April

2012) coincides with the introduction of Part-OPS and is therefore not achievable. A later date should be considered.

Justification:

Unachievable requirement.

Proposed Text (if applicable):

Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April ~~2012~~ ***2016***, which have the capability to operate data link communications and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable:

comment *3636* comment by: *AUSTRIAN Airlines*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *3743* comment by: *Civil Aviation Authority of Norway*

Comment:

The date for the introduction of the requirement (C of A on or after 8 April 2012) coincides with the introduction of Part-OPS and is therefore not achievable. A later date should be considered.

Justification:

Unachievable requirement.

Proposed Text

(if applicable):

Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April ~~2012~~ ***2016***, which have the capability to operate data link communications and are required to be equipped with a

cockpit voice recorder, shall be equipped with a means of recording the following, where applicable:

comment *3787* comment by: *KLM Cityhopper*

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *4284* comment by: *KLM*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *4496* comment by: *TAP Portugal*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver

aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *4669* comment by: *British Airways Flight Operations*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

Before making prescriptive rules, EASA should ensure that all aircraft manufacturers are able to deliver aircraft compliant with the requirement. The date of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the feasibilty of actually equipping the aircraft with datalink recorders.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4887* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *4904* comment by: *BEA*

OPS.GEN.500 (a)

The date of April 2012 might not be in accordance with new version of ICAO annex 6

comment *5176* comment by: *Virgin Atlantic Airways*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers not being able to meet the requirements.

comment *5462* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of

airframe manufacturers

comment *5678* comment by: *ERA*

European Regions Airline Association Comment

(a) Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8th April 2012 which have the capability to operate data link communications.

IR-OPS requires forward fit from 8 April 2012 on the basis of NPA 48A. ERA members would point out that NPA 48A has not been approved. The latest JAA position was that the results of ICAO developments and the available draft would be taken into account in future IRs' amendments as appropriate."

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The date of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Propose:

1. EASA review the implementation date taking into account the possibility of airframe manufacturers.
2. The ICAO decision taken in March 2001 has faced continuous challengers by stakeholders including Eurocontrol. Therefore until this is resolved EASA should consider deleting this paragraph and seek to file a difference with ICAO

comment *5712* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) Aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable:

Comment:

If a decision about IR-OPS is delayed, it could result in a too short implementation time for new aircraft. A specification for a new aircraft is often decided more than a year before delivery of the aircraft. Therefore an implementation date should be set to 2 years after a decision on IR-OPS.

Proposal (including ***new text***):

(a) Aeroplanes and helicopters first issued with an individual certificate of airworthiness ***two years*** ~~on or~~ after ~~8 April 2012~~ ***the IR-OPS has come into force***, which have the capability to operate data link communications

and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable:

comment *5985* comment by: *DGAC*

There must be enough time between the official release of this regulation and the applicability date to allow time for installation on new aircraft. (Aircraft first issued with an individual certificate of airworthiness on the 8th April 2012 will have been manufactured and equipped prior to this date). A retrofit would be too complicated.

comment *6793* comment by: *Icelandair*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *7051* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

Several operators will be required to implement ATN-CPDLC according to (EC) No 29/2009 until 5 February 2015.

Embraer is concerned that with this 8 April 2012 datalink recording requirement, operators would postpone ATN-CPDLC implementation to last minute in order to avoid the costs of datalink recording implementation, jeopardizing Eurocontrol ATN-CPDLC Link 2000+ program.

To avoid this issue, Embraer suggests the date for datalink recording requirement to be postponed to 5 February 2015.

Furthermore, for aircraft currently in production, avionics suppliers may not be able yet to provide a technical solution for datalink recording that would comply with 2012 timeframe.

comment *7054* comment by: *IACA International Air Carrier Association*

(a)

Dates are not aligned with EC Regulation 29/2009 Data link services Article 3 requiring data link services defined in Annex II as from 5 February 2015.

comment *7242* comment by: *AIR FRANCE*

Relevant Text:

*(a) Aeroplanes and helicopters first issued with an individual c**ertificate of airworthiness on or after 8 April 2012, which have the capability to operate data link communications** and are required to be equipped with a cockpit voice recorder, shall be equipped with a means of recording the following, where applicable*:

Comment:

It should be ensured that all aircraft manufacturers are able to deliver aircraft compliant with this new requirement. The data of 8th April 2012 should be subject to further review with the different airframe manufacturers (small and large)

Proposal:

Review the implementation date taking into account the possibility of airframe manufacturers

comment *7415* comment by: *General Aviation Manufacturers Association / Hennig*

GAMA members have reviewed the requirement for data link recording for aircraft that have a capability to operate data link communications if they have a certificate of airworthiness on or after April 8, 2012.

While this is an aggressive timeline for forward-fit, GAMA members are working to meet the FAA data link recording requirement for forward-fit (new certificate of airworthiness) in parallel. April 2012 is a date which we support.

GAMA weighed in on JAA NPA OPS-48A (forward fit) stating that: "GAMA believes that the dates proposed in the NPA are more realistic than the dates listed in original NPA versions, but still does not consider the needed time to align manufacturer type design and suppliers for aeroplanes first type certificated on or after 1 January 2008, and therefore the mandate for new type certificates should be extended to 36 months after the publication of the final amendment.". GAMA also raised concern about the practicality of meeting the in-production aircraft (new certificate of airworthiness) for the fleet when filing comments to the JAA NPA in 2006.

We are pleased to see that the retrofit requirement (i.e. OPS-007 / JAA NPA OPS-48B) not being included in NPA 2009-02 and instead included in the EASA Rulemaking Programme for future action and consideration. When

evaluating the JAA NPA for retrofit scenario for data-link recording, our members identified significant cost implications.

comment *7589* comment by: *AOPA UK*

Seems to be a design requirement, does not fit in here.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.505 Preservation of FDR and CVR recordings - Aeroplanes and Helicopters p. 52-53

comment *126* comment by: *Thormodur Thormodsson*

The procedures for the inspection and maintenance of FDRs specified in Attachment A of ICAO Annex 6, Part II are applicable only for General Aviation aeroplanes. Paragraph 2 of GM OPS.GEN.505(b) and (c) refers to this attachment A and Part II. Suggest only reference Annex 6 and not the specific parts and attachments of the Annex to ensure that all categories of aircraft are covered.

comment *424* comment by: *EHOC*

General

It is important that the structure of the regulation is as logical as is possible. The placing of operational instructions within the equipment section will not assist in the provision of SOPs or OM procedures.

This is an operational procedure and part of the responsibilities of PIC and operator; it should be relocated to Section I or II of Subpart A.

comment *715* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.505(a): NIL

The change from EU OPS has been noted, but it is accepted.

comment *717* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.505(e): NIL

The change from EU OPS has been noted, but it is accepted.

comment *772* comment by: *ECA - European Cockpit Association*

Comment:

A paragraph on the use and preservation of data link recordings should be added.

Justification:

Considering the advent of datalink recording as mentioned in OPS.GEN.500, the OPS.GEN should be extended to include to regulate use and preservation of datalink recordings in the same manner as is done for CVR and FDR recordings.

comment *993* comment by: *REGA*

(a) Depending on the type of aircraft or the type of the FDR-/CVR-system due to the lack of access the pilot-in-command could not be able to control the recording system in every case.

Proposal (a)

The pilot-in-command shall be responsible, if an indication devise is provided, for ensuring that during flight, Flight Data Recorders (FDRs) and Cockpit Voice Recorders (CVRs) are not: (…)

comment *2381* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Clarification is needed as to what the Mandatory reporting requirements are.

Proposal:

Utilise EC2042/2003 .

comment *3331* comment by: *UK CAA*

Page No: 52/53

Paragraph No: OPS.GEN.505

Comment:

The requirement relates to the use of data obtained from equipment and is therefore an operational requirement and should be moved to Subpart A Section II under Operational Procedures.

Justification:

Consistency

comment *4905* comment by: *BEA*

OPS.GEN.505 (b) (1)

BEA believes that the CVR should never be switched off during the flight. This issue had been discussed among JAR flight recorder study group, and it was agreed by the group that recorders shall not be switched off during flight.

comment *6149* comment by: *Air Accidents Investigation Branch*

ICAO Annex 6 prohibits the switching off of flight recorders in flight. OPS.GEN.505 (b) (1) is in conflict with ICAO requirements. This was highlighted during work on JAR-OPS3 by the Flight Recorder Study Group.

comment *6675* comment by: *Air Accidents Investigation Branch*

With respect to OPS.GEN.505 (d) the rule ought to specify a maximum time interval between operational checks (suggest it is done before the first flight of the day) and recording evaluation checks (suggest a maximum of one calendar year for both FDR and CVR).

comment *6676* comment by: *Air Accidents Investigation Branch*

This rule ought to include an obligation on operators to hold and maintain the documentation necessary to convert raw recorded data into engineering units. This document is necessary for accident investigation and also to conduct an evaluation of the FDR recording as specified in (d).

comment *7058* comment by: *IACA International Air Carrier Association*

Clarification needed as to which mandatory reporting requirements. EC 2042/2003 perhaps ?

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.510 Use of FDR and CVR recordings - Aeroplanes and Helicopters p. 53

comment *425* comment by: ***EHOC***

General

It is important that the structure of the regulation is as logical as is possible. The placing of operational instructions within the equipment section will not assist in the provision of SOPs or OM procedures.

This is an operational procedure and part of the responsibilities of PIC and operator; it should be relocated to Section I or II of Subpart A.

comment *718* comment by: ***ECA - European Cockpit Association***

Comment on OPS.GEN.510: delete as follows:

Use of FDR and CVR recordings - Aeroplanes and Helicopters

~~**Without prejudice to national criminal law:**~~

Justification:

This provision definitely opposes ICAO regulation as national law is above the OPS IR. Otherwise accepted, wording complies with EU OPS. Furthermore this was not in EU OPS 1.160, and is useless as any event that require criminal inquiry will be classified as an accident or incident, and thus will allow the proper use of FDR data.

comment *772* comment by: ***ECA - European Cockpit Association***

Comment:

A paragraph on the use and preservation of data link recordings should be added.

Justification:

Considering the advent of datalink recording as mentioned in OPS.GEN.500, the OPS.GEN should be extended to include to regulate use and preservation of datalink recordings in the same manner as is done for CVR and FDR recordings.

comment *2383* comment by: ***The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly***

Delete:

"Without prejudice to National Criminal Law".

Safety should prevail over criminal law

comment *2679* comment by: *AOPA-Sweden*

It should be stated here that this item should over-ride any national criminal law, so the information can not be used in any penalty or certificate action.

comment *3332* comment by: *UK CAA*

Page No: 52/53

Paragraph No:

OPS.GEN.510

Comment:

The requirement relates to the use of data obtained from equipment and is therefore an operational requirement and should be moved to Subpart A Section II under Operational Procedures.

Justification:

Consistency

comment *7061* comment by: *IACA International Air Carrier Association*

Delete "Without prejudice to national criminal law". Safety should prevail over criminal law.

comment *7590* comment by: *AOPA UK*

It should be stated here that this item should override any national criminal law, so the information can not be used in any penalty or certificate action.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.515 Microphones - Aeroplanes and Helicopters p. 53

comment *117* comment by: *tbone aviation a/s*

Propose new wording for section (a):

Flight crew members on flight deck duty om complex motor-powered aeroplanes and aeroplanes used in commercial operations shall communicate through boom, throat or equivalent microphones, when flying below the transition level/altitude.

This new proposed wording include the "equivalent" phrase to allow the use

of other and newer technologies compared to the boom microphone.

comment *426* comment by: *EHOC*

General

As this text includes, for helicopters, headsets, perhaps it needs a different title.

According to the cross reference table, the original rule on which this is based was an equipment rule for the fitting of equipment for radio communications. As it is now an operational rule (the original requirement was not transposed) it should be replaced into Section II.

Paragraph (b)

It is not clear why this is only applicable to complex helicopter (which excludes all light twins) and commercial operations. It should apply to all helicopters - if only to meet the EU noise exposure requirements. Suggested text is:

(b) Flight crew and technical crew members shall wear a headset with boom microphone or equivalent and use it as the primary device for all communications.

comment *1345* comment by: *AECA helicopteros.*

(b) Proposal of a new text.

(b) Flight crew members shall wear a headset with boom microphone or equivalent and use it as the primary device for all communications.

comment *3333* comment by: *UK CAA*

Page No: 53

Paragraph No:

OPS.GEN.515 (b)

Comment:

It is not clear why this is only applicable to complex helicopter (which excludes all light twins) and commercial operations other than to mirror Aeroplanes in (a). It should apply to all helicopters - if only to meet the EU noise exposure requirements. Amend text as indicated which reflects ICAO Annex 6 Part III Section III recommendation.

Justification:

Clarity of purpose and practical application.

Proposed Text (if applicable):

(b) ***Flight crew and technical crew members shall wear a headset with boom microphone or equivalent and use it as the primary device for all communications***.

comment *3749* comment by: *Civil Aviation Authority of Norway*

Comment:

It is not clear why this is only applicable to complex helicopter (which excludes all light twins) and commercial operations other than to mirror Aeroplanes in (a). It should apply to all helicopters - if only to meet the EU noise exposure requirements. Suggest amend text as indicated which reflects ICAO Annex 6 Part III Section III recommendation.

Justification:

Clarity of purpose and practical application.

(b)

Proposed Text

(if applicable):

Flight crew and technical crew members shall wear a headset with boom microphone or equivalent and use it as the primary device for all communications

comment *5713* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

HELICOPTERS

(b) Flight crew members on flight deck duty of complex motor-powered helicopters and helicopters used in commercial operations shall wear a headset with boom microphone or equivalent and use it as the primary device for all communications.

Comment:

In all helicopters, regardless of complexity and type of operations, the pilot generally uses both hands for controlling the aircraft. Even considering that it is often possible to let go of the collective, safety demands a requirement for a "hands-free" system.

Proposal (including ***new text***):

HELICOPTERS

(b) Flight crew members on flight deck duty ~~of complex motor-powered helicopters and helicopters used in commercial operations~~ shall wear a headset with boom microphone or equivalent and use it as the primary

device for all communications.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.520 Flight crew interphone system p. 53

comment *39* comment by: *George Knight*

-(a) This rule inadvertently makes intercom systems necessary in two-seater training sailplanes & powered sailplanes. They are not necessary in those environments due low noise levels.

comment *40* comment by: *George Knight*

-(b) This is an excessive requirement for SAILPLANES & POWERED SAILPLANES used for training. They should be exempted from this provision. Some microlight aircraft used for training use handheld radios and are not designed for two pilot operation. They should also be exempted.

comment *998* comment by: *British Gliding Association*

There is no requirement for an interphone system in a sailplane. It is a quiet environment. Additionally, the BGA also questions the need to regulate this requirement in single crew powered aircraft, regardless of use – if cockpit noise requires it, in single crew aeroplanes the pilot and the passenger(s) or student(s) use interphone systems as required to achieve the flight objectives.

The BGA proposes that sailplanes should be excluded from this requirement and proposes that the wording of OPS.GEN.520 Flight crew interphone system (a) is modified to read;

(a) Where implementing rules require operation by more than one flight crew member, Aeroplanes and helicopters shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

comment *2966* comment by: *AOPA Switzerland*

Crews of aircraft certified with overhead loudspeaker(s) shall not forced to use headsets. However, they may use additional headsets if available.

comment *3381* comment by: *guy Corbett*

This should not apply to gliders as it is unnecessary in a quiet cockpit

comment *3480* comment by: *Aero-Club of Switzerland*

For sailplanes a flight crew interphone system is absolutely unnecessary, nearly impossible to install, with very limited electric power supply possibilities. Besides, all occupants are in a quiet environment. Therefore please re-word:

(a) Where implementing rules require operation by more than one flight crew, aeroplanes and helicopters shall be equipped with flight crew interphones, including headsets and microphones for use by all flight crew members.

comment *3983* comment by: *Chris Fox*

This requirement is inappropriate for two-seater sailplanes. There is no need for headsets and microphones in sailplanes, other than Self-Launching sailplanes.

comment *5064* comment by: *AS Miller*

OPS.GEN.520 Flight crew interphone system

This requires an interphone system for all aircraft with more than one flight crew member.

Another risible requirement for sailplanes.

Proposal *Exclude sailplanes*

comment *5095* comment by: *Trevor Wilcock*

This is totally inappropriate for sailplanes, where the low noise levels make such eqipment unnecessary. In addition (unless perhaps this para is intended to apply just to aircraft where operation requires more than one crew member), for non-complex powered aircraft noise levels may permit adequate communication without headsets.

comment *5385* comment by: *Norwegian Air Sports Federation*

There is no need for interphone system in sailplanes etc.

proposal:

(a) Aircraft required to be operated by more than one flight crew member shall be equipped with a flight crew interphone system for use by all flight crew members.

comment *6291* comment by: *EUROPEAN GLIDING UNION*

We don not know any of the Member States currently requiring interphone system in a sailplane. There is not engine noise, only a quiet environment.

We suggest the wording of OPS.GEN.520 to be modified so that sailplanes are excluded from this requirement.

comment *6535* comment by: *TG WHITING*

This seems a totally unnecessary requirement for a sailplane, especially a single seater. I would propose that sailplanes are excluded from this requirement.

comment *6546* comment by: *European Gliding Union (EGU)*

OPS.GEN.520 Flight crew interphone system

In the quiet environment of a sailplane is no need for an interphone system. If this rule would be applicable for a sailplane flown by an flight instructor and his/her student, the German Aero Club refuses this rule as it is not proportional to the kind of operation and the related risk. The use of headsets in a sailplane is abnormal as the surrounding does not produce significant noise. Finally, the power delivered by the electric system of the sailplane has to be used efficiently for the major tasks of the operation of the sailplane.

The DAeC suggests the following wording:

(a) Aircraft required to be operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

comment *6570* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.520(a)

Wording in the NPA

(a) Aircraft operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones

for use by all flight crew members.

Our proposal

(a) Aircraft requiring more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

Issue with current wording

Not clear if student pilot + instructor also meant here in which case some aircraft would have to be excluded from this requirement.

Rationale

We assume that actually aircraft requiring a crew of more than one member is meant and want the wording to express this more clearly.

If the wording "operated by more than one flight crew member" also is meant to include student pilot + instructor crews then sailplanes and balloons must be excluded. We would though strongly prefer that this requirement is limited to aircraft requiring multiple crew members since quite a few training aeroplanes also are not equipped with intercom especially in the TMG space.

comment *6704* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

We don not know any of the Member States currently requiring interphone system in a sailplane. There is not engine noise, only a quiet environment.

We suggest the wording of OPS.GEN.520 to be modified so that sailplanes are excluded from this requirement.

comment *6893* comment by: *Luftsport-Verband Bayern*

zu: (a) Aircraft operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members. (b) When a radio communication system is required, and in addition to (a), the aircraft shall be equipped with a transmit button on the flight controls at each pilot's station:

Dies darf nicht dazu führen, dass auch Segelflugzeuge Interkomanlagen benötigen.

Vorschlag zur Neuformulierung: (a) Aircraft except gliders operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members. (b) When a radio communication system is required, and in addition to (a), the aircraft shall be equipped with a transmit button on the flight controls at each pilot's station.

comment *7456* comment by: *European Sailplane Manufacturers*

We don not know any of the Member States currently requiring interphone system in a sailplane. There is not engine noise, only a quiet environment. We suggest the wording of OPS.GEN.520 to be modified so that sailplanes are excluded from this requirement.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.525 Communication equipment p. 53-54

comment *41* comment by: *George Knight*

This proposal is not appropriate for Sailplanes and Powered Sailplanes when other than VFR as permitted in the UK at present. Currently there is no requirement for them to have a radio when IFR in class G airspace. Some sailplanes are still fitted with radios that operate only on the UK glider frequencies and are not capable of transmitting or receiving on 121.500 MHz. Many UK glider pilots do not have a flight operator's radio licence and are restricted to the UK dedicated glider frequencies. Sailplanes should be exempt unless operating as a controlled flight.

comment *389* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.525:

Change text as follows:

"...each system ~~**should**~~ **must** have an independent antenna installation..."

Justification:

Use text from the previous requirement stated in EU OPS 1.850 (b)

comment *390* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.525:

ECA requests clarification:

Communication equipment is not required for VFR flights when not controlled.

comment *427* comment by: *EHOC*

General

This rule is not compliant with ICAO Annex 6 Part II Chapter 2.5.1.4 and 2.4.5; areas in which radios should be carried.

It is also not compliant with Chapter 3.7.1 - for which the Standard is un-conditional.

comment *3691* comment by: *IAOPA Europe*

There is no justification to require two way radio communication for VFR night flights. If the VFR night flight takes place in areas where communication is not required there should be no mandate to carry a radio.

Requiring a radio for making traffic patterns at night on an uncontrolled airfield with no assigned radio frequency is absolutely meaningless.

comment *5056* ☐ comment by: *AS Miller*

OPS.GEN.415 Flight instruments and equipment - VFR night flights and IFR flights

OPS.GEN.525 Communiation equipment

In the colder and wetter parts of Europe much glider flying takes place in IMC, under IFR, principally within the 1,000' layer just below cloud base.

None of the equipment listed here is appropriate for this flying.

It is risible to specify a landing light.

Proposals

OPS.GEN.415

Replace SAILPLANES wording with:

(c) Sailplanes operating at night shall comply with (a)(5), (9) & (10)

OPS.GEN.525

Replace the wording in para (a) with:

Where communication with outside agencies is required, aircraft shall be provided with radio communication equipment.

comment *6038* comment by: *Fédération Française Aéronautique*

FFA asks for a **clear statement** saying that in non controlled airspace, a radio communication equipment is not mandatory.

Justification : many non complex aeroplanes (mainly below 2,000 kg MTOW) operated in sports and recreational flying organisations and in non controlled airspace from non controlled airfields, are not equipped with radio communication and do not need one.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.530 Pressure-altitude-reporting transponder p. 54

comment *403* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.530:

Previously EU-OPS 1.865(a) and 1.866. Now pressure-altitude-reporting transponder is prescribed for all flights, irrespective of the conditions of flight, when required by the airspace requirements. The requirement for RVSM operation, previously in EU-OPS 1.872 remains the same in OPS.SPA.010.RVSM. There is a discrepancy as the transponder is necessary in the Implementing Rule, and left to the operators decision in the GM text.

ECA requests clarification:

GM available for operation in RVSM, stating that the transponder may not be necessary in some RVSM areas. But AMC OPS.GEN.530 states that compliance with requirements stated by Single European Sky should be met. Which text applies?

comment *627* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.530: change as follows:

Aircraft shall be equipped with a pressure-altitude-reporting Secondary Surveillance Radar (SSR) transponder ~~**when required by the airspace requirements**~~.

Justification:

While historically a transponder "C" may have been an airspace requirement, the fact that the transponder constitutes the required co-operative element for current collision avoidance systems requires transponder carriage and operation for all aircraft to protect against intruders (from unregulated airspaces).

comment *2507* comment by: *Royal Aeronautical Society*

As specified in ICAO Annex 6 Parts I, II and III, carriage of a pressure-altitude-reporting transponder in a non ACAS-equipped aircraft enables ACAS-equipped aircraft to avoid collisions regardless of the transponder-carriage rules applying to the airspace in which either aircraft is flying, **and is the primary reason why this requirement was specified in JAR-OPS 1/EU-OPS without any airspace rule qualification**. A functioning pressure-altitude-transponder enables ACAS (TCAS II) equipment to determine relative altitude between both aircraft and to compute whether or not a threat exists. Failure to transmit pressure-altitude information from an

operating transponder will prevent ACAS from generating and displaying any Resolution Advisories, and in other circumstances it can result in the generation of multiple 'nuisance' alerts to the crews of the ACAS-equipped aircraft, which can be highly distracting. Such a failure will occur if the transponder does not have a pressure-altitude-reporting capability or if the altitude-reporting function is not enabled. It is suggested that OPS.GEN.530 should include a requirement applicable to aeroplanes and helicopters based upon the text currently published in (EU) OPS 1.866; **'An operator shall not operate an aeroplane or a helicopter unless it is equipped with 1. a pressure-altitude-reporting SSR responder; and 2. any other SSR transponder capability required for the route being flown.'**

comment *7378* comment by: *Europe Air Sports, VP*

It should be added that the Air Traffic Provider can grant exemptions depending on the traffic situation for aircraft not fitted with such a transponder.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.535 Navigation equipment p. 54

comment *42* comment by: *George Knight*

-(c) This inadvertently prevents use of published approaches using other than those using pilot interpreted aids - for example SRA. It also prevents aircraft conducting a part of their flight in IMC, even if there is no intention to perform an instrument approach, without such equipment. The rule is phrased with CAT in mind.

It would be better to re-phrase this rule to say,

"An aircraft intending to perform an approach other than under VFR must be equipped so that it is capable of following a published approach procedure at each aerodrome at which it intends to land in IFR and for each designated alternative." This has the same general effect without being so prescriptive.

comment *428* comment by: *EHOC*

General

It is somewhat surprising that here is a requirement for navigational equipment applying to all but there is no similar provision for radios!

Paragraph (b)

It comes as a complete surprise that there is no method of compliance for

this (extremely objective) GEN rule.

Most States will be shipwrecked on the rock of this imaginative policy.

In previous discussion on JAR-OPS 0, 2 and 4, a number of States would not move away from the specification of ADF, VOR, DME and ILS.

At least some guidance on the use of GPS would be welcome.

What is the pass/fail criteria for reliability of navigation equipment that is required in order to establish a policy for redundancy.

The objective text is supported provided guidance is provided to ensure that there remains a level playing field for all.

Paragraph (c)

Because this text has been shortened from that in ICAO Annex 6 Part II Chapter 2.5.2.9, its meaning has been lost; it is no longer clear that the intention was to set the objective for an Approach Aid (which might be satisfied by any number of methods of compliance). The text should be returned to its purity in the ICAO form.

"(c) On flights in which it is intended to land in instrument meteorological conditions, an aircraft shall be provided with radio equipment capable of receiving signals providing guidance to a point from which a visual landing can be effected. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in instrument meteorological conditions and for any designated alternate aerodromes."

comment *3334* comment by: *UK CAA*

Page No: 54

Paragraph No:

OPS.GEN.535 (b)

Comment:

The rule needs to be more specific in terms of required navigation equipment, either here, or in the AMC.

For an IFR flight, it requires equipment as an aid to landing, but has no navigation requirements.

Justification:

Proposed Text (if applicable):

(b) An aircraft flying under IFR, or under VFR over routes not navigated by reference to visual landmarks shall be equipped with navigational equipment that comprises not less than:

(1) Two independent navigation aids appropriate to the route/area to be flown;

(2) An approach aid suitable for the destination and alternate heliports;

(3) An Area Navigation System when area navigation is required for the route/area being flown;

(4) Two VOR receiving systems on any route, or part thereof, where navigation is based only on VOR signals; and

(5) Two ADF systems on any route, or part thereof, where navigation is based only on NDB signals,

comment *3791* comment by: *IAOPA Europe*

OPS.GEN.535 a(1) should be ammended to read

"the original flight plan or an alternative procedure; and..."

It should not be a requirement that the aircraft can always continue according to the original plan in case of equipment malfunction. It should be sufficient that the pilot has planned for an alternative course of action since otherwise equipment duplication will often be required when this is not necessary.

For instance the following scenario should be allowed without requiring two NDB receivers or RNAV:

In case of a flightplan involving an NDB in the enroute part the pilot should have the option to proceed along an alternative route constituted of VORs if the aircraft's NDB receiver fails.

With the current wording this scenario would not be allowed.

comment *6707* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

Requirement set in OPS.GEN.535 (a) should be clarified so that having a magnetic compass as required for sailplanes and powered sailplanes according to OPS.GEN.410 (a)(1) does not require a secondary instrument for the same purpose - due to measuring a magnetic heading together with an aeronautical map is part of visual navigation. We see this is not intention of this IR but this kind of interpretation may easily occur.

Furthermore, in case of sailplane cloud flying activity as made in non-VFR –conditions, requirement of OPS.GEN.535 (c) shall not be made applicable for sailplanes.

comment *6709* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

In case of sailplane cloud flying activity as made in non-VFR –conditions, requirement of OPS.GEN.535 (c) may be interpretated to apply also for sailplanes. We do not see any examples where sailplanes flying in non-VFR (or meteorologically in IFR conditions) would be used for low visibility

landing operations. We suggest OPS.GEN.535 (c) should be modified not applicable for sailplanes. Furthermore, limited capability of sailplanes to carry electric consuming instruments would create a problem if this item would be considered also in case of sailplane cloud flying activity despite of take-off and landing for such is made in VFR.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.540.A Electronic navigation data management - Complex motor-powered aeroplanes p. 54

comment *430* comment by: *EHOC*

General

It is not clear why this only applies to aeroplanes. The 'A' should be removed from the title.

comment *1842* comment by: *Airbus SAS*

No technical specification or safety objective for equipment is part of this requirement. All details are related to operator procedures.

==> Airbus proposes to include these requirements in Part OR, or in OPS Section II operational procedures.

comment *2294* comment by: *Austro Control GmbH*

General comment for reflexion:

AIRAC Cycles for electronic navigation data and hard copy prints may be different (e.g. issue dates.) This creats in praxis SAFA findings in some occasions.

Therefore it is recommended to define which of the sources are the primary ones for the intendant operation.

comment *2680* comment by: *AOPA-Sweden*

(c):

AOPA-S does not see that an individual owner of an airplane can comply with this paragraph.

comment *3335* comment by: *UK CAA*

Page No: 54

Paragraph No:

OPS.GEN.540.A

Comment:

This requirement should apply to all aircraft not just aeroplanes and therefore 'A' and 'Complex motor-powered aeroplanes' should be removed from the title.

Justification:

This requirement should be applied to all aircraft.

Proposed Text (if applicable):

OPS.GEN.540.~~A~~ Electronic navigation data management

~~- Complex motor-powered aeroplanes~~

comment *3879* comment by: *M Wilson-NetJets*

Original text:

(c) An operator shall continuously monitor both the process and the products.

Suggested new text:

An operator shall continuously monitor both the process and the products, either directly or **by monitoring the compliance of third party providers.**

Comment/suggestion:

Many operators outsource electronic navigation or chart database management to third party providers. Directly monitoring the process of third party providers is not efficient and should be done by established compliance monitoring procedures and practices.

comment *5070* comment by: *IAOPA Europe*

It seems not reasonable that a one-man non commercial operator should have to demonstrate to the authority that the delivered products meet standards of integrity. This is in no way propartional regulation.

comment *7591* comment by: *AOPA UK*

(c) AOPA UK does not see that an individual owner of an airplane can comply

with this paragraph.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.545 Cabin Crew Seats p. 54

comment *431* comment by: *EHOC*

General

It is not clear why the previously single rule for seats, safety belts and harnesses has been divided between a number of rules (GEN.405, GEN.480 GEN.545, CAT.406); it might be more appropriate to put all of the elements concerned with seats into a single rule in GEN.480.

comment *1489* comment by: *ECA - European Cockpit Association*

Comment: change as follows:

Each seat for the minimum required cabin crewmember shall be forward or rearward facing, within 15° of the longitudinal axis of the aircraft. **When it is required for the crew member seat to be able to swivel during flight, then the seat should be locked within 15 degrees of the longitudinal axis of the aircraft for take off and landing.**

comment *2681* comment by: *AOPA-Sweden*

Seems to be a design requirement, doesn't fit in here.

comment *4221* comment by: *DGAC*

This paragraph is not applicable to balloons, because there is no seat.

comment *5630* comment by: *Peter Moeller*

add: during take-off and landing.

comment *7592* comment by: *AOPA UK*

Seems to be a design requirement, does not fit in here.

B. I. Draft Opinion - Part-OPS - Subpart A - Section IV - OPS.GEN.550 Minimum equipment for flight p. 54-55

comment *70* comment by: *Air Southwest*

OPS.GEN.550 (a)(1) The word 'such' is erroneous - remove.

OPS.GEN.550 (a)(2) change "the aircraft has been subject to a permit to fly..." to " the aircraft is subject to a permit to fly..."

OPS.GEN.550 (b) suggested re-write: "The MEL shall not conflict with agency adopted ADs and SDs when the directive proscribes MEL application.

OPS.GEN.550 (c) Suggest: "Any inoperative (unserviceable) aircraft instrument or item of equipment shall not be removed from the aircraft unless:..."

OPS.GEN.550 (c)(3) amend to read as (a)(2) above

comment *432* comment by: *EHOC*

Paragraph (a)(1)

Editorial: incorrect use of the definite article. "such the aircraft..."

comment *680* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.550(a): change as follows:

(a) A flight of a complex motor-powered aircraft or an aircraft involved in commercial operations shall not be commenced when any of the aircraft instruments, items of equipment or functions are inoperative, except if:

(1) such ~~**the aircraft instrument, item of equipment or function**~~ d**efect is allowed according to** ~~**is part of the operator**~~ minimum equipment list (MEL); or

(2) the aircraft has been subject to a permit to fly issued by the competent authority **on the basis of MMEL** ~~**or organisations approved in accordance with Part-21**~~; or

Justification:

(1) wording not understandable, is contradictory to the intention of the MEL, items mentioned in the MEL may be required for all flights, or may be inoperative under certain conditions only.

The system of MEL/MMEL will be eliminated if there is no possibility to allow dispatch below MEL but above MMEL with the permission of the authority .This means that operators are not encouraged to establish safety standards

higher than MMEL.

(2) deviation below MEL shall not be given by organisations approved i.a.w. Part 21, only by authorities.

comment *994* comment by: *REGA*

(c) Following the rule: the inoperative equipment, e.g. rescue winch/spectro/cargo-hook, shall remain mounted respectively shall not be removed from the helicopter even when not used for further missions or non optional for the flight according the MEL or the AFM/RFM (= transport of unnecessary weights).

Proposal (c)

(c) *Any instrument or item of equipment that has been installed in an aircraft and becomes inoperative shall not be removed thereof, unless:*

(...)

(4) *the instrument or item of equipment is optional for flying according the AFM/RFM and the approved maintenance organisation.*

comment *1338* comment by: *Southern Cross International*

(a)(1)

For operators only performing contracted ferry flights or test flights for MRO's, maintaining individual operator MELs for each type/model/variant of aircraft that could potentially be flown is not practicable. Therefore use of an Agency approved MMEL issued by the manufacturer should be considered as an acceptable means of compliance with an equivalent level of safety. Where there is a conflict between the MMEL and an Airworthiness Directive or any other Mandatory Requirement, it is the data or information contained in the Airworthiness Directive or the Mandatory Requirement (e.g. Continued Airworthiness requirement) which shall override.

comment *2682* comment by: *AOPA-Sweden*

There is for some VLJs no MEL issued.

comment *3186* comment by: *Austro Control GmbH*

~~*(2) the aircraft has been subject to a permit to fly issued by the competent authority or organisations approved in accordance with Part-21; or*~~

Justification:

This requirement is missleading and gives the impression that commercial operation is possible with a permit to fly.

To avoid misinterpretation of the requirement clarification with regard to minimum equipment for a flight under a permit to fly has to be added.

There fore delete point (2) and add a new paragraph (d) at the end.

(d) For aircraft operated under a permit to fly issued by the competent authority or organisations approved in accordance with Part-21 the minimum equipment required for the flight has to be regulated under the flight conditions.

comment *3336* comment by: *UK CAA*

Page No: 54

Paragraph No:

OPS.GEN.550(a)(1)

Comment:

Remove the superfluous 'such'.

Justification:

Typographical error

Proposed Text (if applicable):

OPS.GEN.550 Minimum equipment for flight

(a) A flight of a complex motor-powered aircraft or an aircraft involved in commercial operations shall not be commenced when any of the aircraft instruments, items of equipment or functions are inoperative, except if:

(1) ~~such~~ the aircraft instrument, item of equipment or function is part of the operator minimum equipment list (MEL); or

comment *3565* comment by: *Walter Gessky*

OPS.GEN.550 Minimum equipment for flight

Delete (2) ~~the aircraft has been subject to a permit to fly issued by the competent authority or organisations approved in accordance with Part-21; or~~

Add a new "(d) For aircraft operated under a permit to fly issued by the competent authority or organisation approved in accordance with Part-21 or Part M, the minimum equipment required for the flight has to be regulated under the flight conditions."

Justification:

To avoid misinterpretation of the requirement, clarification is required. The requirement gives the impression that commercial operation with a permit to

fly is possible. For clarification with regard to minimum equipment for a flight under a permit to fly (d) has to be added.

comment

3895 comment by: *FOM ANWB MAA*

OPS.GEN.550 Minimum equipment for flight

(c) Any instrument or item of equipment that has been installed in an aircraft and becomes inoperative shall not be removed thereof, unless:

(1) it is replaced by an operative instrument or equipment; or

(2) it is specifically permitted by the MEL; or

(3) the aircraft has been subject to a permit to fly issued by the competent authority or approved organisations.

(4) the aircraft instrument, item of equipment or function is not required for the safe operation of the aircraft.

It should be possible to remove equipment not required for safe operation. Example: it would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment

3943 comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(c)(4) ADD article with same wording as OPS GEN 550 (a) (3), it should be possible to remove equipment not required for safe operation. Example: it would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment

4404 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state:(3) the aircraft instrument, item of equipment or function, **if not listet in the MEL,** is not required for the safe operation of the aircraft

comment

4946 comment by: *ADAC Luftrettung GmbH*

OPS.GEN.550(c)(4)

ADD article with same wording as OPS GEN 550 (a) (3)

ADD article with same wording as OPS GEN 550 (a) (3), it should be possible to remove equipment not required for safe operation. Example: it would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment *5434* comment by: *ALFA-HELICOPTER*

ADD article with same wording as OPS GEN 550 (a) (3), it should be possible to remove equipment not required for safe operation. Example: it would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment *5684* comment by: *ERA*

European Regions Airline Association Comment

(a) A flight of a complex motor-powered aircraft or an aircraft involved in commercial operations shall not be commenced when any of the aircraft instruments, items of equipment or functions are inoperative, except if:

(2) the aircraft has been subject to a permit to fly issued by the competent authority or organisations approved in accordance with Part-21; or .....

Paragraph (a)(2) refers to permit to fly which is a specific airworthiness document which is not what is sought here. Therefore (a)(2) should be amended as follows:

(2) the aircraft **has been permitted to fly by** the competent authority or organisations approved in accordance with Part-21; or.....

comment *5776* comment by: *Norsk Luftambulanse*

(c)(4) ADD article with same wording as OPS GEN 550 (a) (3), it should be possible to remove equipment not required for safe operation. Example: it would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment *5963* comment by: *HSD Hubschrauber Sonder Dienst*

550(c)(4):

ADD article with same wording as OPS.GEN.550(a)(3), it should be possible to remove equipment not required for safe operation

(a winch for example).

comment *6609* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.550 Minimum equipment for flight

(c) Any instrument or item of equipment that has been installed in an aircraft and becomes inoperative shall not be removed thereof, unless:

(1) it is replaced by an operative instrument or equipment; or

(2) it is specifically permitted by the MEL; or

(3) the aircraft has been subject to a permit to fly issued by the competent authority or approved organisations.

(4) the aircraft instrument, item of equipment or function is not required for the safe operation of the aircraft.

It should be possible to remove equipment not required for safe operation. Example: It would not be possible to take a broken winch off the helicopter, which is allowed when it is operative.

comment *7268* comment by: *ANE (Air Nostrum) OPS QM*

(a) A flight of a complex motor-powered aircraft or an aircraft involved in commercial operations shall not be commenced when any of the aircraft instruments, items of equipment or functions are inoperative, except if:

(2) the aircraft has been subject to a permit to fly issued by the competent authority or organisations approved in accordance with Part-21; or .....

Paragraph (a)(2) refers to permit to fly which is a specific airworthiness document which is not what is sought here. Therefore (a)(2) should be amended as follows:

(2) the aircraft has been permitted to fly by the competent authority or organisations approved in accordance with Part-21; or.....

comment *7593* comment by: *AOPA UK*

There is for some VLJs no MEL issued.

B. I. Draft Opinion - Part-OPS - Subpart A - Section V p. 56

comment *2295* comment by: *Austro Control GmbH*

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents, ***which shall contain the performance data of the relevant aircraft***

Justification:

Addition of information is in the interest of safety.

B. I. Draft Opinion - Part-OPS - Subpart A - Section V - OPS.GEN.600 Documents and information to be carried on all aircraft p. 56

comment *43* comment by: *George Knight*

-(a) (6) Whilst this may be appropriate for commercial flying and aerial work it has no relevance to light general aviation and gliding.

For aircraft with 4 or fewer seats (including crew) the requirement for a journey logbook should be waived. Sufficient data will exist in the pilots' log books, existing design aircraft log books and airfield flight records to meet all conceivable requirements. This additional bureaucracy is over-regulation for private, recreational and sporting aviation – especially gliding.

comment *44* comment by: *George Knight*

-(b) The waiver not to carry all documents on some flights is reasonable, however, the need to leave the documents at the aerodrome/operating site is big aeroplane thinking. Some private syndicate aircraft may be parked at an airfield but it is likely that there is no secure place to store documentation the aircraft operators/owners having no premises at the site. Since several owners may share the a/c on a rotating basis they may not meet often and handing over documents is logistically difficult.

Propose change "…may be retained at the aerodrome…" with, "…may be retained at a safe place"

comment *45* comment by: *George Knight*

-(a) (8) Currently this is a legal requirement (UK) only for flights crossing an international boundary. Non-commercial aircraft conducting flight entirely within the airspace of a single state should be exempted.

Regardless, sailplanes should be exempt on flights conducted entirely within then airspace of a single state because they are not capable of following intercepting aircraft's instructions – and I doubt that any intercepting aircraft could fly slowly enough to conduct their part of the drill.

comment *708* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.600(a)(1): "equivalent documents" is ambiguous, the wording from EUOPS 1.130(3): "The current Aeroplane Flight Manual is carried in the aeroplane unless the Authority has accepted that the Operations Manual prescribed in JAR-OPS 1.1045, Appendix 1, Part B contains relevant information for that aeroplane" should be maintained in

the rule.

comment *709* comment by: *ECA - European Cockpit Association*

General comment on OPS.GEN.600: Documents and manuals should be divided into those that should be easily accessible to the crew according to EUOPS 1.130(2): "Those parts of the Operations Manual which are required for the conduct of a flight are easily accessible to the crew on board the aeroplane" [a/c flight ,manuals, aeronautical charts, interception procedures and signals, technical logbook, ATS flight plan, relevant parts of the OPS manual, MEL, OPS FPL, briefing documents (according OPS.GEN605 (8)(i)-(v)] accessibility of documents not to be regulated by AMC.

comment *711* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.605(a)(8): add the following text:

Forms to comply with the reporting requirements of the Authority and the operator.

Justification:

Necessary for compliance with EU OPS contents.

comment *803* comment by: *CAA-NL*

(b) '…OPS-GEN.600(a)(1)-(6) …'

Add:

(a)(2) and (3) CoA and CoR always to be carried

Reason:

due to possible diversion for evidence purpose

(c) '…OPS-GEN.600(a)(1)-(6) …'

Add:

(a)(2) and (3) CoA and CoR always to be carried

Reason:

due to possible diversion for evidence purpose

comment *1000* comment by: *British Gliding Association*

Sailplane flights, unlike most aeroplane flights, are planned so that the sailplane lands back at its take-off site. A very small percentage of the total

land away from the take-off site. In addition, as sailplanes are designed for optimal aerodynamic efficiency and minimum cross section, there is little space for storage.

Original documents can become worn and damaged in use. Replacements are very expensive in member states where NAA's recover a financial surplus on their regulatory activities (eg the UK CAA).

The BGA offers the following observations relating to the carriage of those documents in sailplanes in general;

(1) the Aircraft Flight Manual or equivalent documents;

This important pre-flight reference document cannot be referred to in flight. There is no safety or operational need to carry this document in a sailplane.

(2) the Certificate of Airworthiness;

It is assumed here that the agency is referring to the Airworthiness Review Certificate, which can only be held where a Certificate of Airworthiness exists. Pilots of club sailplanes in particular need to be aware of validity of the airworthiness certificate. Unfortunately Part M rules require that this can only be assured through the ARC format described within Part M. The BGA agrees therefore that until Part M is modified appropriately, an exact copy or the original ARC should be carried in the sailplane. There is however no safety or operational need to carry the Certificate of Airworthiness in a sailplane.

(3) the Certificate of Registration;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(4) the original or copy of the Noise Certificate, if applicable;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(5) the original or copy of the third party liability Insurance Certificate;

As it is possible for a sailplane to make an out-landing where third party property can be affected, the BGA agrees that a copy of the aircraft insurance certificate carried in the sailplane will be of assistance.

(6) the journey log book for the aircraft;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

The BGA agrees that these documents should be carried in a sailplane

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew;

As interception requirements are learnt during FCL theoretical knowledge training. There is no safety or operational need to carry this documentation in a sailplane.

and (9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

The BGA finds it difficult to comment on such an ambiguous statement.

The BGA finds no justification for the disproportional approach taken within this proposed IR.

The BGA therefore proposes the following wording change for OPS.GEN.600 Documents and information to be carried on all aircraft;

OPS.GEN.600 Documents and information to be carried on all aircraft

(a) On any aeroplane or helicopter, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents;

(2) the original or copy of the Airworthiness Review Certificate;

(3) the original or copy of the Certificate of Registration;

(4) the original or copy of the Noise Certificate, if applicable;

(5) the original or copy of the third party liability Insurance Certificate;

(6) the journey log book for the aircraft;

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

(b) On any sailplane or powered sailplane, the following documents shall be carried on each flight:

(1) the original or copy of the Airworthiness Review Certificate;

(2) the original or copy of the third party liability Insurance Certificate;

(3) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

comment *1031* comment by: *arno liesch*

a 9: HEMS-Flights should be treated the same way as the description in article b. The Helicopter returns mostly to his point of departure. Especially the Flight-Log should remain on HEMS-Operating-Base.

comment *1036* comment by: *REGA*

OPS.GEN.600 (a): HEMS-Flights should be treated the same way as the description in article b. The Helicopter (complex or non-complex) returns to his point of departure (HEMS operating base).

OPS.GEN.600 (b): The distance shall not be defined by numbers. The operator has to define the specific local area according the requirements by the competent authority.

Proposal (OPS.GEN.600, b)

(…) taking off and landing at the same aerodrome/operating site and remaining within 50 nm of that aerodrome/operating site or in a specific operating area approved by the competent authority; *(…) of departure ~~on the same day~~ within the same 24 hours period;*

Proposal (OPS.GEN.605, 3)

(…) on commercial air transport flights ~~by day and~~ over routes navigated by reference to visual landmarks, with: (…)

(ii) ~~other than complex motor-powered helicopters~~ ~~and~~ helicopters having a maximum passenger seating configuration of 9 or less engaged in flight operations conducted within a local area specified in the operations manual approved by the competent authority;

comment *1044* comment by: *AECA helicopteros.*

The description of the required maps should be contained in Flight Planning rule

comment *1554* comment by: *Luftfahrt-Bundesamt*

Under (a) (5) as a further document the **„Third party liability insurance certificate“** should be added.

comment *1753* comment by: *Swedish Soaring Federation*

Para (b) shall also apply to sailplanes flying cross-country on closed circuits (i.e returning to the launch aerodrome). There is no possibility to carry all these documents in a cramped sailplane cockpit.

comment *1914* comment by: *Ingmar Hedblom*

The Aircraft Flight Manual or equivalent documents should be on-board also during local flights. There may be a need to consult these in an emergency situation, a flight safety issue.

Change the last part of the text to …” information referred to in

OPS.GEN.600**(a)(2)** - (6) may be retained at the aerodrome/operating site

comment *2008* comment by: *Klaus HARTMANN*

zu (c) :

Für non-commercial flights mit Ballonen ist es nicht gefordert das Flight Manual während der Fahrt mit an Bord zu haben. Die Mitnahme im Verfolgerfahrzeug ist danach ausreichend. Dies verhindert aber grundsätzlich das schnelle Auffinden wichtiger Informationen in besonderen Situationen oder z.B. für Piloten die weniger vertraut mit dem gerade verwendeten Ballon sind oder Checklisten für Notverfahren.

Auch wenn das Flughandbuches im Ballon während der Fahrt selten benutzt wird, sollte es dem Piloten grundsätzlich aus Sicherheitsgründen zur Verfügung stehen. Die Mitnahme im Ballonkorb stellt auch keinerlei Platz- oder Gewichtsprobleme dar.

Der Satz (c) sollte daher geändert werden nach :

On non-commercial flights with balloons, the documents referred to in OPS.GEN.600 (a)(2) - (6) may be carried in the retrieve vehicle.

comment *2384* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Replace "to be carried on all aircraft" by "to be available on all aircraft".

Delete "original or copy" from (4) and (5) as this implies the option is not available to the other documents.

Clarification is required for:

1. **AMC OPS.GEN.600.2** states the documents and information may be available in a form other than on printed paper; this implies also electronic documents and/or hard copies.Is this correct?

2.Please also clarify that the carriage of the Airworthiness review Certificate is also covered by the mandatory carriage of the C of A

comment *2787* comment by: *Southern Cross International*

To facilitate ferry flights and test flights OPS.GEN.600 (a) (2) shall be modified as follows:

(2) the Certificate of Airworthiness or Permit to Fly issued by the competent authority or organisations approved in accordance with Part-21, as appropriate;

comment *2788* comment by: *Southern Cross International*

It should be possible to have certain documents and information available in an electronic format such as an Electronic Flight Bag (EFB).

comment *3049* comment by: *AEA*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***'or equivalent computerized data'***

comment *3160* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

to c: on commercial and non-commercial-flights all documents except the disaster-management-plan may be carried in the retrieve-vehicle

Following the rule: Bevor Sie das Handbuch aufgeschlagen haben, sind Sie aufgeschlagen.

comment *3187* comment by: *Austro Control GmbH*

(a)

On any aircraft, the following documents shall be carried on each flight:

Add a new

(a) (10) the Aircraft Radio Licence, if applicable;

Justification:

Required according ICAO SARP for all aircraft when a radio station is available.

comment *3245* comment by: *Aero-Club of Switzerland*

We think, whenever possible and reasonable, only exact copies of valid

documents (1), (2) and (3) should be carried onboard.

Justfication for powered aircraft: In case of a fire, valuable documents could be destroyed.

Justification for sailplanes: There is neither room nor necessity to cary all this papers onboard the aircraft!

To (8): "visual signals": We support the idea if the Agency is of the opinion, that pictograms of these signals must be easily available on a map or in a manual.

Justification: This reduces stress in emergency, even after having learnt everything.

To (9): Please give details, otherwise each and every NAA will ask for something different!

Justification: EASA officers said to us that the main idea of the Agency is to make us, the users, more independent from the NAA...

comment *3420* comment by: *barry birch*

As balloon baskets are open and there is the risk of theft or items being lost from the basket during landing, it would be better to keep any paperwork safely in the retrieve vehicle. Barry Birch, Balloon Pilot/Instructor, Italy.

comment *3566* comment by: *Walter Gessky*

OPS.GEN.600 Documents and information to be carried on all aircraft

(a) On any aircraft, the following documents shall be carried on each flight:

Add a new **(a) (10) the Aircraft Radio Licence, if applicable;**

Justification:

Required according ICAO SARP for all aircraft when a radio station is available.

comment *3637* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***'or equivalent computerized data'***

comment *3821* comment by: *IAOPA Europe*

For some documents it is explicitly stated that the document may be a copy or an original, for other documents this distinction is not made.

There should no requirement to carry originals since these are often best stored safely on the ground. An copy of the original document should be sufficient as onboard documentation.

comment *3881* comment by: *M Wilson-NetJets*

Original text:

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents;

(2) the Certificate of Airworthiness;

(3) the Certificate of Registration;

(4) the original or copy of the Noise Certificate, if applicable;

(5) the original or copy of the third party liability Insurance Certificate;

(6) the journey log book for the aircraft;

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

(c) On non-commercial flights with balloons, the documents referred to in OPS.GEN.600(a)(1) - (6) may be carried in the retrieve vehicle.

Suggested new text:

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents;

(2) the Certificate of Airworthiness;

(3) the Certificate of Registration;

(4) the original or copy of the Noise Certificate, if applicable;

(5) the original or copy of the third party liability Insurance Certificate;

(6) the journey log book for the aircraft;

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

(c) On non-commercial flights with balloons, the documents referred to in OPS.GEN.600(a)(1) - (6) may be carried in the retrieve vehicle.

(d) Documentation in OPS.GEN.600(a)(6) -(9) may be carried onboard the aircraft by other means than paper if so approved by the responsible authority.

Comment/suggestion:

To ensure compatibility with electronic carriage of documents and manuals, a clause should be added to provide for this opportunity.

comment *4073* comment by: *Ted Moore*

Surely the carriage of the documents mentioned in (C) can be carried in the retrieve vehicle in both commercial and non commercial flights. What is the difference?

comment *4222* comment by: *DGAC*

OPS.GEN.600 + OPS.GEN.610 + AMC OPS.GEN 610

Proposal :

Return to the wording of EU-OPS 1055(b)

(b) An operator may be permitted not to keep an aeroplane journey log, or parts thereof, by the Authority if the relevant information is available in other documentation.

Justification

As written OPS.GEN.600 + OPS.GEN.610 seem to imply that a journey log has to be established and carried on board, which is not consistant with the possibility provided in EU-OPS OPS 1.125 & 135 + OPS 1.1055b, which allowed to gather this information in other documentations.

comment *4285* comment by: *KLM*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent computerized data'***

comment *4405* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: (6) the journey log book for the aircraft, **if not in an electronic format**;

comment *4497* comment by: *TAP Portugal*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent computerized data'***

comment *4673* comment by: *British Airways Flight Operations*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent computerized data'***

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4888* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent computerized data'***

comment *5127* comment by: *Ryanair*

(9) - the wording "or is required by the States concerned with the flight" is too vague in this context and could be misinterpreted by members states

Proposal

(9) "....or is required by the authority designated by the Member State where the operator has its principle place of business"

comment *5146* comment by: *Trevor Wilcock*

Para a - general: I question the wisdom of carrying original documents in an aircraft. In the event of accident, such important documents, which might relate to safety investigations, could be destroyed. I also see no operational reason to carry original documents. This appears to be recognised by OPS.GEN.615 which calls for such documentation to be provided to the

competent authority within a reasonable time. If so, why not store originals off-aircraft.

Para a (1): this seems to reflect "big aircraft" thinking. There is nothing in the aircraft flight manual for my sailplane or light aircraft that I need to refer to in the course of my flights. Loading, cg and airfield performance calculations are simple matters for which I do not need to refer to the flight manual; any data that I might need I have already prepared in appropriate form. In any case in a sailplane there is no room to store and access such a manual during flight.

Para a (2) - (5): I propose copies, not originals.

Para a (6): the practicalities of sailplane operations are not taken into account here. A training sailplane may in a day make several tens of short flights, with frequent changes of crew. The information on crew and flight duration is, in the case of my club, recorded at the launch point and retained. Transcribing it into a journey log giving crew and journeys (or even series of journeys) would be a substantial task which would make no safety or operational contribution.

Para b - the alleviation proposed here is still reflective of commercial aircraft thinking. I operate my light aircraft from a farmer's field. It does not make sense to keep significant documents at such an operating site; they are far better retained at home, to be produced on demand in a reasonable time in accordance with OPS.GEN.615.

comment *5265* comment by: *Graham HALLETT*

OPS.GEN.600 (c).

This implies that for commercial flights these documents must be carried on board, but in OPS.GEN.605(c), it says they can be carried in the retrieve vehicle. Would it not be simpler to say within this clause: 'For balloons, the documents…. May be carried in the retrieve vehicle'.

comment *5315* comment by: *Light Aircraft Association UK*

Paragraph b).

Since emergency documentation may be contained in the operating manual which may be required even on local flights, this paragraph should be reworded "… the documents and information referred to in OPS.GEN.600 a)2) – 6) may be retained at the aerodrome/operating site".

comment *5386* comment by: *Norwegian Air Sports Federation*

Carrying these documents in original version on board in every flight will destroy these documents. There should be an possibility to carry a copy on

board.

For most air sports the flight starts and ends at the home field. There is no need to carry the document s in (1)-(6) for these flights.

comment *5463* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***'or equivalent computerized data'***

comment *5690* comment by: *ERA*

European Regions Airline Association Comment

(a) On any aircraft, the following documents shall be carried on each flight:

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

First: Apart from some requirements are not justified there is no provision for Electronic Flight Bags [EFB]. Therefore, suggest the following changes to (a) (8) (9):

(8) ~~procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and (9)~~ any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

The Authority may permit the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed paper. An acceptable standard of accessibility, usability and reliability must be assured

Second: There is also a need for greater clarification regarding documents to be carried on board. Some places in IR state that an original or a copy is accepted. In other places in the IR there is incoherent information. There is a need to determine whether documents must be originals or if copies are possible. This is of special importance when it comes to C of A and certificate of registry

comment

5715 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents;

- - -

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

Comment:

Except for aerobatic flights, the AFM should be onboard for flights within 50 nm radius from the departure airport

Proposal (including ***new text***):

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(~~1~~ ***2***) - (6) may be retained at the aerodrome/operating site.

comment

6042 comment by: *Fédération Française Aéronautique*

French FFA supports this requirement, including item (a), (4) and (5) which accept copy of original document.

Additionally, FFA proposes to extend the possibility to carry a complete copy of the following documents :

- (1) Airplane Flight Manual,
- (2) Certificate of Airworthiness
- (3) Certificate of Registration

Justification : Doing so, those importants documents will be preserved from destruction in case of accident. FFA does not see any difference with documents (4) and (5) for which a copy of the original is accepted.

FFA supports also item (b) which alleviate the requirement to carry all documents during "local flights"

comment

6166 comment by: *EUROPEAN GLIDING UNION*

Para (b) shall also apply to sailplanes flying cross-country on closed circuits (i.e returning to the launch aerodrome). There is no possibility to carry all these documents in a cramped sailplane cockpit.

comment *6274* comment by: *DAeC LV NRW e.V.*

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

OPS.GEN.600(b)

Wording in the NPA

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

Our proposal

(b) On < delete: non-commercial> flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

Issue with current wording

This rule should also be applicable to commercial flights on non complex airplanes and sailplanes

Rationale

Passenger rides with non complex aircraft e.g. sailplanes usually occur unexpectedly during otherwise non commercial operation when interested passengers show up on the airfield. It is not appropriate to require documents to be on the airplane just for these occasional rides. Often they are not available directly at the takeoff location.

comment *6417* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

In EU-OPS, journey logbook did not have to be carried on board.

Proposal

Remove the requirement for journey logbook on board.

Justification

Nothing proves that this would clearly improve safety.

comment *6419* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

There is no consistency with NPA 2008-22 as nothing mentions Part-OR certificate here. Anyways , we re-new our comment previsouly made in NPA 2008-22 : This appendix gives the template for a new Part OR certificate. It seems not be stated anywhere such a certificate is required.

Where is such a certificate defined in the IRs ? in part-OR? in part-AR? in part-OPS ? in part FCL ?

Moreover, it is not clear :

• If an organization needs an OR certificate and an operational certificate (eg: ATO, AOC, FSTD…)?

• If any operational certificate (eg: ATO, AOC, FSTD…) is considered as a an annex or supplement to this OR certificate?

• If the delivery of any operational certificate (eg: ATO, AOC, FSTD…) implies that the organization is compliant with OR requirements, and thus if such an operational certificates de facto includes the OR compliance ? (in this case, a specific OR certificate would be useless)

PROPOSAL

Re-write, precise and homogenize requirements between different parts according to their activity .

Clarify it in the IRs :

• If there is really a need for a new OR certificate?

• If any operational certificate is to be considered as an appendix to such a possible OR certificate ?

• if any operational certificate is to be considered as an independent document ?

or

• if there is no need for such a supplementary OR-certificate which would be complexifying the regulation in a contrary manner to Basic Regulation aims.

comment *6537* comment by: *TG WHITING*

Once again this proposal does not seem to have taken into account the operational use and technical specification of a sailplane. Sailplane flights are generally designed to return back to the take off site. Sailplanes are designed for maximum efficiency and have little storage space/weight allowances for storage of extensive paperwork (or indeed anything else).

In the typical glider there is no provision for carrying paperwork where it will

not risk damage or loss.

THe flight manual is of no use during the duration of a glider flight and thus there seems no safety reason as to why it should be carried in flight. The Airworthiness Review Certificate is not awarded (Part M rules) unless a valid Certificate of Ariworthiness exists. There therefore seems to be no need to carry the Certificate of Airworthiness in the sailplane. The ARC document is amended over the course of 3 years and thus cannot be laminated as protection. There is a real risk of loss or damage in carrying the original and I would propose that it be mandatory only to carry an exact copy. There also seems to be no safety or operational benefit to carrying the Certificate of Registration and the log book of the sailplane in each flight.

It would seem very appropriate to carry a copy of the third party liabilty Insurance certificate for the sailplane in case of damage incurred to a third party in an outlanding. Similarly aeronautical charts as required for the legal operation of the planned flight should always be carried.

I would propose amending the OPS GEN 600 with a separate option for sailplanes specifying only the copy of the ARC review, a copy of the third party liability insurance document and the current appropriate aeronautical charts.

comment *6571* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.600(b)

Wording in the NPA

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

Our proposal

As discussed on Comment 6273 certain flights of non commercial organizations and persons should not be considered as commercial operation although payments for cost sharing are exchanged. So this requirement should apply. Never the less it should be further extended:

(b) On < delete: non-commercial> flights with sailplanes, other than complex motor-powered aeroplanes and helicopters taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, the documents and information referred to in OPS.GEN.600(a)(1) - (6) may be retained at the aerodrome/operating site.

Issue with current wording

This rule should also be applicable to commercial flights on non complex airplanes and sailplanes

Rationale

Passenger rides with non complex aircraft e.g. sailplanes usually occur unexpectedly during otherwise non commercial operation when interested passengers show up on the airfield. It is not appropriate to require documents to be on the airplane just for these occasional rides. Often they are not available directly at the takeoff location.

comment *6710* comment by: *Finnish Aeronautical Association - Kai Mönkkönen*

Sailplane activity in clearly most cases is made from a certain aerodrome or gliding site despite of a length of a cross-country flight route. We consider it is essential that the required documentation as in OPS.GEN.600 for sailplanes is required to be available for a pilot making daily inspection before sailplane flight operation of the day. Quite limited space available in a sailplane cockpit restricts practical storage of the required documentation also during a flight. We do not see any other documents than perhaps flight manual such that even in principle would be needed by the pilot during the flight.

We suggest that in case of sailplanes and powered sailplanes the documentation shall be made available at least for daily inspection.

comment *6800* comment by: *Icelandair*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent computerized data'***

comment *6830* comment by: *EFLEVA*

Comment on OPS.GEN 600 and AMC OPS.GEN 600 (page 256)

The EFLEVA supports the note in the AMC OPS.GEN.600 item 2, that allows documentation to be carried in "a form other than on printed paper".

comment *6833* comment by: *EFLEVA*

Comment on OPS.GEN 600 b).

The EFLEVA notes that emergency information could be included in the operating manual. This may be required even on local flights. EFLEVA suggests that the final part of the paragraph should be reworded "… the documents and information referred to in OPS.GEN.600 a)2) – 6) may be retained at the aerodrome/operating site".

comment *6899* comment by: *Luftsport-Verband Bayern*

zu: GEN.600 Documents and information to be carried on all aircraft:

Heute werden vielfach elektronische "Moving-Maps" eingesetzt.

Vorschlag zur Neuformulierung: (7) current and suitable aeronautical paper or electronical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

comment *7065* comment by: *IACA International Air Carrier Association*

(a)(3)

Replace "to be carried on all aircraft" by "to be available on all aircraft".

(a)(4) and (a)(5)

Delete "original or copy" from (4) and (5) as this implies the option is not available to the other documents. AMC OPS.GEN.600 2. states the documents and information may be available in a form other than on printed paper; this implies also electronic documents and/or hard copies.Please clarify.

Please also clarify that the requirement to carry the Airworthiness Review certificate adequately covered by the mandatory carriage of the Certificate of Airworthiness ?

comment *7244* comment by: *AIR FRANCE*

Relevant Text:

(a) On any aircraft, the following documents shall be carried on each flight

6) the journey log book for the aircraft.

Comment:

Most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***'or equivalent data from other documents'***

comment

7267 comment by: *EPFU is the European Union of national powered flying organisation from the 10 main European countries*

At least on board non complex aeroplanes used in non commercial operations, EPFU thinks that a copy of all official original documents must be sufficient.

So EPFU suggests to allow non complex aeroplane involved in non commercial operations to carry **only copies** of documents listed in OPS.GEN.600 (a), (1) to (5).

comment

7277 comment by: *ANE (Air Nostrum) OPS QM*

(a) On any aircraft, the following documents shall be carried on each flight:

(...)

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew; and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

First: Apart from some requirements are not justified there is no provision for Electronic Flight Bags [EFB]. Therefore, suggest the following changes to (a) (8) (9), delete old (8) and put (9) as new (8):

(8) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

Add:

The Authority may permit the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed paper. An acceptable standard of accessibility, usability and reliability must be assured

Second: There is also a need for greater clarification regarding documents to be carried on board. Some places in IR state that an original or a copy is accepted. In other places in the IR there is incoherent information. There is a need to determine whether documents must be originals or if copies are possible. This is of special importance when it comes to C of A and certificate of registry

comment

7387 comment by: *Europe Air Sports, VP*

These requirements with the exception of (7) contribute in no case to flight safety. It only enables ground authorities to police the operation of that

aircraft.

Second, the original documents should be kept in a safe place while it is sufficient to carry copies. We recommend to discuss the need for carrying which copies of documents during the CRD process.

comment *7396* comment by: *Comercial Operators in Sweden*

OPS.GEN.600 Ducuments and Information to be carried on all aircrafts

When flying a balloon you do not have a cocpit, you are outside and I whant to suggest that balloons are allowed to carry copies of the documents.

This to be shure that the original documents will not be damage or lost.

comment *7400* comment by: *Comercial Operators in Sweden*

I suggest that all docoments will be allowed to have in the retrive vehicle.

comment *7458* comment by: *European Sailplane Manufacturers*

Sailplane flights, unlike most aeroplane flights, are planned so that the sailplane lands back at its take-off site. A very small percentage of the total land away from the take-off site. In addition, as sailplanes are designed for optimal aerodynamic efficiency and minimum cross section, there is little space for storage.

Original documents can become worn and damaged in use. Replacements are very expensive in member states where NAA's recover a financial surplus on their regulatory activities (eg the UK CAA). The BGA (and also the sailplane manufacturers) offers the following observations relating to the carriage of those documents in sailplanes in general;

(1) the Aircraft Flight Manual or equivalent documents;

This important pre-flight reference document cannot be referred to in flight. There is no safety or operational need to carry this document in a sailplane.

(2) the Certificate of Airworthiness;It is assumed here that the agency is referring to the Airworthiness Review Certificate, which can only be held where a Certificate of Airworthiness exists. Pilots of club sailplanes in particular need to be aware of validity of the airworthiness certificate.

Unfortunately Part M rules require that this can only be assured through the ARC format described within Part M. The BGA agrees therefore that until Part M is modified appropriately, an exact copy or the original ARC should be carried in the sailplane. There is however no safety or operational need to carry the Certificate of Airworthiness in a sailplane.

(3) the Certificate of Registration;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(4) the original or copy of the Noise Certificate, if applicable;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(5) the original or copy of the third party liability Insurance Certificate;

As it is possible for a sailplane to make an out-landing where third party property can be affected, the BGA agrees that a copy of the aircraft insurance certificate carried in the sailplane will be of assistance.

(6) the journey log book for the aircraft;

The BGA believes that there is no safety or operational need to carry this document in a sailplane.

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

The BGA agrees that these documents should be carried in a sailplane

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew;

As interception requirements are learnt during FCL theoretical knowledge training. There is no safety or operational need to carry this documentation in a sailplane.and (9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight. The BGA finds it difficult to comment on such an ambiguous statement. The BGA finds no justification for the disproportional approach taken within this proposed IR.

The BGA and the sailplane manufacturers therefore propose the following wording change for OPS.GEN.600 Documents and information to be carried on all aircraft;

OPS.GEN.600 Documents and information to be carried on all aircraft

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent

documents;

(2) the original or copy of the Certificate of Airworthiness;

(3) the original or copy of the Certificate of Registration;

(4) the original or copy of the Noise Certificate, if applicable;

(5) the original or copy of the third party liability Insurance Certificate;

(6) the journey log book for the aircraft;

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew;

and

(9) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

(b) On non-commercial flights with sailplanes, other than complex motor-powered aeroplanes and helicopters, the documents and information referred to in OPS.GEN.600(a)(1),(3),(4) & (6) may be retained at the aerodrome/operating site.

comment *7475* comment by: *David ROBERTS*

This is the set of proposed rules that I have explained previously, during the drafting phase, is (a) impractical (b) unnecessary (c) bureaucratic (d) without a safety case for sailplanes in particular.

1. Having originals of some of the documents on board can lead to them being lost / destroyed / degraded through frequent handling. Therefore copies should be adequate when documents are justified in carriage. Original documents cost money to replace. Copies do not.

2. In a sailplane, no pilot in his right mind is going to look at the flight manual in flight. All the necessary information he / she needs is on a placard or in his / her head.

3. There is just simply not room in most sailplanes to carry all these documents

4. There are alternative means of ascertaining compliance, when necessary, for the state of the aircraft. It carries registration markings, therefore can be checked 'online' on the ground as to its CofA status without carrying the actual CofA document on board.

5. These requirements appear to be borne out of certain member States' local rules (France? and maybe some former eastern block countries?). Please rethink this for a modern western democracy!

6. The distinction in sub para (b) for flights < 50 NM radius from the take off aerodrome is arbitary and adds nothing. Why should not all documents be held on the ground for any flight planned to return to the base aerodrome?

7. It is far from convenient for the owners of privately owned aircraft to keep the documents at the aerodome. Most will keep them at home or in their office.

I regard this set of proposals as cometely disproportionate and lends credence to those who criticise the 'European system' for ultimate bureaucracy.

Proposal: re-think this whole section PLEASE on review and take notice of what the real experts think!

comment | *7515* | comment by: *John Castle*

To carry other than a copy of the ARC and insurance documents is impractical and unnecessary in a sailplane. No reference can be made to manuals etc in flight. It is possible that an out landing could damage a 3rd party property and therefore proof of insurance may be required. Whilst most cross country flights are navigated with GPS based equipment it is sensible that the appropriate Aeronautical charts are carried for reference in the event of a system failure.

B. I. Draft Opinion - Part-OPS - Subpart A - Section V - OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations p. 56-57

comment | *434* | comment by: *EHOC*

Paragraph (a)(6)

Editorial; not sure that portions (which is usually associated with allocation) is the correct word; it might be better as:"Those parts of the operations manual..."

Paragraph (b)(3)

Whilst this is not an issue for A to A operations; for operations in a local area (which for example in some States are all operations within the State borders), some of these elements are considerably beyond those envisaged in the original rule - which considered flights only in a single day.

As far as the OPS.GEN.605 is concerned, the alleviation from carriage (under the conditions above) of:

The Flight Manual;

The CofA;

The CofR

The liability insurance certificate;

The journey log book

appears to be too liberal.

comment | *681* | comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.605(a): add the following text:

(9) Information according to (2), (3), (4), (6), (7) and (8) shall be easily accessible to the flight crew.

Justification:

Safety relevant.

comment *706* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.605: Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations.

Should be split up in two paragraphs: GEN 605 and CAT 605.

Justification:

non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations are mixed in one paragraph.

comment *707* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.605(a)(9): EUOPS 1.125(b) Implicit

accepted

comment *710* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.605: Documents and manuals should be divided into those that should be easily accessible to the crew according to EUOPS 1.130(2): "Those parts of the Operations Manual which are required for the conduct of a flight are easily accessible to the crew on board the aeroplane" [a/c flight ,manuals, aeronautical charts, interception procedures and signals, technical logbook, ATS flight plan, relevant parts of the OPS manual, MEL, OPS FPL, briefing documents (according OPS.GEN605 (8)(i)-(v)]

Note that the accessibility of documents is not to be regulated by AMC

comment *805* comment by: *CAA-NL*

Comment regarding:

(a)(2) the Aircraft Technical Log in accordance with Part-M;

CAA-NL proposes EASA to add:

M.A. 306

Reason:

Clear reference to Part M

comment *806* comment by: *CAA-NL*

Comment regarding:

(a)(5) a certified true copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

CAA-NL proposes EASA to add:

AMC/GM for alternative compliance

Reason:

Currently no clear compliance procedures are defined

comment *807* comment by: *CAA-NL*

Comment regarding:

a)(6) portions of the operations manual relevant to the duties of the crew;

CAA-NL: proposes EASA to add:

'current' to the operations manual

Reason:

In compliance with EU-OPS and JAR-OPS to emphasize currency of OM

comment *808* comment by: *CAA-NL*

Comment regarding:

(a)(8)(v) mass and balance documentation; if applicable.

CAA-NL proposes EASA to add:

Remove 'if applicable' from text

Reason:

Unclear text; or define what is meant by 'if applicable'

comment *809* comment by: *CAA-NL*

Comment regarding:

(b)(1) on commercial flights other than commercial air transport remaining within 50 nm of the aerodrome/operating site of departure and returning to the aerodrome/operating site of departure on the same day;

CAA-NL poses the following question:

Does this mean that take-offs and landings are permitted on other aerodromes/operating sites on that day?

Reason:

If more take-offs are made, for each flight m&b and other flight documentation has to be filled out

The CAA-NL asks EASA to clarify (b)(1)

comment *810* comment by: *CAA-NL*

Comment regarding:

(b) the documents and information referred to in paragraphs OPS.GEN.600(a)(1) - (6) and OPS.GEN.605(a)(1), (5) and (8)(ii)-(iii) may be retained at the aerodrome/operating site.

CAA-ML proposes to EASA to add:

(a)(2) and (3) CoA and CoR always to be carried

Reason:

due to possible diversion for evidence purpose

And to add:

paragraphs OPS.GEN.600(a)(2) and (a)(8)(v) need not be carried on board however must be retained on the ground

Reason:

(a)(2) alleviation already exists in EU-OPS and JAR-OPS; (a)(8)(v) alleviation desired

Information must be retained on the ground; in case of accident, aircraft status at take-off is available

Reference: OR.OPS.030.MLR

comment *811* comment by: *CAA-NL*

Comment regarding:

(c) On commercial flights with balloons, the documents referred to in paragraph OPS.GEN.600(a)(1) - (6) and OPS.GEN.605(a)(1), (5) and (8)(ii)-(iii) may be carried in the retrieve vehicle.

The CAA-NL proposes to EASA to add:

paragraphs OPS.GEN.600(a)(2) and (a)(8)(v) need not be carried on board

however must be retained on the ground

Reason:

(a)(2) alleviation already exists in EU-OPS and JAR-OPS; (a)(8)(v) alleviation desired

Information must be retained on the ground; in case of accident, aircraft status at take-off is available

Reference: OR.OPS.030.MLR

comment *1045* comment by: *AECA helicopteros.*

To modify

Whilst this is not an issue for A to A operations; for operations in a local area (which for example in some States are all operations within the State borders), some of these elements are considerably beyond those envisaged in the orginal rule - which considered flights only in a single day.

As far as the OPS.GEN.605 is concerned, the alleviation from carriage (under the conditions above) of:

The Flight Manual;

The CofA;

The CofR

The liability insurance certificate;

The jouney log book

appears to be too liberal.

comment *1162* comment by: *CAA-NL*

Comment regarding:

OPS.GEN.605(a)(8)

Comment: no mention is made of the requirement for a Dangerous Goods Transport Document to accompany a consignment of dangerous goods to final destination; this form is completed by the shipper and is different to the notification to the Captain of any dangerous goods on board (see OPS.GEN.605(a)(8)(iv).

Justification: Part 7;1.2.2 of the Technical Instructions requires one of the two copies of the Dangerous Goods Transport Document, which must be presented to the operator before the dangerous goods can be accepted for air transport, to accompany the consignment to final destination.

Proposed Text (if applicable):

Add a new OPS.GEN.605(a)(8)(v) as follows:

"(v) a copy of the Dangerous Goods Transport Document(s) accompanying any dangerous goods carried as cargo."

(note this will result in the consequential re-numbering of the existing (v))

comment *1380* comment by: *International Air Transport Association*

OPS.GEN.605(a)(8). Subparagaph (iv) makes reference to written information for dangerous goods, commonly referred to as the Notification to Captain (NOTOC). However, in addition to the NOTOC information there is also a requirement that one of the copies of the dangerous goods transport document must also accompany the consignment of dangerous goods to destination, unless the information has been provided to the operator in electronic form.

This provision is set out in part 7;1.2.2 and 7;1.2.3 of the ICAO Technical Instructions.

On this basis, a new subparagraph (v) should be inserted below the current OPS.GEN.605(a)(8)(iv), which would then make reference to the carriage of copies of the dangerous goods transport document, if applicable, unless the operator has the information contained on the dangerous goods transport document(s) available in electronic form.

The current subparagraph (v) would then be renumbered as (vi).

comment *1410* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

No mention is made of the requirement for a Dangerous Goods Transport Document to accompany a consignment of dangerous goods to final destination; this form is completed by the shipper and is different to the notification to the Captain of any dangerous goods on board (see OPS.GEN.605(a)(8)(iv).

Comment:

Part 7;1.2.2 of the Technical Instructions requires one of the two copies of the Dangerous Goods Transport Document, which must be presented to the operator before the dangerous goods can be accepted for air transport, to accompany the consignment to final destination.

Proposal:

Add a new OPS.GEN.605(a)(8)(v) as follows:

"(v) a copy of the Dangerous Goods Transport Document(s) accompanying any dangerous goods carried as cargo."

Note:

This will result in the consequential re-numbering of the existing (v).

comment *1555* comment by: *Luftfahrt-Bundesamt*

– Referring to (a)(5), the **Operation Specification** should also be required to be carried on board.

B. Under (a) (8) as another document the „Dangerous Goods Transport Document" should be added:

„(v) a copy of the Dangerous Goods Transport Document."

The current No. (v) should be renamed to (vi) accordingly.

comment *1604* comment by: *British Parachute Association*

We suggest that in (a) (8) (iv) after the words "...dangerous goods," be added (in parentheses) the following..

"(excepting smoke trail devices carried by parachutists who intend to exit the aircraft)"

This is in order to enable the use of smoke trail devices by parachutists engaged on parachute displays and will ensure consistency with our comments 1412, 1632 and 1657.

comment *1754* comment by: *Swedish Soaring Federation*

para (b) (2) shall also apply to sailplanes flying cross-country on closed circuits (i.e returning to the launch aerodrome). There is no possibility to carry all these documents in a cramped sailplane cockpit.

comment *2009* comment by: *Klaus HARTMANN*

zu (c) :

Hier werden Dokumente aufgeführt, die an Bord eines kommerziell genutzten Luftfahrzeugs (auch Ballone) während des Fluges mitzuführen sind, und unter (c) welche Dokumente bei Ballonfahrten stattdessen auch im Verfolgerfahrzeug mitgeführt werden können.

Auch hier wird wie in OPS.GEN.600 für non-commercial flights mit Ballonen nicht die Mitnahme vom Flughandbuch gefordert. Die Mitnahme im Verfolgerfahrzeug ist danach ausreichend. Dies verhindert aber grundsätzlich das schnelle Auffinden wichtiger Informationen in besonderen Situationen oder z.B. für Piloten die weniger vertraut mit dem gerade verwendeten Ballon sind oder Checklisten für Notverfahren.

Auch wenn das Flughandbuches im Ballon während der Fahrt selten benutzt wird, sollte es dem Piloten grundsätzlich aus Sicherheitsgründen zur Verfügung stehen. Die Mitnahme im Ballonkorb stellt auch keinerlei Platz- oder Gewichtsprobleme dar.

Zusätzlich werden unter anderem als nicht erforderlich im Ballon die meteorologischen Informationen und die AIS Informationen für die Ballonfahrt genannt. Dies sind jedoch wichtige Informationen die während der Fahrt jederzeit vom Piloten benötigt werden könnten. Daher gehören diese Sicherheitsinformationen unbedingt mit an Bord und nicht ins Verfolgerfahrzeug.

Der Satz (c) sollte daher geändert werden nach :

On commercial flights with balloons, the documents referred to in OPS.GEN.600 (a)(2) - (6) and OPS.GEN.605 (a)(1) and (5) may be carried in the retrieve vehicle.

comment *2265* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Documents and information to be carried on non-commercial flights

Comment / Proposal:

Modify text:

(b)(1): on commercial flights other than commercial air transport remaining within 50 nm of the aerodrome/operating site of departure and returning to the aerodrome/operating site of departure on the same day or if approved by the competent authority for operations within a 24 hours period in an area specified in the operations manual.

(b)(3): on commercial air transport flights (delete: by day) and over routes navigated by reference to visual landmarks, with:

Remarks:

This alleviation is needed du to operations (e.g. HEMS) that have a range of 50NM an more.

comment *2385* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Replace: "Certified true copy of the operator certificate" by "copy of the operator certificate and extend the application of AMC OPS.600 to OPS GEN 605

comment *2764* comment by: *Pietro Barbagallo ENAC*

OPS.GEN.605(a)(5) Comment:The statement "True Certified Copy" should be defined. Also it should be clarified who is responsible for the issue of such statement.

Justification: Proposed actions: 1) add the definition of "True Certified Copy"

in OPS.GEN.010; 2) add a new AMC OPS.GEN.605(a)(5) specifying that the statement "True Certified Copy" should be issued by the Quality Manager of the Commercial Air Operator or by a person He has delegated for such duty.

OPS.GEN.605(a)(8) Comment: No mention is made of the requirement for a Dangerous Goods Transport Document to accompany a consignment of dangerous goods to final destination; this form is completed by the shipper and is different to the notification to the Captain of any dangerous goods on board (see OPS.GEN.605(a)(8)(iv)).

Justiifcation: Part 7;1.2.2 of the ICAO Technical Instructions requires one of the two copies of the Dangerous Goods Transport Document, which must be presented to the operator before the dangerous goods can be accepted for air transport, to accompany the consignment to final destination.

Proposal: Add a new OPS.GEN.605 (a) (8) (v) as follows: "(v) a copy of the Dangerous Goods Transport Document(s) accompanying any dangerous goods carried as cargo." (note this will result in the consequential re-numbering of the existing (v))

comment *2789* comment by: *Southern Cross International*

It should be possible to have certain documents and information available in an electronic format such as an Electronic Flight Bag (EFB).

comment *2958* comment by: *Austro Control GmbH*

(5): certified true copy

Comment:

for a uniform understanding in the Member States and for legal certainty it is recommended to define what "Certified True Copy" means: is it a certification according to national law (e.g. certification by competent authority, by court, by public notary etc) or is it understood as a self certification by the operator?

It is recommended to allow both possibilities and to define that in the respective AMC.

Proposed Text for AMC, OPS. GEN.605 (a) (5), Page 256:

Certified true copy should mean a certification by the issuing authority, by court, by public notary, by any other national authorised organisation or by the operator based on a suitable procedure.

comment *2972* comment by: *REGA*

Rmk: the requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration only.

comment *2982* comment by: *CAA-NL*

comment *2983* comment by: *AOPA Switzerland*

The carriage of the Aircraft Technical Log does not increase flight safety. Therefore this point is to be withdrawn.

comment *3181* comment by: *Peter SCHMAUTZER*

In OPS GEN.605a 5 is stipulated that as document a certified true copy of the operator certificate has to be carried in the aircraft.

Until now a non-certified copy of the AOC was sufficient. If the copies have to be notarised, there will be costs to perform notarisations, which can be avoided. If somebody has the intention to use a false documents, a certification can also be forged. The consequences of faking documents are the same.

If at taxi operation flight plans are filed electronically and NOTAMS and Met Info is received in the same way, this documentation can not be carried in paper. There should be a possibility to have these documentations on a laptop.

comment *3188* comment by: *Austro Control GmbH*

(a)

(1) ~~the Aircraft Radio Licence;~~

Justification:

Transferred to OPS.GEN.600 (a), because it is required when a radio station is on board.

comment *3212* comment by: *Austro Control GmbH*

(7) the Minimum Equipment List (MEL) **or equivalent document;**

The definiton of the term "equivalent document" is not clear and must be defined. Explanation in AMC OPS.GEN.605 is not sufficient.

comment *3337* comment by: *UK CAA*

Page No: 56

Paragraph No:

OPS.GEN.605 (a)(5)

Comment: Paragraph (a)(5) does not cover the possibilities that an aircraft used in commercial operations may be subject to a declaration rather than certification nor that an aircraft used in non-commercial operations may be subject to some kind of certification. In addition, the reference to "the operator certificate" may be ambiguous.

Justification: UK CAA considers that the IRs should provide for conditions under which a certificate shall be replaced by a declaration and conditions under which a declaration shall be replaced by a certification process, in accordance with Article 8.5 (b) and (d) of Regulation 216/2008. Such IRs would need to provide for different kinds of certification, so that the use of the phrase "the operator certificate" would not be appropriate.

In any case the UK CAA considers that one kind of "operator certificate" is not appropriate due to the specific international requirements/obligations regarding an Air Operator Certificate". The UK proposes that two kinds of certificate be provided for commercial operations, one for CAT and one for commercial operations other than CAT (see also comment 595 to NPA 2008-22).

Proposed Text (if applicable):

(5) a certified true copy of a certificate issued to the operator in accordance with AR.GEN.310 or a declaration verified in accordance with AR.GEN.340, whichever is required.

comment *3338* comment by: *UK CAA*

Page No: 56

Paragraph No:

OPS.GEN 605(a)(5)

Comment:

"….**air** operator certificate…"

Justification: Consistent terminology

Proposed Text (if applicable):

Insertion of "air"

comment *3339* comment by: *UK CAA*

Page No: 56-57

Paragraph No:

OPS.GEN.605(a)(8)

Comment: No mention is made of the requirement for a Dangerous Goods Transport Document to accompany a consignment of dangerous goods to final destination. This form is completed by the shipper and is different to the notification to the Captain of any dangerous goods on board (see OPS.GEN.605(a)(8)(iv)).

Justification: Part 7;1.2.2 of the Technical Instructions requires one of the two copies of the Dangerous Goods Transport Document, which must be presented to the operator before the dangerous goods can be accepted for air transport, to accompany the consignment to final destination.

Proposed Text (if applicable):

Add a new OPS.GEN.605(a)(8)(v) as follows:

"(v) a copy of the Dangerous Goods Transport Document(s) accompanying any dangerous goods carried as cargo."

(note this will result in the consequential re-numbering of the existing (v))

comment *3567* comment by: *Walter Gessky*

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

Delete (a) (1) ~~the Aircraft Radio Licence;~~

Justification:

Transferred to OPS.GEN.600 (a), because is required when a radio station is on board.

comment *3568* comment by: *Walter Gessky*

OPS.GEN.605

(7) the Minimum Equipment List (MEL) or equivalent document **when applicable**; and

Justification:

MEL shall not be required for all aircraft used in CAT (aircraft below 2000kg MTOW)

comment *3609* comment by: *Austro Control GmbH*

(b) (1):

... at the same day ***or within a 24 hours in an area specified in the operations manual when under Authority approval.***

(b) (3):.... flights ~~by day~~ and over routes....

Justification:

No limitation if an approval exists.

comment *3826* comment by: *IAOPA Europe*

Some countries do no longer issue a separate Aircraft Radio License. Therefore this requirement should be deleted.

comment *3896* comment by: *FOM ANWB MAA*

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

(a) (5) a ~~certified true~~ copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

the requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration or the EU only.

comment *3945* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(a)(5) Rmk: the requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration only.

comment *3946* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(b)(3) For HEMS operations in the specified geographical area the carriage of NOTAM and Weather information in paper form should not be required.

comment *4223* comment by: *DGAC*

(b)(3):

This paragraph introduces alleviations for commercial air transport with less than 9 passengers in VFR regarding to the documents which have to be carried. The resulting provision is less demanding than the related provisions

of JAR OPS 3.005(f) which, for non circular flights, requires the flight manual, the Certificate of airworthiness and the certificate of registration to be carried (in case of a SAFA inspection for example).

We suggest reconsidering this paragraph and may be distinguishing the A to A operations from the other operations.

comment

4406 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Shold state: (3) on commercial air transport flights by day **or day and night for HEMS operation** and over routes navigated by reference to visual landmarks, with: **(iii) complex motor-powered helicopters and having a maximum passenger seating configuration of 9 or less engaged in HEMS operations conducted within a local area specified in the operations manual**

comment

4951 comment by: *ADAC Luftrettung GmbH*

OPS.GEN.605(a)(5)

Why a certified copy?

Rmk: the requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration onl

OPS.GEN.605(b)(3)

This rules out HEMS night operations. What is the size of the permissable local area?

Text can partly be replaced by reference to "local operations" if unchanged.

For HEMS operations in the specified geographical area the carriage of NOTAM and Weather information in paper form should not be required.

comment

5314 comment by: *CAA CZ*

OPS.GEN.605 (a)(5): Instead of "operator certificate" should be "air operator certificate".

comment

5440 comment by: *ALFA-HELICOPTER*

(5) The requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration only.

comment | *5448* | comment by: *ALFA-HELICOPTER*

For HEMS operations in the specified geographical area the carriage of NOTAM and Weather information in paper form should not be required.

comment | *5634* | comment by: *Peter Moeller*

605(a)(5) why must it be a certified copy. It does not improve safety if it is certified. A normal copy should be enough.

comment | *5644* | comment by: *Peter Moeller*

605(b) add

(4) on HEMS flights day and night following VFR within the defined local area the documents referred to in OPS.GEN (a) - (6) and OPS.GEN.605(a)(1), (5), (8)(i),(ii),(iii),(iv) may be retrieved at the HEMS Operating Base.

comment | *5694* | comment by: *ERA*

European Regions Airline Association Comment

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations, the following documents and information shall be carried on each flight:

(5) a certified true copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

The ERA Directorate has the same concern as with OPS.GEN.600. In addition when the authorities can request originals directly from the airline HQ is not a "certified true copy" unjustified? In addition more information is required on the definition of a certified true copy. In the case of the AOC would the following be acceptable?:

- A copy stamped by the operator, or
- A copy stamped by an authority.

In many cases it is currently simply acceptable to carry a simple copy.

Therefore ERA would like to see the following changes to paragraph (a) (5):

(5) a ~~certified true~~ copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

The Authority may permit the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed

paper. An acceptable standard of accessibility, usability and reliability must be assured.

comment *5777* comment by: *Norsk Luftambulanse*

(a)(5) Rmk: the requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration only.

comment *5778* comment by: *Norsk Luftambulanse*

For HEMS operations in the specified geographical area the carriage of NOTAM and Weather information in paper form should not be required.

comment *5968* comment by: *HSD Hubschrauber Sonder Dienst*

605(a)(5): the requirement for a true certified copy is overdone for operators that perform CAT-operations in the member state of registration only.

comment *5975* comment by: *HSD Hubschrauber Sonder Dienst*

605(b)(3):

For HEMS-operations in a specified geographical area the carriage of NOTAM and weather information in paper form should not be required.

comment *6145* comment by: *Finnish CAA*

Paragraph No: OPS.GEN.605(a)(8)

Comment: Missing mention of the requirement for a Dangerous Goods Transport Document to accompany a consignment of dangerous goods to final destination; this form is completed by the shipper and is different to the notification to the Captain of any dangerous goods on board (see OPS.GEN.605(a)(8)(iv)).

Justification:

Part 7;1.2.2 of the Technical Instructions requires one of the two copies of the Dangerous Goods Transport Document, which must be presented to the operator before the dangerous goods can be accepted for air transport, to accompany the consignment to final destination.

Proposed text (if applicable):

Add a new OPS.GEN.605(a)(8)(v) as follows:

"(v) a copy of the Dangerous Goods Transport Document(s) accompanying any dangerous goods carried as cargo."

(note this will result in the consequential re-numbering of the existing (v))

comment *6168* comment by: *EUROPEAN GLIDING UNION*

para (b) (2) shall also apply to sailplanes flying cross-country on closed circuits (i.e returning to the launch aerodrome). There is no possibility to carry all these documents in a cramped sailplane cockpit.

comment *6275* comment by: *DAeC LV NRW e.V.*

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations, the following documents and information shall be carried on each flight:

OPS.GEN.605

Wording in the NPA

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations, the following documents and information shall be carried on each flight:

Our proposal

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations except on sailplanes and non complex airplanes

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations except on sailplanes and non complex airplanes, the following documents and information shall be carried on each flight:

Issue with current wording

These requirements should not apply to non complex aircraft only occasionally used for commercial operations.

Rationale

Most of these documents are not available for non complex airplanes and sailplanes. Also these aircraft are usually only occasionally used in commercial operations. These additional requirements are just not appropriate in this case.

comment *6284* comment by: *Lufthansa CityLine GmbH*

More information is required on the definition of a certified true copy. In the case of the AOC would the following be acceptable?:

A copy stamped by the operator, or

A copy stamped by an authority.

In many cases it is currently simply acceptable to carry a simple copy.

Therefore Lufthansa CityLine would like to see the following changes to paragraph

a): in addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations, the following documents and information shall be carried on each flight:

(5) a ~~certified true~~ copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

….

The Authority may permit the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed paper. An acceptable standard of accessibility, usability and reliability must be assured.

comment *6344* comment by: *Konrad Polreich*

OPS.GEN.605 (b) (3)

There is an alleviation for certain CAT flights, but not for non-commercial operations. I see no reason for this, therefore I suggest to amend the paragraph by adding non-commercial flights.

Suggestion:

(b)(3) on non-commercial flights and commercial air transport flights by day and over routes …….

comment *6573* comment by: *Baden-Württembergischer Luftfahrtverband*

OPS.GEN.605

Wording in the NPA

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations, the following documents and information shall be carried on each flight:

Our proposal

As discussed on Comment 6273 certain flights of non commercial organizations and persons should not be considered as commercial operation although payments for cost sharing are exchanged. So this requirement should not apply. Never the less exemptions should be made:

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations except on sailplanes and non complex airplanes

(a) In addition to OPS.GEN.600(a), on flights with complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations except on sailplanes and non complex airplanes, the following documents and information shall be carried on each flight:

Issue with current wording

These requirements should not apply to non complex aircraft only occasionally used for commercial operations.

Rationale

Most of these documents are not available for non complex airplanes and sailplanes. Also these aircraft are usually only occasionally used in commercial operations. These additional requirements are just not appropriate in this case.

comment

6610 comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations

(a) (5) a ~~certified true~~ copy of the operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

The requirement for a certified copy is overdone for operators that perform CAT operations in the member state of registration or the EU only.

comment *6611* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.GEN.605 (b) (3)

This rules out HEMS night operations. What is the size of the permissable local area? Text can partly be replaced by reference to "local operations" if unchanged.

Remark: For HEMS operations in the specified geographical area the carriage of NOTAM and weather information in paper form should not be required.

comment *7070* comment by: *IACA International Air Carrier Association*

Replace "certified true copy of the operator certificate" by "copy of the operator certificate" and extend the applicability of AMC.OPS.600 to OPS.GEN.605.

comment *7281* comment by: *ANE (Air Nostrum) OPS QM*

We has the same concern as with OPS.GEN.600. In addition when the authorities can request originals directly from the airline HQ is not a "certified true copy" unjustified? In addition more information is required on the definition of a certified true copy. In the case of the AOC would the following be acceptable?:

- A copy stamped by the operator, or
- A copy stamped by an authority.

In many cases it is currently simply acceptable to carry a simple copy.

Therefore we would like to see the following changes to paragraph (a) (5) use a copy instead a certified true copy:

(5) **a copy of the** operator certificate if the aircraft is used in commercial operations and a copy of the declaration if the aircraft is used in non-commercial operations;

And add the following paragraph:

The Authority may permit the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed paper. An acceptable standard of accessibility, usability and reliability must be assured.

comment *7406* comment by: *Comercial Operators in Sweden*

Let all documents be allowed to be carried in the retrive vehicle and prefferebly copies.

This is because a bolloon pilot is always outside an storege are verry much limited.

B. I. Draft Opinion - Part-OPS - Subpart A - Section V - OPS.GEN.610 Journey log book p. 57

comment *46* comment by: *George Knight*

AMC states that, -

The aircraft journey log book should contain the following items:

a. aircraft registration;

b. date;

c. crew member names and duty assignments;

d. departure and arrival points and times;

e. purpose/nature of the flight;

f. incidents, observations (if any); and

g. signature of the pilot-in-command.

Whilst this may be appropriate for commercial flying and aerial work it has no relevance to light general aviation and gliding.

For aircraft with 4 or fewer seats (including crew) the requirement should be waived. Sufficient data will exist in the pilots' log books, existing design aircraft log books and airfield flight records to meet all conceivable requirements. This additional bureaucracy is over-regulation for private, recreational and sporting aviation – especially gliding.

comment *71* comment by: *Air Southwest*

OPS.GEN.610 Do you really mean 'Journey Log Book'. We haven't had journey log books for years. JAR-OPS 1.415 referred to the "Journey Log." Suggest maintaining the same title and drop the word 'book'.

comment *713* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.610: NIL

The change from EU OPS has been noted, but it is accepted.

comment *813* comment by: *CAA-NL*

Comment regarding:

1. d. departure and arrival points and times;

CAA-NL proposes to add:

….'actual' times of departure and arrival

Reason:

In compliance with 1.1055/3.1055 a7 / a8

and add:

Hours of flight

Reason:

Missing in text; In compliance with 1.1055/3.1055 a9

comment *814* comment by: *CAA-NL*

Comment regarding:

2. The journey log may be combined with the aircraft log book as required in M.A.305.

CAA-NL suggests to EASA to add:

Text suggests that content of the journey log may only be combined with the log book instead of the Aircraft Technical Log. Reference to MA 305 is to "Aircraft continuing airworthiness record system' which does requires the ATL system as required by MA 306.

EU-OPS and JAR-OPS 1.1055 (b)/3.1055 (b) and relevant IEM makes it possible to include the content of a journey log in the ATL system.

Reason:

Present text is not clear in the option of ATL

comment *1023* comment by: *Beat Fahrni*

Journey log book als Ersatz des alten Flugreisebuchs.

comment *1032* comment by: *arno liesch*

The effort should be to keep paper-work at a reasonable level. By doing each day the Flight-Log and the mission-reports plus the HUMS-recordings, the documentation seems to be at great length.

comment *1037* comment by: *REGA*

The effort should be to keep paper-work at a reasonable level. By doing each day the Flight-Log and the mission-reports plus the HUMS-recordings, the documentation seems to be at great length.

comment *1755* comment by: *Swedish Soaring Federation*

Note: Journey log book in a digital format is already allowed in some countries.

comment *2683* comment by: *AOPA-Sweden*

In some of the third country, there is not a requirement to carry a journey log book. As in Sweden the journey log book is issued by the competent authority, who shall issue a journey log book for a third country aircraft?

comment *3050* comment by: *AEA*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

comment *3638* comment by: *AUSTRIAN Airlines*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

comment *3883* comment by: *M Wilson-NetJets*

Original text:

Particulars of the aircraft, its crew and each journey shall be retained for each flight or series of flights in the form of a journey log book.

Suggested new text:

Particulars of the aircraft, its crew and each journey shall be retained for each flight or series of flights.

Comment/suggestion:

The form of retention should not be specified to allow for other acceptable means of compliance in the future. The form as a Journey logbook should be transferred to the AMC.

comment *4222* □ comment by: *DGAC*

OPS.GEN.600 + OPS.GEN.610 + AMC OPS.GEN 610

Proposal :

Return to the wording of EU-OPS 1055(b)

(b) An operator may be permitted not to keep an aeroplane journey log, or parts thereof, by the Authority if the relevant information is available in other documentation.

Justification

As written OPS.GEN.600 + OPS.GEN.610 seem to imply that a journey log has to be established and carried on board, which is not consistant with the possibility provided in EU-OPS OPS 1.125 & 135 + OPS 1.1055b, which allowed to gather this information in other documentations.

comment *4286* comment by: *KLM*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

comment *4498* comment by: *TAP Portugal*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

comment *4677* comment by: *British Airways Flight Operations*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirement is redundant with OPS.GEN.600. Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4889* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add '***or equivalent computerized data'***

comment *5147* comment by: *Trevor Wilcock*

The practicalities of sailplane operations are not taken into account here. A training sailplane may in a day make several tens of short flights, with frequent changes of crew. The information on crew and flight duration is, in the case of my club, recorded at the launch point and retained. Transcribing it into a journey log giving crew and journeys (or even series of journeys) would be a substantial task which would make no safety or operational contribution.

comment *5387* comment by: *Norwegian Air Sports Federation*

Electronic journey log book should be allowed.

comment *5465* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***or equivalent computerized data'v***

comment *6170* comment by: *EUROPEAN GLIDING UNION*

Note: Journey log book in a digital format is already allowed in some countries.

comment *6802* comment by: *Icelandair*

Relevant Text:

Particulars of the aircraft, its crew and each journey shall be retained for each flights or series of flights in the form of a journey log book.

Comment:

This requirements is redundant with OPS.GEN.600, Moreover, most airlines do not carry a journey log book but use equivalent computerized data.

Proposal:

Add `***or equivalent computerized data'***

comment *7594* comment by: *AOPA UK*

In some of the third country, there is not a requirement to carry a journey log book. As in Sweden the journey log book is issued by the cornpetent authority, who shall issue a journey log book for a third country aircraft?

B. I. Draft Opinion - Part-OPS - Subpart A - Section V - OPS.GEN.615 Production of documentation and records p. 57

comment *714* comment by: *ECA - European Cockpit Association*

Comment on OPS.GEN.615: NIL

The change from EU OPS has been noted, but it is accepted.

comment *1422* comment by: *International Air Transport Association*

On the basis of comments made to OPS.GEN.605(a)(8) and the addition of the dangerous goods transport document or instead electronic data where the information on the dangerous goods transport document has been provided in electronic form. If this amendment to OPS.GEN.605(a)(8) is made then there would be a need for a consequential amendment to OPS.GEN.615 to recognise that where the dangerous goods transport document(s) are not physically being carried on board the aircraft, that the operator shall make available the dangerous goods transport document(s) either electronically or where requested by the competent authority in printed form within a reasonable time.

comment *2684* comment by: *AOPA-Sweden*

It should be added that documents, need for the flight shall only be available until the aircraft comes to a stop after a flight, so the cockpit can be cleaned as fast as possible.

comment *2790* comment by: *Southern Cross International*

It should be possible to have certain documents and information available in an electronic format such as an Electronic Flight Bag (EFB).

comment *3201* comment by: *Austro Control GmbH*

*The pilot-in command shall make available within a reasonable time of being requested to do so by the competent authority **but latest before commencement of a flight**, the documentation required to be carried on board.*

Justification:

The text gives the pilot the possibility to delay to provide the documentation. Latest before a flight will be started the documents requested has to be available.

comment *3340* comment by: *UK CAA*

Page No: 57

Paragraph No:

OPS.GEN.615

Comment:

The pilot-in-command may also be requested by an "inspecting authority" to make available documentation, in accordance with the procedures set down in PART-AR, Subpart GEN, Section IV.

Justification:

The use of the terms "competent authority" and "inspecting authority" throughout the Agency's NPAs is not altogether clear. However, the UK CAA understands that an authority designated by a Member States to issue a certificate to or receive a declaration from an operator and to carry out related oversight is a "competent authority" whereas a body designated to carry out "ramp inspections" is an "inspecting authority". Both tasks may require the production of documents and records and since a Member State may designate different bodies to carry out these functions, both terms should be used in OPS.GEN.615.

Proposed Text (if applicable):

"The pilot-in**-**command shall make available…..requested to do so by the competent authority **or an inspecting authority**,…"

comment *3569* comment by: *Walter Gessky*

OPS.GEN.615 Production of documentation and records

The pilot-in command shall make available within a reasonable time of being requested to do so by the competent authority **but latest before commencement of a flight**, the documentation required to be carried on board.

Justification:

The text gives the pilot the possibility to delay to provide the documentation. Latest before a flight will be started the documents requested has to be

available.

comment *7595* comment by: *AOPA UK*

It should be added that documents, need for the flight shall only be available until the aircraft comes to a stop after a flight, so the cockpit can be cleaned as fast as possible.

B. I. Draft Opinion - Part-OPS - Subpart A - Section VI p. 58

comment *779* comment by: *ECA - European Cockpit Association*

The whole section on security should be deleted.

Justification:

The Security provisions in this NPA overlap with the requirements in Regulation 300/2008 of 11 March 2008 on common rules in the field of civil aviation security. The proposed text contains conflicting or divergent concepts and definitions. This could create confusion and legal uncertainty. The nature of the rules are also different as part of the security rules in OPS are AMC or Guidance Material while in the Regulation the same would be either part of a Regulation or a Recommendation to the Member States.

ECA believes that the use of AMC is not adequate for this section. Any operator could propose another AMC, and if the level of safety is the same, the Authority or the Agency would not have any reason to deny it.

Finally, some of the proposed rules deviate from ICAO Annexes and would oblige the Member States to file differences creating potential risks of non recognition from other ICAO signatory parties.

comment *3052* comment by: *AEA*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *3639* comment by: *AUSTRIAN Airlines*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *4289* comment by: *KLM*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *4499* comment by: *TAP Portugal*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *4696* comment by: *British Airways Flight Operations*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the

responsibility of the European Commission and associated committology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4890* comment by: *Deutsche Lufthansa AG*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *5466* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *6803* comment by: *Icelandair*

Comment:

According to the EASA basic regulation (216/2008), EASA has no mandate from the EU legislator to deal with security matters. Security matters are the responsibility of the European Commission and associated comitology committee. The role of EASA is limited to safety aspects of security

requirements for examples when the airworthiness of the aircraft is affected.

Proposal:

Reconsider security requirements and ensure that they are coordinated with the European Commission

comment *7247* comment by: *AIR FRANCE*

Comment:

As other European regulations are in evolution, the agency shall coordinate with those projects.

B. I. Draft Opinion - Part-OPS - Subpart A - Section VI - OPS.GEN.700 Disruptive Passenger Behaviour p. 58

comment *780* comment by: *ECA - European Cockpit Association*

This paragraph should be deleted. ECA believes the provisions of the security section should be deleted as they overlap with Regulation 300/2008 (see comment n° 779). If, however it is decided to keep this section within OPS, the following changes are needed:

OPS.GEN.700 Disruptive Passenger**s** Behaviour

~~**When deemed necessary, t**~~**T**he pilot-in-command shall take appropriate measures to reduce the risk to flight safety emanating from ~~**potentially**~~ disruptive passengers hindering crew members from performing their duties or not complying with crew member instructions.

comment *2046* comment by: *claire.amos*

Conflict between heading and text - disruptive passenger and potentially disruptive passenger are different definitions under EU Regulations

delete the word "potentially" from text

Potentially disruptive passengers have a different definition under EU Regulation EC300 - means a passenger who is either a deportee, a person deemed to be inadmissable for immigration reasons or a person in lawful custody. This is security risk and not the same as a normal passenger who becomes disruptive causing a safety problem.

comment *4916* comment by: *Virgin Atlantic Airways*

Relevant Text:

GM OPS.GEN.700 Disruptive Passenger Behaviour

GENERAL

1. Operators engaged in the transportation of passengers should take into account that their passengers could obstruct the safe operation of the aircraft. Passenger behaviour may be affected by a variety of factors, including:

a. limitations on personal 'freedom', such as restrictions on smoking or on the use of mobile phones;

b. physical effects, such as from consummation of alcohol, illness, or taking of medication, possibly increased from effects of higher altitude and less available oxygen;

c. social or psychological effects, such as from fear of flying, claustrophobia, or reluctance to follow instructions.

2. The pilot-in-command should consider preventive measures when the possibility of disruptive passenger behaviour is anticipated. Such measures could include, but are not

limited to:

a. communication with the potentially disruptive passenger in an effort to reduce the likelihood of disruptive behaviour;

b. reseating a potentially disruptive passenger to an area where there is less risk of passenger interference;

c. deny boarding to the potentially disruptive passenger or cancel the flight.

Comment: Delete 'or cancel the flight'.

It is unlikely a scenario would ever arise where a flight would be cancelled because of a disruptive passenger(s) and suggest therefore this option in the formal legislation be removed.

Proposed Text:

GM OPS.GEN.700 Disruptive Passenger Behaviour

GENERAL

1. Operators engaged in the transportation of passengers should take into account that their passengers could obstruct the safe operation of the aircraft. Passenger behaviour may be affected by a variety of factors, including:

a. limitations on personal 'freedom', such as restrictions on smoking or on the use of mobile phones;

b. physical effects, such as from consummation of alcohol, illness, or taking of

medication, possibly increased from effects of higher altitude and less available oxygen;

c. social or psychological effects, such as from fear of flying, claustrophobia, or reluctance to follow instructions.

2. The pilot-in-command should consider preventive measures when the possibility of disruptive passenger behaviour is anticipated. Such measures could include, but are not limited to:

a. communication with the potentially disruptive passenger in an effort to reduce the likelihood of disruptive behaviour;

b. reseating a potentially disruptive passenger to an area where there is less risk of passenger interference;

c. deny boarding to the potentially disruptive passenger (s).

comment

6190 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Regulation (EC) No 300/2008 provides the basis for a common interpretation of ICAO Annex 17.

According to Regulation (EC) No 300/2008 article 10 all Member States shall draw up, apply and maintain a National Civil Aviation Security Programme. This programme shall be made available in appropriate parts to operators and entities concerned. The programme shall define responsibilities for the implementation of the common basic standards and describe the measures required by operators. The common basic standards consists of a large variety of security measures and includes both inflight security measures and training. The detailed implementing legislation are at present being prepared by the Commission in cooperation with Member States. Regulation (EC) No 300/2008 also requires air carriers to draw up, apply and maintain an air carrier security program.

Considering the above we find it inappropriate and unpractical to single out a few security related issues and regulate them in the flight safety context. We have absolutely no objections of regulating the issues per se, but they should be dealt with in the same context as all other security issues. We believe that this view is also shared by most stake holders.

Proposal:

All security issues related to ICAO Annex 17 should be left to be dealt with in the implementing legislation of Regulation (EC) No 300/2008.

comment

6461 comment by: *BDF - German Airline Association*

The EASA NPA 2009-02 reflects only safety issues. Since "Disruptive passenger behaviour" is already covered in Regulation (EC) 300/2008, Chpt 4.3 of the annex, and the forthcoming Commission Regulation (Commission Regulation laying down detailed measures for the implementation of the common basic standards on aviation security), it is already regulated what

the pilot-in-command's responsibilities are and what action must therefore be taken. Regulation 300/2008 also reflects that security is not only an issue during a flight but already starts on the ground.

Additionally the EASA NPA mixes safety and security related subjects. Security must stay in the Commissions's and the Committee for Civil Avation Security's sole authority.

B. I. Draft Opinion - Part-OPS - Subpart A - Section VI - OPS.GEN.705 Reporting acts of unlawful interference p. 58

comment *783* comment by: *ECA - European Cockpit Association*

The paragraph should be deleted. ECA believes the provisions of the security section should be deleted as they overlap with Regulation 300/2008 (see comment n° 779). If, however it is decided to keep this section within OPS, the following changes are needed:

OPS.GEN.705 Reporting acts of unlawful interference.

Following an act of unlawful interference on board an aircraft, the pilot-in-command or, if unable, **the operator shall inform the competent authority either at the point of departure or the next place of landing. ~~submit, w~~W**ithout delay, **the operator shall submit** a report to the competent authority in the State of the operator in compliance with its national civil aviation security programme**~~, and shall inform the designated local authority~~**.

comment *3053* comment by: *AEA*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *3640* comment by: *AUSTRIAN Airlines*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *4224* comment by: *DGAC*

Replace "~~competent~~ authority" by "**appropriate** authority".

The wording "the competent authority in the State of the operator" is confusing. The report shall not be submitted to the authority competent for OPS matters but to the authority responsible for the coordination and monitoring of the implementation of the common basic security standards referred to in article 4 of R300/2008 of the European Parliament and the Council of 11 march 2008

comment *4292* comment by: *KLM*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *4500* comment by: *TAP Portugal*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *4892* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *5467* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

comment *6194* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Regulation (EC) No 300/2008 provides the basis for a common interpretation of ICAO Annex 17.

According to Regulation (EC) No 300/2008 article 10 all Member States shall draw up, apply and maintain a National Civil Aviation Security Programme. This programme shall be made available in appropriate parts to operators and entities concerned. The programme shall define responsibilities for the

implementation of the common basic standards and describe the measures required by operators. The common basic standards consists of a large variety of security measures and includes both inflight security measures and training. The detailed implementing legislation are at present being prepared by the Commission in cooperation with Member States. Regulation (EC) No 300/2008 also requires air carriers to draw up, apply and maintain an air carrier security program.

Considering the above we find it inappropriate and unpractical to single out a few security related issues and regulate them in the flight safety context. We have absolutely no objections of regulating the issues per se, but they should be dealt with in the same context as all other security issues. We believe that this view is also shared by most stake holders.

Proposal:

All security issues related to ICAO Annex 17 should be left to be dealt with in the implementing legislation of Regulation (EC) No 300/2008.

comment *6465* comment by: *BDF - German Airline Association*

Reflecting on BDF's comment on OPS.GEN.700 aviation security measures are within the remit of the Commission.

comment *6805* comment by: *Icelandair*

Relevant Text:

Following an act of unlawful interference on board the aircraft, the pilot-in-command or, if unable, the operator shall submit,, without delay a report to the Competent Authority,

Comment:

This wording is not line with EU-OPS. We suggest to stick to EU-OPS and replace 'unable' with 'in his/her absence'

Proposal:

Realign with EU-OPS: replace '***unable'*** with '***in his/her absence'***

B. I. Draft Opinion - Part-OPS - Subpart B p. 59

comment *916* comment by: *CAA-NL*

Text does not provide a clear definition for CAT.

comment *949* comment by: *KLM*

Very confusing that helicopters and fixed wing are all put together and very unclear what is applicable to which category.

Helicopters have to be mentioned seperately, even if it means duplication, but this is unclear and too much mixed up.

comment *1353* comment by: *AECA helicopteros.*

An additional rule to provide a requirement for radios for VFR is required:

OPS.CAT.524 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

(a) motor powered aircraft shall be provided with radio equipment that permits:

(1) communication with appropriate ground stations;

(2) communication with appropriate air traffic control facilities; and

(3) reception of meteorological information.

comment *2297* comment by: *Austro Control GmbH*

general comment:

for a uniforme understanding a definition of "Commercial Air transport" is necessary and therefore requested (see OPS.GEN.001).

comment *7074* comment by: *IACA International Air Carrier Association*

Contrary to small aircraft, ETOPS will not be included in Part-OPS. ETOPS for large aircraft used in Commercial Air Transport (CAT) will remain separate as AMC 20-6. Hereto CRD 2008-01, including training requirements, will be published within one month.

p.57 AMC5 OR.OPS.015.MLR Operations Manual

8.5 ETOPS for two-engine aeroplanes. A description of the ETOPS operational procedures. (Refer to EASA AMC 206)

B. I. Draft Opinion - Part-OPS - Subpart B - Section I p. 59

comment *6058* comment by: *DGAC*

We do not understand the rationale for mentioning R 216/2008 in the scope of part OPS subparts GEN, CAT & COM and not mentioning it in the scope of both part OR subpart OPS and part OPS subpart SPA?

If, as explained by EASA, the mere application of those subparts is not enough to ensure compliance with the BR, then mentioning the BR in the scope should be avoided as it is confusing and misleading.

"OPS.CAT.001 Scope

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial air transport operations, to ensure compliance with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations)".

B. I. Draft Opinion - Part-OPS - Subpart B - Section I - OPS.CAT.001 Scope p. 59

comment *673* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.001: change as follows:

OPS.CAT.~~**001**~~**005** Scope

Justification:

Should read "OPS.CAT.005"

comment *674* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.001: change as follows:

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial air transport operations~~**, to ensure compliance with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations)**~~

Not acceptable - Justification:

Everything necessary to comply with the BR must be found in the IR/AMC/GM. Reference to BR 216/2008 is inappropriate.

comment *677* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.001: add the following text:

"An operator shall comply with the applicable retroactive airworthiness requirements for aeroplanes operated for the purpose of commercial air transportation."

Justification:

Missing requirements from EU OPS 1.005 (b).

comment *3570* comment by: *Walter Gessky*

OPS.CAT.001 Scope

Comment:

For a uniform understanding a definition of "Commercial Operation" is required and therefore shall be added (see OPS.GEN.001).

comment *4225* comment by: *DGAC*

Renumber this paragraph into "**OPS.CAT.005 Scope",** as the same paragraph in OPS.GEN is numbered "OPS.GEN.005 Scope"

comment *4226* comment by: *DGAC*

There should be a general statement allowing for an operator, when operating a non commercial flight, to keep the same rules than it uses when undertaking commercial air transport, that is to say allowing replacing GEN provisions by the similarly numbered CAT provisions when those provisions start with "notwithstanding OPS.GENxxx". By applying those "notwithstanding OPS.GENxxx" provisions, operators should be "deemed to be compliant with the corresponding OPS.GEN xxx provisions"

comment *4227* comment by: *DGAC*

There should be a provision (*at least in the Cover Regulation*) equivalent to (3) EU/JAR-OPS 1/3.001, stating that subpart CAT does not apply "to flights immediately before, during, or immediately after an aerial work activity provided these flights are connected with that aerial work activity and in which, excluding crew members, no more than 6 persons indispensable to the aerial work activity are carried."

comment *5965* comment by: *Irish Aviation Authority*

Comment:

The paragraph needs to be re-numbered to OPS.CAT.005 Scope.

Justification:

For regulation consistency all other references to "Scope" are .005.

OPS.GEN.005 Scope; OPS.COM.005 Scope; OPS.SPA.005.GEN Scope.

Proposed text:

OPS.CAT.005 Scope

B. I. Draft Opinion - Part-OPS - Subpart B - Section I - OPS.CAT.040 Carriage of sporting weapons and ammunition p. 59

comment *686* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.040(a): change as follows:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not ~~**immediately**~~ accessible to the passengers; and

Justification:

Safety and security relevant

comment *1411* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Carriage of weapons in other than separate compartment should only be permitted if the approval of all states concerned has been granted, as required by EU-OPS 1.065 (b).

Comment:

The current wording is vague and the wording "as far as possible" may provide for the operator not implementing adequate measures.

Proposal:

Amend AMC OPS.CAT.040 1. as follows:

"If the aircraft does not have a separate compartment in which weapons and ammunition can be stowed, carriage of such items is subject to approval by all States concerned. In such instances, procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. ~~As far as possible,~~ The weapons should be stowed so they are not immediately accessible to the passengers (e.g. in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly."

comment *1413* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

The conditions of AMC OPS.CAT.040 are equally relevant to weapons of war and munitions of war.

Comment:

Weapons of war and munitions of war will often be firearms and so need to be inaccessible to passengers and unloaded.

Proposal:

Amend AMC OPS.CAT.040 as follows:

"OPS.CAT.040 Carriage of sporting weapons, weapons of war, munitions of war and ammunition

Sporting weapons, weapons of war, munitions of war and ammunition carried in an aircraft shall be: ...

comment *2765* comment by: *Pietro Barbagallo ENAC*

Comment: The requirements of this paragraph are equally relevant to weapons of war and munitions of war (see also the conditions of AMC OPS.CAT.040).

Justiifcation: Weapons of war and munitions of war will often be firearms and so need to be inaccessible to passengers and unloaded, as required by EU-OPS 1.065.

Proposal: Amend OPS.CAT.040 as follows: "Carriage of sporting weapons, weapons of war, munitions of war and ammunition sporting weapons, weapons of war, munitions of war and ammunition carried in an aircraft shall be: (…)"

comment *3054* comment by: *AEA*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *3641* comment by: *AUSTRIAN Airlines*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *4293* comment by: *KLM*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *4501* comment by: *TAP Portugal*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *4703* comment by: *British Airways Flight Operations*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different from the text from EU-OPS 1.070. In order to avoid confusion we suggest retaining the text from EU-OPS through a simple copy and paste of EU-OPS 1.070

Proposal:

Realign with EU-OPS 1.070

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4893* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately

accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *5471* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *5967* comment by: *Irish Aviation Authority*

Comment:

JAR-OPS 3.070 has an additional paragraph dealing with checked baggage. This should be inserted as paragraph c) as detailed below.

Proposed text:

c) Ammunition for sporting weapons may be carried in passengers' checked baggage, subject to certain limitations, in accordance with the Technical Instructions.

comment *6494* comment by: *BDF - German Airline Association*

Carriage of weapons and ammunition are dealt with by aviation seecurity

regulations. Regulation (EC) 300/2008 , Chapter 4 of the Annex, as well as the National Security Programme already cover dangerous goods. This must be recognized as the responsibility for regulatory authority and activity for Security (Commission).

comment *6786* comment by: *AIR FRANCE*

The new IR structure is supposed to be a real improvement in comparison to the previous EU OPS and JAR OPS. How can you then explain that one will have to look for sporting weapons in "OPS CAT 040 General requirements" when there is "OPS SPA DG Dangerous Goods"? The legal reasons justifying the new structure should not prevent EASA from trying to deliver a user friendly document.

Suggest to move this paragraph to OPS.SPA.DG.

comment *6806* comment by: *Icelandair*

Relevant Text:

Sporting weapons and ammunition carried in an aircraft shall be:

(a) inaccessible to passengers during flight, or if the aircraft does not have a separate compartment in which weapons can be stowed, appropriate procedures shall be applied to ensure that they are not immediately accessible to the passengers; and

(b) in the case of firearms or other weapons that can contain ammunition, unloaded.

Comment:

The requirement as written is different as the text from EU-OPS 1.070. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.070

Proposal:

Relalign with EU-OPS 1.070

comment *7408* comment by: *Axel Schwarz*

This requirement should be included in OPS.GEN, since it applies to all operations.

B. I. Draft Opinion - Part-OPS - Subpart B - Section I - OPS.CAT.045 Carriage of weapons of war and munitions of war p. 59

comment *439* comment by: *EHOC*

General

There is no rule (or information) about the conditions under which weapons of war are carried or stowed. A rule, or method of compliance, is necessary to ensure that the safety standard of the original rule is upheld.

"(b) stowed in the aircraft in a place which is inaccessible to passengers; and

(c) in the case of firearms or other weapons that can contain ammunition, unloaded;

renumber old (b) to (d).

Amend also AMC OPS.CAT.040 Carriage of weapons and ammunition to include OPS.CAT.045:

AMC OPS.CAT.040 and **OPS.CAT.045** Carriage of weapons and ammunition

comment *684* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.045(a): NIL

There has been a change from EU OPS, but it is accepted.

comment *2051* comment by: *claire.amos*

Notification to PIC is currently verbal and we would want it to remain so. Suggest deleting final sentence and change of wording:

The PIC shall be informed by the operator before the flight..... .

comment *3055* comment by: *AEA*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *3341* comment by: *UK CAA*

Page No: 59

Paragraph No: OPS.CAT.045

Comment:

The section contains no rule (or information) about the conditions under which weapons of war are carried or stowed.

Justification:

A rule, or method of compliance, is necessary to ensure that the safety standard of the original rule is upheld.

Proposed Text (if applicable):

(c) Weapons of war and munitions of war should be:

(i) stowed in the aircraft in a place inaccessible to passengers, and

(ii) in the case of firearms and other weapons that carry ammunition, unloaded.

comment *3642* comment by: *AUSTRIAN Airlines*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *3802* comment by: *Civil Aviation Authority of Norway*

Comment:

The section contains no rule (or information) about the conditions under which weapons of war are carried or stowed.

Justification:

A rule, or method of compliance, is necessary to ensure that the safety standard of the original rule is upheld.

Proposed Text

(if applicable):

(b) stowed in the aircraft in a place which is inaccessible to passengers; and

(c) in the case of firearms or other weapons that can contain ammunition, unloaded;

renumber old (b) to (d).

comment *4294* comment by: *KLM*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *4502* comment by: *TAP Portugal*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *4894* comment by: *Deutsche Lufthansa AG*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *5294* comment by: *Department for Transport UK*

This reflects the requirements of Article 35 of the Chicago Convention. However, Article 35 is not restricted to CAT operations. While most weapons/munitions of war will be carried on CAT operations it is possible that some may be carried on non-commercial aircraft operated by arms/munitions manufacturers. It may therefore be appropriate to include

this requirement in the general section of Part-OPS

comment *5472* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

comment *6045* comment by: *Irish Aviation Authority*

Comment:

The text set out in these two paragraphs is too liberal.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

For these two important regulations the rule text should revert to that which was incorporated in EU OPS and JAR OPS 3.

comment *6787* comment by: *AIR FRANCE*

The new IR structure is supposed to be a real improvement in comparison to the previous EU OPS and JAR OPS. How can you then explain that one will have to look for weapons of war in "OPS CAT 040 General requirements" when there is "OPS SPA DG Dangerous Goods"? The legal reasons justifying the new structure should not prevent EASA from trying to deliver a user friendly document.

Suggest to move this paragraph to OPS.SPA.DG.

comment *6808* comment by: *Icelandair*

Relevant Text:

OPS.CAT.045 Carriage of weapons of war an ammunitions of war

Comment:

The requirement as written is different as the text from EU-OPS 1.065. In

order to avoid unnecessary confusion we suggest to stick to EU-OPS through a simply copy and paste of the EU-OPS 1.065

Proposal:

Realign with EU-OPS 1.065

B. I. Draft Opinion - Part-OPS - Subpart B - Section I - OPS.CAT.050 Information on emergency and survival equipment carried p. 59

comment *440* comment by: *EHOC*

General

The text of the original rule should be restored as it was directly taken from ICAO Annex 6 Part I Chapter 11.5. This text (which includes the requirement for lists containing the information) should be restored to the rule:

"Operators shall at all times have available for immediate communication to rescue coordination centres, **lists containing** information on the emergency and survival equipment carried on board the aircraft."

The AMC should contain the method of compliance also usng the text of ICAO.

comment *682* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.050: NIL

There has been a change from EU OPS, but it is accepted.

comment *685* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.045(b): NIL

There has been a change from EU OPS, but it is accepted.

comment *3342* comment by: *UK CAA*

Page No: 59

Paragraph No: OPS.CAT.050

Comment:

The text from previous Ops requirements should be restored as it was taken directly from ICAO Annex 6 Part I Chapter 11.5.

The AMC should also be modified to contain the method of compliance also using the text of ICAO.

Justification:

Enhancement of text and standardisation.

Proposed Text (if applicable):

Operators shall at all times have available for immediate communication to rescue coordination centres, ***lists containing*** information on the emergency and survival equipment carried on board the aircraft.

comment *3800* comment by: *Civil Aviation Authority of Norway*

Comment:

The text from previous Ops requirements should be restored as it was taken directly from ICAO Annex 6 Part I Chapter 11.5.

The AMC should also be modified to contain the method of compliance also using the text of ICAO

Justification:

Enhancement of text and standardisation.

Proposed Text

(if applicable):

Operators shall at all times have available for immediate communication to rescue coordination centres, ***lists containing*** information on the emergency and survival equipment carried on board the aircraft.

comment *4228* comment by: *DGAC*

In order to ease the reading of the provision, add comas before and after "for immediate communication to rescue coordination centres"

comment *6046* comment by: *Irish Aviation Authority*

Comment:

The text set out is too liberal.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

For these two important regulations the rule text should revert to that which was incorporated in EU OPS and JAR OPS 3.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.110 Carriage of special categories of passengers p. 60

comment *642* comment by: *ECA - European Cockpit Association*

Commen on OPS.CAT.110(b): change as follows:

(b) The pilot-in-command shall be notified **in advance** when any persons referred to in (a) are planned to be carried on board.

Justification:

self-explanatory

comment *3058* comment by: *AEA*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *3643* comment by: *AUSTRIAN Airlines*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *4295* comment by: *KLM*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *4503* comment by: *TAP Portugal*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *4895* comment by: *Deutsche Lufthansa AG*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *5179* comment by: *Virgin Atlantic Airways*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *5473* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *6114* comment by: *Ryanair*

Ref GM OPS.CAT.100 - "special categories of passengers" includes deportees, inadmissible passengers and persons in custody. Such persons are already defined and legislated for in Regulation (EC) 300/2008 as "potentially disruptive passengers". This conflict must be removed.

comment *6811* comment by: *Icelandair*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *7248* comment by: *AIR FRANCE*

Relevant Text:

OPS.CAT.110 Carriage of Special Carriage of passengers

Comment:

There is no definition of **special categories of passengers**

Proposal:

Define special categories of passengers (in line with EU-OPS/JAR-OPS)

comment *7368* comment by: *ETF*

Comment to (a)

Further guidance on special categories of passengers is needed. It would in particular be useful with limitations on special categories of passengers. Secondly how the cabin crew can protect themselves when helping this category of passengers in an emergency.

The reason being that there is no way a carrier or pilots or cabin crew can guarantee for example the same possibility for survival in a crash of this category of passengers in particular when they are numerous on board. To justify this the NTSB report on survivability of accidents from 1983 to 2001 outlines that in selected survivable accidents from 1970 to 1995 as many as 68 % of the occupants involved in aircraft accidents died as a result of injuries sustained during postcrash fires.

It has been argued by manufacturers that the 90 second evacuation test for certification is only a template. Nevertheless The ATSB report on evacuation commands for optimal passenger management of 2006 states: "If a fire enters the cabin, there is typically less than two minutes before conditions

deteriorate to the extent that human life cannot be supported. Hence, it is essential that the surviving occupants can be evacuated efficiently and expeditiously."

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.111 Persons under the influence of alcohol or drugs p. 60

comment *643* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.111: change as follows:

Persons under the influence of alcohol or drugs ~~**to such an extent that they may endanger the safety of the aircraft or its occupants**~~ shall not be allowed on the aircraft.

Justification:

The effects of alcohol and drugs cannot be underestimated in any case. The reactions of a person under the influence of alcohol/drugs are unexpected. The best measure shall be the preventive one.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.115 Passenger briefing p. 60

comment *2298* comment by: *Austro Control GmbH*

Passenger briefing cards shall be free from other informations (e.g. advertising matters or commercials)

Proposal to change the text:

*".....pictorial instructions indicate **exclusively** the operation of emergency equipment and exits.... "*

Justification:

Experience has shown that some operators have put advertising text or commercials on the briefing cards, which may put the seriosity of the cards in question.

comment *2817* comment by: *M Wilson-NetJets*

Original text:

Passengers of motor-powered aircraft shall be provided with a safety briefing card on which pictorial instructions indicate the operation of emergency equipment and exits likely to be used by passengers in the case of an emergency.

Suggested new text:

Passengers of motor power aircraft shall be made aware of the safety features and their operation of the aircraft required and/or likely to be used by a passenger during any type of emergency in such a fashion that the information is easily retained and reproduced during an emergency.

AMC1: Passenger shall be provided with a briefing card

AMC2: Passengers shall be briefed on the items as described in OPS.GEN.115

Comment/suggestion:

There are many ways to make passengers/owners aware of the safety features of an aeroplane. Although safety cards at the moment are a good tool to acquaint passengers/owners with these safety features it might be surpassed in the future by better means. By this instruction being in an IR it will not as easily be amended if an operator wants to progress to a more efficient or safer means of making the passengers/owners familiar with the safety features. Therefore the requirement for a safety card should be moved to an AMC.

comment *5156* comment by: *DGAC*

Rename the paragraph "OPS.CAT.115 Passenger briefing - **motor-powered aircraft**" (or add "MOTOR-POWERED AIRCRAFT" at the beginning of the paragraph), as the provisions it contains deal with motor-powered aircraft only.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.116 Embarking and disembarking of passengers p. 60

comment *644* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.116: add the following:

OPS.CAT.116 Embarking and disembarking of passengers

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator. **This person shall receive the authorisation of the pilot-in-command before initiating the embarking.**

Justification:

Previous to the embarking process it is necessary to confirm the aircraft and the crew is ready for the process.

comment *2278* comment by: *Austro Control GmbH*

(b)

Disembarking has necessarily to be undertaken during the deflation of the ballon; otherwise the ballon will even take off again because of weight loss. Therefore clarification is necessary and the requirement has to be adapted.

comment *3059* comment by: *AEA*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *3645* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *3795* comment by: *KLM Cityhopper*

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement.

comment *4296* comment by: *KLM*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *4505* comment by: *TAP Portugal*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *4707* comment by: *British Airways Flight Operations*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean the need to nominate a specific person for the task.

Proposal:

Delete this requirement

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4896* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *5158* comment by: *DGAC*

This provision is new. EU-OPS requires for procedures to be documented in the OPS Manual for embarking and disembarking but there is no provision requiring a person to be assigned to supervise the embarking/disembarking. This would enable to tailor the procedure according to the type of operation.

comment *5181* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirement goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *5474* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the

responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *5699* comment by: *ERA*

European Regions Airline Association Comment

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Therefore ERA propose to delete this requirement.

comment *6812* comment by: *Icelandair*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Comment:

This new requirements goes beyond EU-OPS and cannot be justified. Procedures are in place for disembarking and embarking as stated in the OPS manual but this does not mean a need to nominate a specific person for this task.

Proposal:

Delete this requirement

comment *7208* comment by: *Ryanair*

Comment

(a) Has no basis in flight safety and must be removed

Proposal

Remove

comment *7249* comment by: *AIR FRANCE*

Relevant Text:

(a) Embarking and disembarking of passengers shall be done under the responsibility of a person designated by the operator.

Proposal:

Modify this requirement: "embarking and disembarking of passengers shall be done by following operator's procedures."

comment *7656* comment by: *Asociación Española de Pilotos de Aerostación (AEPA)*

OPS CAT 116 (b): Although the procedure is accurate typing CAT is not adequate. It would be better GEN

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.120 Stowage of baggage and cargo p. 60

comment *951* comment by: *CAA-NL*

Comment CAA-NL:

The Agency should make clear that if aircraft have no stowage facility within the cabin the hand baggage and cargo must be weight at the check in.

comment *1430* comment by: *International Air Transport Association*

OPS.CAT.120(a).

There should be a requirement at this point to identify that any cargo carried in the passenger compartment must not contain items of dangerous goods, except as described in Part 7;2.1.1 of the ICAO Technical Instructions.

comment *5300* comment by: *Department for Transport UK*

Sub paragraph (a) requires that only hand baggage and cargo which can be adequately and securely stowed shall be taken into the passenger compartment. However, the requirement in subparagraph (b) to adequately stow the baggage is conditional and therefore implies that not all baggage need be stowed. This is not consistent with paragraph 4.8 to Annex 6 Pt 1 which requires that "the operator shall ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is adequately and securely stowed.

The text should be amended to ensure full implementation of paragraph 4.8 of Annex 6 Pt 1.

Proposed text: OPS.CAT.120(b) All baggage and cargo taken on board shall

be stowed so as to prevent its movement.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.130 Smoking on board p. 60

comment *630* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.130: change as follows:

Smoking is not permitted on board of any commercial flight, unless it is a designated smoking flight, in this case, the non-smoking areas shall include the aisles and toilets**, as well as any other area designated by the manufacturer or operator**.

Justification:

We believe that this paragraph does not show most of the European national legislations about smoking in public spaces and working positions. Therefore, it would be recommended to simply ban smoking on commercial flights unless it is a designated smoking flight, i.e. a smoking charter flight.

comment *952* comment by: *CAA-NL*

Comment CAA-NL:

The Agency should make clear that in most EU countries it is forbidden to smoke on a working place, which is also valid for an aircraft

comment *5286* comment by: *Department for Transport UK*

OPS.GEN.130 states that no one shall be allowed to smoke outside of those areas that the operator has designated a smoking area and OPS.CAT.130 states that non-smoking areas shall include the aisles and toilets. However, there appears to be no rule which specifically requires operators to designate smoking and non smoking areas.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.150.H Operating minima - Helicopter Airborne Radar Approaches (ARAs) for overwater operations p. 60-61

comment *442* comment by: *EHOC*

Paragraph (a)(2)

This does not work well because it confuses the establishment of minima

with the method of indicating it. It might be better to purify the text as shown.

"(i) the minimum Descent Height (MDH) is determined with a radio altimeter; or

(ii) the Minimum Descent Altitude (MDA) is determined with a barometric altimeter at the appropriate setting."

The AMC already provides the method of establishing the minimum height/altitude and includes the provision of an adequate margin for the MDA.

Paragraph (d)

This should be turned into a recognised imperative - a recent accident in the North Sea has highlighted that the text for visual reference is not quite as good as it might be (and is very difficult to establish); in view of this, it might be better if the word 'adequate' is put into the text. The operator will then be able to establish what adequate is for each type that is flown taking into consideration that some have highly sophisticated control augmentation (thus offloading the pilot for visual flying) but others do not.

"(d) An approach shall not be continued beyond decision range, or below MDH/A, unless adequate visual reference with the destination has been established."

comment *6047* comment by: *Irish Aviation Authority*

Comment:

(d) The text needs to be expanded to include the use of the term "adequate visual reference".

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Amend text to "adequate visual reference".

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.155.A Selection of alternate aerodromes - Aeroplanes p. 61

comment *310* comment by: *CAA-NL*

Attachment #8

Sent the attached file as EASA RPF december 2006.

comment | *645* | comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.155.A(d): change as follows:

(d) A destination alternate aerodrome, an isolated aerodrome, a 3% en-route alternate aerodrome or an en-route alternate aerodrome required at the planning stage shall only be selected when **the rescue and fire-fighting service available is appropriate to the aircraft category and** the available current meteorological information indicates that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be at or above the applicable landing minima in Table 1A of OPS.CAT.155.A.

Justification:

Rescue and fire-fighting services must be taken into account in the selection of alternate aerodromes.

comment | *791* | comment by: *KLM*

(b) change the one 3% en-route alternate into "fuel en -route alternate".

This enroute alternate is used with statistical fuel policies as well with the lower coverage and will not necessarily be 3%. In order to make clear the purpose of this enroute alternate it has to be called "Fuel en-route alternate".

comment | *792* | comment by: *KLM*

The requirement to have the weather available one hour before the stimated arrival is irrealistic and too limiting. It should be the estimated time of arrival untill one hour after the estimated arrival time.

comment | *793* | comment by: *KLM*

Table 1A planning minima.

Difficult to put into flightplanning systems and time consuming for dispatcher and pilot to determine which minima are applicable.

The table used for ETOPS with an increment to the usable facility is easier and more approriate. The intention is to create a margin in weather not to depend on facilities.

comment | *875* | comment by: *Condor Flugdienst GmbH - FRA HO/R*

Refering to OPS.CAT.155.A(c):Term “landing minima” incorrect. It shall be renamed by the term “alternate minima”.

comment *887* comment by: *Condor Flugdienst GmbH - FRA HO/R*

In detail OPS.CAT.155.A (d): This paragraph shall be corrected with the following wording:

A destination alternate aerodrome, an isolated aerodrome, a 3% en-route alternate aerodrome

or an en-route alternate aerodrome required at the planning stage shall only be selected when

the available current meteorological information indicates that during a period commencing one

hour before and ending one hour after the estimated time of arrival, the weather conditions will be at or above the applicable **planning minima** in Table 1A of OPS.CAT.155.A.

comment *1372* comment by: *KLM*

Not included are APV/LPV and those developments are available already. More reason to change the methodology and determine the required minima and add and increment for use as an alternate.

comment *2299* comment by: *Austro Control GmbH*

It is recommended to insert a point (e):

Considering that alternate aerodrome selection shall take into account also extreme meteorogical conditions. (e.g. -50° C outside air temperatur on aerodroms along polar routes) a requirement appears necessary.

comment *2396* comment by: *Dassault Aviation*

Technical comment

Page 61 Table 1A of OPS.CAT.155.A : Line 3 "Cat I", Column 2 "Non precision". For the purpose of harmonization, we would like to add this clear-cut statement : "a localizer approach is a non-precision approach procedure" as per GM OPS.CAT.155.A(d). Indeed, when checking the planning minimums at the destination alternate, if CAT 1 ILS equipped, some pilots take into account the LOC approach procedure (considering only a glide failure) and some others take into account another non-precision approach procedure (considering a total ILS failure).

comment *2508* comment by: *Royal Aeronautical Society*

Paragraph (a) (3) contains the terms 'separate runways' but does not define what this should mean. **It is suggested that 'separate runways' should**

be defined as currently specified in EU-OPS (OPS 1.192 (j)) thus:

Separate runways. Runways at the same aerodrome that are separate landing surfaces. These runways may overlay or cross in such a way that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway. Each runway shall have a separate approach procedure based on a separate aid.

comment *2818* comment by: *M Wilson-NetJets*

Original text:

PLANNING MINIMA

'Non-precision minima' in Table 1A of OPS.CAT.A.155 means the next highest minimum that is available in the prevailing wind and serviceability conditions; Localizer only approaches, if published, are considered to be 'non precision' in this context. It is recommended that operators wishing to publish tables of planning minima choose values that are likely to be appropriate on the majority of occasions (e.g. regardless of wind direction). Unserviceabilities should, however, be fully taken into account.

Suggested new text:

No suggested text

Comment/suggestion:

"localizer only approaches" does that include ILS approaches for which the Glide Slope is temporarily unserviceable?

comment *2819* comment by: *M Wilson-NetJets*

Original text:

Table 1A

Suggested new text:

The forecasted/expected weather at the alternate aerodrome shall be at or above the weather minima applicable to that approach increased by 500m for the visibility and a cloud ceiling of 100' above the DA/H or MDA/H as applicable.

Comment/suggestion:

Alternate weather minima should be based on a risk assessment of the unforecasted deterioration of the weather. Separately a risk mitigation factor should be included based on unforeseen failure of approach equipment. The current table is an inconsistent hybrid of both. Analogue to the requirements for helicopters (OPS.CAT.155.A) the weather deterioration mitigation measures should be solely based on an increase in the weather requirements above the weather requirements of the expected and planned approach at the alternate aerodrome. This increase should also be applicable to circling or visual approaches.

Another option is to move these values to the AMC.

comment *3060* comment by: *AEA*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *3062* comment by: *AEA*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *3646* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *3845* comment by: *AUSTRIAN Airlines*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *4297* comment by: *KLM*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *4298* comment by: *KLM*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *4508* comment by: *TAP Portugal*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *4512* comment by: *TAP Portugal*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *4711* comment by: *British Airways Flight Operations*

Proposal:

There is no need for different text from EU Ops 1.295; therefore Ops 1.295 text should be retained.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4897* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *4898* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *5159* comment by: *DGAC*

(b) allows for operators to select one destination alternate and one 3% en-

route alternate (ERA) aerodrome. This choice doesn't mean that the reduced contingency fuel (RCF) procedure will be applied.

However the definition of a 3%ERA of OPS.GEN.010 is only: "an ERA aerodrome selected for the purpose of reducing contingency fuel to 3%".

Therefore, it is necessary to amend the definition of "3% ERA" in (1) of OPS.GEN.010 to reflect the use of these terms in the present OPS.CAT.155.A(b).

This paragraph is an illustration of the limits of the new structure. We are not convinced to have fully understood what provision shall be applicable to whom and what provision of OPS.GEN.155 is deemed to be applicable in addition to those laid-down in OPS.CAT.155A, especially in the case of isolated aerodrome

comment *5475* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *5477* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *5671* comment by: *Deutsche Lufthansa AG*

Relevant text:

(d) ... will be at or above the applicable landing minima in Table 1A of OPS.CAT.155.A.

Comment:

Change terminology for clarity.

Proposal:

(d) ... will be at or above the applicable **planning** minima in Table 1A of OPS.CAT.155.A.

comment *5717* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

Table 1A of OPS.CAT.155.A Planning minima - Aeroplanes

Type of approach	Planning minima
CAT II and III	CAT I*
CAT I	Non-precision*and**
Non-precision	Non-precision ceiling + 200 ft Non-precision visibility + 1 000 m *and**
Circling	Circling

Comment:

LTS and OTS should be included in the planning minima table.

Proposal (including ***new text***):

Planning minima - Aeroplanes (Table 1A of OPS.CAT.155.A)

Type of approach	**Planning minima**
Cat II, ***OTS Cat II*** and III	Cat I (Note 1)
Cat I ***and LTS Cat I***	Non-precision (Notes 1 and 2)
Non-precision	Non-precision (Notes 1 and 2) Plus 200 ft / 1 000 m
Circling	Circling

Note 1 - RVR.

Note 2 - The ceiling must be at or above the MDH.

comment *6814* comment by: *Icelandair*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section, shouldn't?

Proposal:

Reword this paragraph to avoid legal uncertainty

comment *6817* comment by: *Icelandair*

Relevant Text:

(a) Notwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight time unless:

..

2) the flying time to the destination does not exceed six hours; and...

Comment:

This requirements is not in line with EU-OPS 1.295 c) 1) i).

EU-OPS is more accurate as it speaks about **in-flight replanning**. This changed requirement will have a tremendous impact on flight operations without any safety justification.

Proposal:

Realign with EU-OPS 1.295 c) 1) i)

comment *7077* comment by: *IACA International Air Carrier Association*

(c)

Term "landing minima" incorrect. It shall be renamed by the term "alternate minima".

comment *7079* comment by: *IACA International Air Carrier Association*

(d)

Correct the wording at the end "…above the applicable planning minima in Table 1A of OPS.CAT.155.A."

comment *7250* comment by: *AIR FRANCE*

Relevant Text:

(a) Nothwithstanding OPS.GEN.155, for a flight to be conducted in accordance with IFR, at least one destination alternate aerodrome shall be selected and specified in any flight plan unless:...

Comment:

The notwithstanding OPS.GEN.155 should concern the entire OPS.CAT.155A paragraph rather than only the a) section.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.155.H Selection of alternate aerodromes - Helicopters p. 62

comment *443* comment by: *EHOC*

Paragraph (a)

It is not clear what the construct 'notwithstanding' is intended to mean in this paragraph. A close reading of the text of OPS.GEN.155 would suggest (as stated in OPS.GEN.155(d)) that paragraphs (a) and (c) are applicable to CAT. It would appear that the text of OPS.CAT.H.155 complements the text of OPS.GEN.155 and does not replace it.

In fact it would appear that the text of the CAT rule is only intended to replace the text of OPS.GEN.155(e). Specifying only this clause would have made the intent much clearer:

"Notwithstanding OPS.GEN.155(e)..."

(See also the comment in OPS.CAT.H.156).

Paragraph (c)(4)

This needs to be brought into line with Annex 6 which states "to the extent possible, deck availability shall be guaranteed" – to the extent possible is explained and qualified in the AMC.

Paragraph (d)

The contraction of the original text has led to a change in requirements.

The previous requirement prescribed minima for the three cases: those for the destination; those for an offshore destination alternate; and those for all other destination alternates. The proposal puts all into one clause and points to 'Table 1H'. The end result is a increased requirement for the destination

and an inappropriate set of conditions for the offshore alternates (subject to their own specific rules).

This can be rectified by applying the following text:

"(d) A destination or destination alternate aerodrome required at the planning stage shall only be selected when the available current meteorological information indicates that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be at or above the applicable planning minima as follows:

(1) *For a destination*, the applicable landing minima as specified in accordance with OPS.GEN.150; and

(2) *For an offshore alternate*, the applicable landing minima as specified in accordance with (c)(4) above; or

(3) *For a destination alternate*, the applicable landing minima as specified in Table 1H of OPS.CAT.155.H."

comment *871* comment by: *Robert R McGregor*

comment *872* comment by: *Robert R McGregor*

It is misleading to simply state, that an IFR flight to a coastal aerodrome does not require an alternate, when, in reality, there must be an alternative means available of guaranteeing a safe arrival at the destination other than by completion of an IFR approach procedure.

30 years ago offshore flights on the North Sea were mostly conducted under VFR, for which a destination alternate was not required. But, on occasion, this led, to helicopters flying for hundreds of miles, at very low levels in conditions of low cloud and poor visibility to a coastal aerodrome destination where the weather had deteriorated to below arrival minima. To address this undesirable situation, the UK CAA set minima for en-route and destination weather for offshore VFR flights, of 600 ft cloud base and 4 km visibility (day) and 1000 ft cloud base and 5 km (night).

Although these new requirements brought about an improvement in operational safety, it was quickly realized that transit of areas of low cloud and poor visibility under IFR was intrinsically safer and that the normal requirement for a destination alternate under IFR could be dispensed with if the meteorological conditions at the coastal aerodrome were reliably forecast to be suitable for the alternative of a VFR arrival after an offshore descent to below cloud.

The rule that has worked exceedingly well for the past 26 years has been that, normally, a destination alternate is required, unless, the destination is a coastal aerodrome for which there is a valid Landing Forecast* of 600 ft

cloud base and 4 km visibility, by day or 1000 ft cloud base and 5 km, by night. This ensures that there is a high probability of the weather conditions being suitable for completion of, either an IFR approach, or a VFR arrival following an offshore descent to below cloud i.e. a VFR alternative to an IFR arrival.

*It is important that a destination Landing Forecast (with 90% reliability) is used for this purpose as opposed to an Aerodrome Forecast (TAF) which has only 70% reliability.

Consequently, the text in paragraph (a)(1) should be amended as follows:-

(a)"…unless:

(a)(1) the destination is a coastal aerodrome where the meteorological conditions forecast for the estimated time of arrival will be suitable for an arrival under VFR."

comment *3343* comment by: *UK CAA*

Page: 62

Paragraph No: OPS.CAT.155.H

Comment: Paragraph (a)

The text of OPS.GEN.155 would suggest (as stated in OPS.GEN.155(d)) that paragraphs (a) and (c) are applicable to CAT. It would appear that the text of OPS.CAT.H.155 complements the text of OPS.GEN.155 and specifically paragraph (e). Alluding to this by changing the text as indicated below would make the intent clearer.

Paragraph (c)(3)

This needs to be brought into line with Annex 6 which states "to the extent possible, deck availability shall be guaranteed" – to the extent possible is explained and qualified in the AMC.

Paragraph (d)

The original text has been contracted and lost its intent leading to a change in requirements for the destination and destination alternate. This should be rectified by applying the amended text below.

Justification:

Clarification and correction of text.

Proposed Text (if applicable):

(a) Notwithstanding OPS.GEN.155 ***(e)***, …….

(c)(3) ***To the extent possible,*** deck availability shall be ….

(d) A destination***, and when required at the planning stage a*** ~~or~~ destination alternate aerodrome***,*** ~~required at the planning stage~~ shall only be selected when the available current meteorological information indicates that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be at or above the

applicable planning minima ~~in Table 1H of OPS.CAT.155.H~~ ***as follows:***

~~*(1) For a destination, the applicable landing minima as specified in accordance with OPS.GEN.150; and*~~

(2) For an offshore alternate, the applicable landing minima as specified in accordance with (c)(4) above; or

(3) For a destination alternate, the applicable landing minima as specified in Table 1H of OPS.CAT.155.H.

comment *5160* comment by: *DGAC*

This paragraph is an illustration of the limits of the new structure. We are not convinced to have fully understood what provision shall be applicable to whom and what provision of OPS.GEN.155 is deemed to be applicable in addition to those laid-down in OPS.CAT.155H, especially in the case of isolated aerodrome…

comment *5779* comment by: *Norsk Luftambulanse*

(b) There are good offshore and fixed wing solutions. To provide a similar safe and good solution for HEMS operators with IFR as an integrated part of their operations, a specification that 2 alternate approaches to same aerodrome is acceptable should be added;

"As helicopters can operate independent of the runway structure, and only require the approach aids, it should be specified that two destination alternates to the same aerodrome fulfill the requirement, provided two independent navaids are used, and the weather requirement for an alternate is applied for the approach with the highest minima."

comment *6054* comment by: *Irish Aviation Authority*

Comment:

(a)(i) - The term "Coastal Aerodrome" is not defined.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Amend text in definitions to include Coastal Airfield.

comment *6915* comment by: *Konrad Polreich*

OPS.CAT.155.H (a)(2)

For helicopters acc. to this paragraph, it would be necessary to have VMC available, to plan without an alternate, compared to less restrictive conditions for aeroplanes. Although the flight time is normally considerably less than 6 hours and thus the available weather forecasts for the destination before take-off is more accurate. It should be possible to plan without an alternate, also for helicopters, when conditions at the destination are comparable to OPS.CAT.155.A (a)(3). The destination criteria (at ETA ± 1 hr) could be:

- VMC (ceiling above MRVA/MSA), or

- 2 separate instrument approach procedures, and

- weather: ceiling 400ft and visibility 1000m above the required planning minimum acc. Table 1H of OPS.CAT.155.H (The higher minimums of the 2 separate approach procedures have to be considered)

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.156.A Selection of take-off alternate aerodromes - Aeroplanes p. 63

comment *72* comment by: *Air Southwest*

This paragraph is virtually a direct copy of OPS.GEN.155 (a-c) the only difference (excluding the ETOPS requirement) is that this paragraph mentions the operational flight plan not the ATS FPL. Suggest a directive pre-amble to OPS.GEN.155 to direct CAT Operators to OPS.CAT.156.A.

comment *558* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.156.A(a)(1): change as follows:

(a) A take-off alternate aerodrome shall be selected and specified in the operational flight plan, if:

(1) at the aerodrome of departure the weather conditions are ~~**at or**~~ below the applicable aerodrome operating minima; or

Justification:

Wrong transfer from JARs: a departure aerodrome with weather conditions at the applicable minima is still suitable for landing.

comment *559* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.156.A(b): consider adding:

(b) **Notwithstanding OPS.GEN.155** ~~**The**~~ **the** take-off alternate aerodrome

shall be located within the following distances from the aerodrome of departure:

Justification:

(b) (1) does not cater for a two hours ETOPS take-off alternate. This is specified in OPS.CAT.156.A so OPS.GEN.155 (b) should allow this as well. Another option is to add 'Notwithstanding OPS.GEN.155 to OPS.CAT.156.A (b).

comment *794* comment by: *KLM*

(c) one hour before the estimated time of arrival is too much and not useful. It is sufficient to require the weather to be at or above the required minima from ETA plus one hour.

comment *3063* comment by: *AEA*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *3647* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *4299* comment by: *KLM*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *4514* comment by: *TAP Portugal*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *4899* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *5161* comment by: *DGAC*

The purpose of this paragraph, in order to select a take-off alternate, is to determine a distance threshold equivalent to flying during 60 minutes (or 120 minutes) in still air standard conditions (see EU-OPS 1.295). We should find in this paragraph (at IR level) the conditions for calculation of the distance threshold because the way it is written, it seems to be dependant on the actual conditions (temperature, wind, etc...) which is not feasible.

comment *5182* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a negative impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *5478* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the '**in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *6818* comment by: *Icelandair*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Comment:

This definition is not consistent with EU-OPS due to the lack of reference to the **'in still air standard conditions'** (EU OPS 1.295). This would have a tremendous impact on flight operations which cannot be justified on safety grounds.

Proposal:

Realign with EU-OPS.

comment *7254* comment by: *AIR FRANCE*

Relevant Text:

b) The take off alternate aerodrome shall be located within the following distances from the aerodrome of departure

1) For aeroplanes having two engines

i) one hour flight time at the One-Engine-Inoperative cruise speed or

ii) The ETOPS diversion time subject to any MEL restrictions, up to a maximum of two hours at the OEI cruise speed

2) For aeroplanes having three or more engines, two hours flight time at OEI cruise speed.

Proposal:

The **'in still air standard conditions' present in AMC OPS.CAT.156.A.B.1 should be included in OPS.CAT.156.A.B.1.**

comment *7661* comment by: *Juergen Hauk*

OPS.CAT.156.A
Selection of take-off alternate aerodromes - Aeroplanes

(a) …

(b) The take-off alternate aerodrome shall be located within the following distances from the aerodrome of departure:

(1) For aeroplanes having two engines:

(i) one hour flight time at One-Engine-Inoperative (OEI) cruise speed; or

(ii) the Extended Range Twin-Engine Operations (ETOPS) diversion time, subject to any MEL restrictions,
up to a maximum of two hours at the OEI cruise speed.

(2) …

Comment:

It is not clearly stated, if small jets, which basically do have a diversion time of 120 minutes, may also choose a take-off alternate aerodrome up to two hours distance.

From my point of view, this should be the case. At least they should be allowed to do so, if the competent authority approved an extension (up to 180 minutes) acc. to OPS:CAT.225A
??

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.156.H Selection of take-off alternate aerodromes - Helicopters p. 63

comment *444* comment by: *EHOC*

General

This appears to be a repetition of the intent of the text that is contained in OPS.GEN.155(d).

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.170 Minimum terrain clearance altitudes p. 63

comment *446* comment by: *EHOC*

General

The text does not capture the true intent of this rule.

The text in (b) is not understood because once the minimum altitudes have been specified, why would they not be used by all aircraft? A suggested text (and arrangement) might be:

"(a) An operator shall specify minimum flight altitudes, and the methods to determine those altitudes, for all route segments to be flown which provide the required terrain clearance taking into account the performance of the aircraft."

Then; delete (b) and renumber new (c) to (b)

Paragraph (b)

The meaning of this text is obscure; inserting the additional text into (a) would provide the same intent and make the rule simpler (see (a) above).

Paragraph (c)

It would be better if the meaning of this were made more precise; the following text is much clearer.

"Where minimum flight altitudes established by States overflown are higher than those established by the operator, the higher values shall apply."

comment *969* comment by: *REGA*

HEMS missions: It is unrealistic to establish minimum flight altitudes for all routes in mountainous terrain (Alps). Furthermore due the character of HEMS operations it is impossible to define routes to HEMS operating sites. A general minimum flight altitude of 500 ft/1000 ft as defined for example by the Swiss law is more realistic for a HEMS-operation.

Proposal (a)

An operator shall specify minimum flight altitudes for all route segments to be flown in airline operation, which provide the required terrain clearance, taking into account the performance of the aircraft.

comment *2266* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Minimum terrain clearance altitudes

Comment / Proposal:

Modify text:

(a) An operator shall specify minimum flight altitudes for all route segments regularly flown in an airline operation,

comment *3344* comment by: *UK CAA*

Page No: 63

Paragraph No: OPS.CAT.170 (b)

Comment:

The proposed rule appears to be incomplete as it does not state what the "method specified in its operations Manual" is to be used for. Add the phrase "for the calculation of minimum terrain clearance altitudes".

Justification:

To clarify what the "method specified" is to be used for.

Proposed Text (if applicable):

An operator of complex motor-powered aircraft shall ***calculate minimum terrain clearance altitudes*** use***ing*** a method specified in its operations manual.

comment *4577* comment by: *Bristow Helicopters*

Paragraph b results in a circular argument. The operations manual is written to comply with the regulations, whilst this regulation requires the operator to comply with itself, i.e. the ops manual and not the regulations

comment *5780* comment by: *Norsk Luftambulanse*

For helicopters we suggest to allow for using criteria from arrival routes for the width of protected area also for en-route portions even outside of 30 NM of ARP/PRP in order to be able to keep IFR en-route altitudes as low as possible to avoid icing (and thus replacing VFR flight at low level). The en-route portion should then be considered to be arrival routes according to the above criteria, i.e. ±2.50 NM

A requirement should be that the operator ensures that the scaling on the GPS system is configured to maximum scaling ±1 NM (terminal) on a permanent base. The selected scale and any lower scale will be used during the various phases of flight. The default en-route scaling of ±5 NM (outside 30 NM) shall not be used. RAIM/HIL limits shall follow the selected scaling.

comment *6029* comment by: *Irish Aviation Authority*

Comment:

The Title of the paragraph uses the term "Minimum Terrain Clearance Altitude" which is not defined in the definitions. Additionally this is a term that is not in common use within the aviation world at present.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Revert to use of "Minimum Safe Altitude" or "Minimum Obstacle Clearance Altitude".

Routes and areas of operation

comment *447* comment by: *EHOC*

General

It has been suggested that ERs 2.a.1, 2.a.4, 2.a.6 and 3.a.5 contain the original intent of this rule.

However, the original intent (in accordance with Annex 6 Part I Chapter 4.1 - Annex 6 Part I Chapter 2.1) was to ensure that, over-and-above general considerations for flight, specific elements that address the Area and Route of Operation are considered. This could include additional procedures, equipment, conditions - e.g. offshore, the met coverage for the area (offshore operations), performance in the case of mountains etc.

The ER is only general and requirement should be put into an IR and expanded out into its respective parts.

comment *5164* comment by: *DGAC*

Justification :

For operators located in islands (e.g : in the Caribbean region), water surfaces should also be accepted for single-engine aeroplanes, based on distance criteria, ditching certification, etc.

Proposed text : Amend the text as follows (or add this possibility in an AMC OPS.CAT.180) :

"When single-engine aircraft are used, surfaces which permit a safe landing to be executed shall be available along the route, except for helicopters when holding an approval in accordance with Part OPS.SPA.001.SFL. **For landplanes, a place on land is required, unless otherwise approved by the Authority**.

comment *5454* comment by: *ALFA-HELICOPTER*

Delete: Restrictions should be according to the RFM.

comment *5719* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: Not all multi-engine aircraft have capability to sustain flight in the event of failure to one engine. Hence, the use of the term single-engine when considering safe forced landing is not correct. For helicopters the term should be category B helicopters

Proposal (including ***new text***):

Add following text:

HELICOPTERS

When ~~single-engine aircraft~~ ***category B helicopters*** are used, surfaces which permit a safe forced landing to be executed shall be available along the route, except for when holding an approval in accordance with Part OPS.SPA.001.SFL.

comment *6544* comment by: *SFR Sweden*

Section: OPS.CAT.180 Routes and areas of operation

Relevant Text: When single-engine aircraft are used, surfaces which permit a safe forced landing to be executed shall be available along the route, except for helicopters when holding an approval in accordance with Part OPS.SPA.001.SFL.

It might be reasonable to think that the propose of this requirement is to ensure safety for passengers, crew and third party in case of a forced landing. However, a forced landing might be necessary even for twin – engine helicopters during certain conditions. A reference to PC 3 might be better suited.

Proposal:

HELICOPTERS

When helicopters in Performance Class 3 are used, surfaces which permit a safe forced landing to be executed shall be available along the route, except for when holding an approval in accordance with Part OPS.SPA.001.SFL.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.185.H Meteorological conditions - Helicopters p. 64

comment *973* comment by: *REGA*

The wind speed shall not be defined by numbers. Depending on the operation or the situation, e.g. urgent transport, a landing should be allowed, if: The operator has defined a wind maximum in accordance with the RFM limitation.

comment *2267* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Meteorological conditions - Helicopters

Comment / Proposal:

Modify text:

A flight to a helideck or elevated Final Approach and Take-Off Area (FATO) shall only be executed in accordance with the AFM limitations.

comment *3897* comment by: *FOM ANWB MAA*

OPS.CAT.185.H Meteorological conditions - Helicopters

A flight to a helideck or elevated Final Approach and Take-Off Area (FATO) shall not be operated when, according to available information, the mean wind speed at the helideck or elevated aerodrome is ~~60 knots or more~~ in excess of the HFM limits.

Restrictions should be according to the RFM.

comment *3948* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Delete!

Restrictions should be according to the RFM.

comment *5139* comment by: *ADAC Luftrettung GmbH*

Consider alleviation for HEMS operations (mountain operations)

Delete: Restrictions should be according to the RFM.

comment *5781* comment by: *Norsk Luftambulanse*

Delete: Restrictions should be according to the RFM.

comment *6055* comment by: *Irish Aviation Authority*

Comment:

The guidance set out in this paragraph should be applied to equally to OPS.GEN and OPS.COM operations

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Amend text in OPS.GEN.185 and OPS.COM.185 to include this paragraph.

comment *6375* comment by: *HDM Luftrettung gGmbH*

Delete: Restrictions should be according to the RFM.

comment *6615* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.CAT.185.H Meteorological conditions - Helicopters

A flight to a helideck or elevated Final Approach and Take-Off Area (FATO) shall not be operated when, according to available information, the mean wind speed at the helideck or elevated aerodrome is ~~60 knots or more~~ in excess of the HFM limits.

Restrictions should be according to the RFM.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.205 Fuel and oil supply p. 64-65

comment *449* comment by: *EHOC*

Paragraph (c)

There is a lack of cohesion between this rule and AMC 3 OPS.CAT.205.H. Specifically the elements are not organised or ordered in the same way and text that is contained in the rule is repeated in the AMC. As the AMC follows the original method of planning, perhaps the rule should reflect this - i.e.:

(c) Notwithstanding OPS.GEN.205, fuel calculations shall be based upon the following:

(1) taxi fuel;

(2) trip fuel;

(3) Reserve fuel consisting of:

(i) contingency fuel;

(ii) alternate fuel, if an destination alternate is required;

(iii) final reserve fuel;

(4) additional fuel, if required by the type of operation (e.g. isolated aerodromes);

(5) extra fuel if requested by the pilot-in-command.

Paragraph (c)(3)

All of this is specified in AMC 3 OPS.CAT.205.H; it is not clear why other than the objective is being set in this rule. All that happens is the the objective

set in the rule and the method of compliance become confused.

The method of compliance should be removed and only the objective left.

Paragraph (c)(4)

All of this is specified in AMC 3 OPS.CAT.205.H; it is not clear why other than the objective is being set in this rule. All that happens is the the objective set in the rule and the method of compliance become confused.

The method of compliance should be removed and only the objective left.

Paragraph (c)(4)(iii)

This has been removed from ICAO because of the near impossibility of being able to carry an additional 2 hours fuel. It should be set as an objective and then left to the operator to specify.

Paragraph (5)

The reason that contingency fuel comes before alternate fuel (in the original) is that it is (with the exception of offshore operations) applied only to the trip fuel. The original order should be applied.

Addition of new Paragraph (d)

An objective text for the requirement for in-flight planning should be inserted here as (d) and AMC1 OPS.CAT.205 pointed to it.

"(d) An operator shall provide in-flight replanning procedures for calculating fuel required when a flight has to proceed along a route or to a destination other than originally planned."

comment *970* comment by: *REGA*

Beside trip fuel we have to carry 10% contingency fuel and a final reserve for 20 minutes at day or 30 minutes at night. This means that almost half of our fuel carried on board is a reserve! That also means that we may not start to a lot of standard missions, especially in summer, when we only carry 250kg of standard fuel on board because of the RSH (technical crew member). Such a fuel policy is more than unrealistic in Switzerland, where we have a narrow net of refueling possibilities.

Definition of aerodrome: Need to be clarified, if operating sites are included or not. Sometimes operating sites are mentioned separately.

An exception for HEMS should be added. Otherwise when Helicopters operated in mountainous terrain at high altitudes a reserve fuel for 30 minutes could result in performance problem. For those exceptionally cases, in specific areas described in the operational manual, where fuel is available within 20 minutes at cruise speed from the operational site, the HEMS mission should be alleviated from the final reserve fuel rule/ (4).

Proposal (3) and (4)

(3)

(ii) … or /operational site

(4)

(ii) …/operational site

Notwithstanding (4), for HEMS-operations in a specific areas, described in the operational manual and approved by the competent authority, where fuel is available within 20 minutes at cruise speed from the operational site.

comment *2268* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Fuel and oil supply

Comment / Proposal:

Modify text:

HELICOPTERS

(c) Notwithstanding OPS.GEN.205, fuel calculations on IFR flights shall be based upon the following: [...].

Remarks:

The fuel requirements stated are to extensive for VFR helicopter operations that are not bound to airports and mostly operate locally.

comment *3064* comment by: *AEA*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *3165* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

Is ballooning now CAT? or not, otherwise we missed the calculation for LPG for any kind of balloons

comment *3345* comment by: *UK CAA*

Page No: 64

Paragraph No: OPS.CAT.205

Comment:

The rule title includes the words 'oil supply' but there is no adequate supporting text and the requirement is covered by paragraph 2.a.7 of the Basic Regulation.

Justification:

Clarity

Proposed Text (if applicable):

Amend title: OPS.CAT.205 Fuel ~~and oil~~ supply

comment *3648* comment by: *AUSTRIAN Airlines*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *3898* comment by: *FOM ANWB MAA*

OPS.CAT.205 Fuel and oil supply

HELICOPTERS

(3) alternate fuel, if a destination alternate is required, which shall include:

(i) fuel for a missed approach at the destination ~~aerodrome~~; and

(ii) fuel for flying and landing at the destination alternate ~~aerodrome~~; and

(iii) for offshore operations 10% of (i) and (ii) above;

(4) final reserve fuel:

...

(ii) for IFR or when flying VFR and navigating by means other than by reference to visual land marks or at night, fuel to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination ~~aerodrome~~ in standard conditions, calculated with the estimated mass on arrival above the alternate aerodrome or the destination, when no alternate is required; or

Destination would suffice, "aerodrome" rules out an operating site where fuel

is available. As an alternative change to read aerodrome/ operating site

comment *3951* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(c)(3)(i) Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *3952* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(c)(3)(ii) Delete : ..Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *3962* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(c)(4)(ii) Delete : ..Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *4300* comment by: *KLM*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *4516* comment by: *TAP Portugal*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *4900* comment by: *Deutsche Lufthansa AG*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *5140* comment by: *ADAC Luftrettung GmbH*

205 (c) (3) (i) Destination would suffice, "aerodrome" rules out an operating site where fuel is available

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

205 (c) (3) (ii) Destination would suffice, "aerodrome" rules out an operating site where fuel is available

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

205 (c) (4) (ii) Destination would suffice, "aerodrome" rules out an operating site where fuel is available

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *5464* comment by: *ALFA-HELICOPTER*

205 (c)(3)(i) and (ii) / also 205 (c)(4)(ii) Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *5479* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *5653* comment by: *Peter Moeller*

add

(3)(i)(ii) ....aerodrom/heliport

(4)(ii) .....aerodrom/heliport

comment *5782* comment by: *Norsk Luftambulanse*

(c)(3)(i) Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *5783* comment by: *Norsk Luftambulanse*

(c)(3)(ii) Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *5784* comment by: *Norsk Luftambulanse*

(c) (4) (ii) Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *6048* comment by: *Irish Aviation Authority*

Comment:

Helicopters (c)(4)(i)

There is a typographical error in the text "20 minutes ar best range speed" should read "20 minutes at best range speed".

Justification:

Standardisation with already accepted aviation normal practice.

comment *6385* comment by: *HDM Luftrettung gGmbH*

(c)(3)(i):

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

(ii):

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

205 (c)(4)(ii):

Delete : .. Aerodrome,,.Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *6619* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.CAT.205 Fuel and oil supply

HELICOPTERS

(3) alternate fuel, if a destination alternate is required, which shall include:

(i) fuel for a missed approach at the destination ~~aerodrome~~; and

(ii) fuel for flying and landing at the destination alternate ~~aerodrome~~; and

(iii) for offshore operations 10% of (i) and (ii) above;

(4) final reserve fuel:

...

(ii) for IFR or when flying VFR and navigating by means other than by reference to visual land marks or at night, fuel to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination ~~aerodrome~~ in standard conditions, calculated with the estimated mass on arrival above the alternate aerodrome or the destination, when no alternate is required; or

Destination would suffice, "aerodrome" rules out an operating site where fuel is available. As an alternative change to read aerodrome/ operating site

comment *6820* comment by: *Icelandair*

Relevant Text:

OPS.CAT.205 Fuel and Oil Supply

Comment:

This paragraph is complex and in order to avoid unnecessary confusion we suggest to realign it with EU-OPS

Proposal:

Realign with EU-OPS.

comment *6877* comment by: *Luftsport-Verband Bayern*

zu: AEROPLANES (c) Except for non-commercial flights with other than complex motor-powered aircraft taking off and landing at the same aerodrome/operating site and remaining within 50 nautical miles (nm) of that aerodrome/operating site, flights conducted in accordance with VFR shall carry reserve fuel not less than: (1) 30 minutes fuel at normal cruising altitude by day; or...: Bislang gab es keine Festlegung für den Reservekraftstoff im Bereich der nichtkommerziellen Fliegerei. Dies wird nun in Fällen, in denen über eine Distanz von mehr als 50 km geflogen wird oder bei denen an einem anderen Flugplatz gelandet wird auf 30 Minuten festgelegt. Dies kann zu Zuladungsproblemen führen.

Vorschlag Neuformulierung: AEROPLANES (c) Except for non-commercial flights with other than complex motor-powered aircraft flights conducted in accordance with VFR shall carry reserve fuel not less than: (1) 30 minutes fuel at normal cruising altitude by day; or

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.210 Refuelling / defuelling with wide cut fuels p. 65

comment *450* comment by: *EHOC*

<u>General</u>

The philosophy of numbering is not understood with the GEN and CAT rules. They share the same number but deal with different concepts (which is reflected in the title). Would it not be advantageous to provide a different number for the CAT rule (as it was in the original rule)?

comment *3571* comment by: *Walter Gessky*

OPS.GEN / CAT.210 Refuelling / defuelling with wide cut fuels

Comment

It should be reviewed if refuelled or defuelled during passengers are

embarking creats an unnecessary safety risk and should not be forbidden.

It the case of emergency (fire) passengers on board will disembark while passengers still try to embark the aircraft. This might be an undue safety risk.

comment *5707* comment by: *Peter Moeller*

For HEMS operation patient treatment may require the patient, Med crew and Flight Crew to stay on board, rotors runnning and perform a hot refueling.

The operator shall publish procedures which guarantte a safe hot refuelling.

comment *6051* comment by: *Irish Aviation Authority*

Comment:

There is a typographical error in the text, The "of" between "type" and "fuel" is superfluous.

Justification:

Standardisation with already accepted aviation normal practice.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.225.A Maximum distance from an adequate aerodrome for two-engined aeroplanes p. 65-66

comment *73* comment by: *Air Southwest*

OPS.CAT.225.A.(a)(1)(ii)(A) should read: "with a MPSC of 19 seats or less; **AND** " not 'or'. Reference EU-OPS 1.245 (a)(2)(i)

comment *877* comment by: *Condor Flugdienst GmbH - FRA HO/R*

This paragraph requires clarification that any competent authority may extent ETOPS Threshold distance up to a maximum of 120 minutes.

comment *917* comment by: *CAA-NL*

Comment CAA-NL:

Add. in 'no wind' and ISA conditoins.

Reason:

Not in line with EU-OPS and ICAO

comment *1098* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Condor comments: If EASA intends to permit extension of the 60 mins ETOPS threshold, the para should say so in plainer words.

comment *2064* comment by: *Airbus S.A.S.*

OPS.CAT.225.A (a)(1)(ii)(A) states:

"With a MPSC of 19 seats or less; *or*"

Replace "or", hereabove underlined, with "and".

In fact, if both conditions (A) and (B) of OPS.CAT.225.A(a)(1)(ii) are not satisfied, automatically provision OPS.CAT.225.A (a)(1)(i) applies.

comment *2357* comment by: *Dassault Aviation*

Technical comment:

Page 65 OPS.CAT.225.A §(a)(1)(ii) Maximum distance from an adequate aerodrome for two-engined aeroplanes. In this proposed requirement, there is no condition associated with the maximum distance flown from an adequate aerodrome, except the one-engine inoperative cruise speed. The additional criteria of EU-OPS1.245(a) "under standard condition in still air" should be added.

comment *2387* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

OPS .CAT.225.A is unclear in that it appears to refer to non-ETOPS and ETOPS aircraft.

Proposal:

1.A new AMC should be written and included in **AMC OPS.SPA.**

2. EU-OPS references 1.245(a) (b) and 1.246 (a) (b) are clearer and should be used instead.

comment *2824* comment by: *M Wilson-NetJets*

Original text:

(a) Two-engined aeroplanes shall not be operated over a route that contains a point further from an adequate aerodrome than: (1) for turbo-propeller or jet-powered aeroplanes: (i) the distance flown in 60 minutes at the One-Engine-Inoperative (OEI) cruise speed, for aeroplanes: (A) with a Maximum Passenger Seating Configuration (MPSC) of more than 19; or (B) a maximum take-off mass of 45 360 kg or more; (ii) the distance flown in 120 minutes at the OEI cruise speed, for aeroplanes: (A) with a MPSC of 19 seats or less; or

(B) a maximum take-off mass less than 45 360 kg. For jet aeroplanes, the competent authority may extend the distance referred to above by a maximum of 60 minutes, provided this extension is within the performance limits of the aeroplane and the operator has experience to ensure the safety of the operation; and (2) for other aeroplanes, the distance flown in 120 minutes at the OEI cruise speed, or 300 nautical miles, whichever is less.

(2) for other aeroplanes, the distance flown in 120 minutes at the OEI cruise speed, or 300 nautical miles, whichever is less.

Suggested new text:

(a) Two-engined aeroplanes shall not be operated over a route that contains a point further from an adequate aerodrome than: (1) for turbo-propeller or jet-powered aeroplanes: (i) the distance flown in 60 minutes at the One-Engine-Inoperative (OEI) cruise speed, for aeroplanes: (A) with a Maximum Passenger Seating Configuration (MPSC) of more than 19; or (B) a maximum take-off mass of 45 360 kg or more; (ii) the distance flown in 120 minutes at the OEI cruise speed, for aeroplanes: (A) with a MPSC of 19 seats or less; **AND**

(B) a maximum take-off mass less than 45 360 kg. For jet aeroplanes, the competent authority may extend the distance referred to above by a maximum of 60 minutes, provided this extension is within the performance limits of the aeroplane and the operator has experience to ensure the safety of the operation; and (2) for other aeroplanes, the distance flown in 120 minutes at the OEI cruise speed, or 300 nautical miles, whichever is less.

(2) for other aeroplanes, the distance flown in 120 minutes at the OEI cruise speed, or 300 nautical miles, whichever is less.

Comment/suggestion:

The "OR" at the end of the sentence in (a)(1) should be an "AND" so that the logic of the paragraph is correct.

comment *3065* comment by: *AEA*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *3202* comment by: *Austro Control GmbH*

(c) Notwithstanding the provision of (a), a two-engined aeroplane may be operated beyond the maximum distance from an adequate aerodrome, provided:

(4) ***the operation is approved by the competent authority and*** *the maximum diversion time is stipulated in the operations specification to the Air Operator's Certificate (AOC).*

Justification:

According EU-OPS Authority approval for ETOPS operation is required. This should also be mentioned.

comment *3572* comment by: *Walter Gessky*

OPS.CAT.225.A Maximum distance from an adequate aerodrome for two-engined aeroplanes

(c) Notwithstanding the provision of (a), a two-engined aeroplane may be operated beyond the maximum distance from an adequate aerodrome, provided:

(4) **the operation is approved by the competent authority and** the maximum diversion time is stipulated in the operations specification to the Air Operator's Certificate (AOC).

Justification:

According EU-OPS Authority approval for ETOPS operation is required. This should also mentioned and added to (4).

comment *3649* comment by: *AUSTRIAN Airlines*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see

previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *4302* comment by: *KLM*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

comment *4518* comment by: *TAP Portugal*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *4720* comment by: *British Airways Flight Operations*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing. It would be impossible to apply the provisions of this para if the effects of wind had to be considered, and there is no justification for making that change in any case.

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard**

conditions'

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4901* comment by: *Deutsche Lufthansa AG*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

Generally re-align the whole text with EU-OPS 1.245

comment *5165* comment by: *DGAC*

The purpose of this paragraph is to determine a distance threshold equivalent to flying during 60 minutes (or 120 minutes) in still air standard conditions. We should find in this paragraph (at IR level) the conditions for calculation of the distance threshold because the way it is written, it seems to be dependant on the actual conditions (temperature, wind, etc...) which is not feasible.

(c):

Proposal : Amend the beginning of (c) as follows:

"(c) Notwithstanding the provision of (a), **if 'ETOPS' approved by the competent authority** a two-engined aeroplane may be operated beyond the maximum distance from an adequate aerodrome, provided:"

Justification :

It should be made clear that (c) applies to ETOPS operations

ETOPS operations need approval

comment *5183* comment by: *Virgin Atlantic Airways*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine

aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *5480* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *5706* comment by: *ERA*

European Regions Airline Association Comment

(a) (1)(ii)(A): 'or' constitutes an alleviation as compared to JAR-OPS 1.245(a)(2)(i) 'and'

- Whilst this is noted some clarification is needed on the background to this change.
- The reference to 'in still air and standard conditions' is missing
- Re-align with EU-OPS to add reference to 'in still air and standard conditions'

comment *6608* comment by: *KLM Cityhopper*

Comment:

The reference to **'in still air and standard conditions'** is missing

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *6821* comment by: *Icelandair*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing (see previous comments)

Proposal:

Realign with EU-OPS to add reference to **'in still air and standard conditions'**

comment *7081* comment by: *IACA International Air Carrier Association*

(a)(1)(i)

This article appears to limit ETOPS for aircraft with more than 19 passengers and 45 tons to 120 min (60 min + 60 min), while smaller aircraft could go to 180 min (120 min + 60 min) !?

Furthermore, (c) makes no reference to the AMC 20-6 that is applicable to larger CAT aircraft. Why is AMC 20-6 not re-named AMCx.OPS.CAT.225.A ?

Please review and amend.

comment *7256* comment by: *AIR FRANCE*

Relevant Text:

OPS CAT.225A Maximum Distance from adequate aerodrome for two engine aeroplanes

Comment:

The reference to **'in still air and standard conditions'** is missing.

Proposal:

Even if 'still air conditions' is reminded in AMC 20-6, this condition should be part of the definition given here.

comment *7313* comment by: *General Aviation Manufacturers Association / Hennig*

GAMA notes that OPS.CAT.225.A (a)(1)(ii) the definition of cruise speed (for determination of distance to adequate aerodromes) differs from the EU-OPS 1.245(a) language which includes "under standard conditions in still air" – a

statement which has not been retained in the NPA. This is of great concern as it indicates a change from the ETOPS requirements developed through the JAA Operational Sectorial Team (OST) over several years.

This is an important technical definition for the determination of ETOPS / Extended Operations and we feel it is important that the language be brought fully [emphasis added] in alignment with EU-OPS which was based on the much debated JAR-OPS definitions for ETOPS.

GAMA would especially note the hard work of the OST to develop the requirements for ETOPS for aircraft with a maximum take-off mass of less than 45,360kg.

GAMA recommends that EASA ensure that no intentional or unintentional changes are made to the ETOPS requirements as part of NPA 2009-02 as they are based on significant government and industry coordination on this important regulatory matter.

comment *7659* comment by: *Juergen Hauk*

Note: In this letter I will name a jet-powered airplane with 19 MPSC and MTOM<45.360 kg a "small jet"

OPS.CAT.225.A

Maximum distance from an adequate aerodrome for two-engined aeroplanes

(a) Two-engined aeroplanes shall not be operated over a route that contains a point further from an adequate aerodrome than:

(1) for turbo-propeller or jet-powered aeroplanes:

(i) the distance flown in 60 minutes at the OEI cruise speed, for aeroplanes:

(A) with a Maximum Passenger Seating Configuration (MPSC) of more than 19; or

(B) a maximum take-off mass of 45 360 kg or more;

(ii) the distance flown in 120 minutes at the OEI cruise speed, for aeroplanes:

(A) with a MPSC of 19 seats or less; or

(B) a maximum take-off mass less than 45 360 kg.

For jet aeroplanes, the competent authority may extend the distance referred to above by a maximum of 60 minutes, provided this extension is within the performance limits of the aeroplane and the operator has experience to ensure the safety of the operation; and

(2) …

EASA NPA 2009-02b - **AMC OPS.CAT.225.A(c)**

Maximum distance from an adequate aerodrome for twoengined aeroplanes

OPERATION OF TWIN TURBOJET AEROPLANES HAVING A MAXIMUM PASSENGER SEATING CONFIGURATION OF 19 OR LESS AND HAVING A MAXIMUM TAKE-OFF MASS OF LESS THAN 45 360 KG BETWEEN 120 AND 180 MINUTES FROM AN ADEQUATE AERODROME – OPERATIONAL CRITERIA FOR SMALL TWINS WITHOUT ETOPS CAPABILITY
1....

(Note: In this comment I will name a jet-powered airplane with 19 MPSC and MTOM<45.360 kg a "small jet")

Comments:

??

At (a)(1)(ii)(A) the text must be "and" (... with a MPSC of 19 or less;

and ...)

??
In EU-OPS, the extension, which a competent authority may approve up to 60 minutes, was only applicable for small jets. Now the text is applicable also for the "big" ones. I assume, this is by purpose.

??

It is not clearly stated, that this "extension" has nothing to do with an ETOPS approval.

Looking at AMC OPS.CAT.225.A(c), that paragraph seems to be the one which gives the basis for an extension up to 60 minutes, but it is applicable only for small jets ...

??

There are no questions when we talk about performance limits.
But how to define "experience", which is required "to ensure the safety of operation"?

??

Assuming, that for samll jets an ETOPS approval is relevant for "diversion times" of more than 180 minutes, (e.g. 240 minutes), we should have an official name for the extension up to 180 minutes: Most times I read "ER" operartion (Extended Range Operations), sometimes I find "EROPS". May be you will find a better wording.

??

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.230.A Pushback and towing - Aeroplanes p. 66

comment *319* comment by: *Aero-Club of Switzerland*

We think that this paragraph ist not necessary.

Justification: A/C will always be towed and pushed back according to

aviation standards and procedures, at least within the EU area of jurisdiction.

comment *3415* comment by: *Peter SCHMAUTZER*

Every procedure has to be carried out according to this standards, why only pushback and towing.

comment *7036* comment by: *Christian Hölzle*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.235 Air Traffic Services - Motor-powered aircraft p. 66

comment *452* comment by: *EHOC*

Paragraph (c)

This goes beyond that required by the original rule. (c) and (d) should be replace by a single (c):

(c) An operator shall ensure that a flight is not commenced unless an ATS flight plan has been submitted, or adequate information has been deposited or transmitted as soon as possible after take-off, in order to permit alerting services to be activated if required.

comment *976* comment by: *REGA*

HEMS missions are characterized by rapid changes in destinations and routes. To require submissions of flight plans for HEMS missions is not proportional. Hems missions are monitored (day and night) by the operational control center, e.g. Geographic Information System (GIS) and radio contact. A flight plane shall only submit, if required by the applicable air space requirement. Demanding e.g. the operational control center instead of the pilot to transmit the flight plan after the take off is often more adequate.

Proposal (b) (1)

Also by night….

Proposal (c)

A flight shall not be commenced unless a flight plan has been submitted to ATS, if required by the applicable air space requirement, or adequate information has been deposited in order to permit alerting services to be activated if required.

Proposal (d)

...or by the operator or an authorized person

comment *1336* comment by: *Air-Glaciers (pf)*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *1899* comment by: *SHA (AS)*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *1976* comment by: *Berner Oberländer Helikopter AG BOHAG*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2229* comment by: *Heliswiss*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2246* comment by: *Dirk Hatebur*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2269* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Air Traffic Services - Motor-powered aircraft

Comment / Proposal:

Modify text:

(a) Air Traffic Services (ATS) shall be used when required by the applicable airspace requirements.

(b) delete

(c) delete

(d) delete

Remarks:

The requirement to submit a flight plan should only be applicable if required by the applicable airspace requirement. Typical helicopter operations are within a certain area and the destinations often change rapidly. The burden of filing a flight plan is not proportional for helicopter operations.

comment *2489* comment by: *Jan Brühlmann*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2594* comment by: *Walter Mayer, Heliswiss*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2601* comment by: *Catherine Nussbaumer*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2728* comment by: *Heli Gotthard*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *2954* comment by: *Pascal DREER*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *3179* comment by: *Heli Gotthard AG Erstfeld*

OPS.CAT.235 Air Traffic service – Motor – powered aircraft

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio

comment *3236* comment by: *Eurocontrol CND*

OPS.CAT.235 Air Traffic Services – Motor-powered aircraft

As regards (a), this is a rather broad statement which is not possible to apply, considering that, in Class G airspace two-way communication is not required while, at the same time, at least flight information service and alerting service are available, which both form part of ATS.

Regarding (c), to require a flight plan for all VFR flights is a far-reaching extension of the ICAO requirements contained in Annex 2, paragraph 3.3.1.

comment *3521* comment by: *Heliswiss AG, Belp*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *3670* comment by: *Austro Control GmbH*

(a)

This requirement to submit a flight plan should only be applicable if there is a requirement by the applicable airspace rules. The burden of filing a flight plan is not proportinal for helicopter operations.

Suggest for modification of text:

"Air Traffic Services (ATS) shall be used when required by the applicable airspace rules".

Following the new text of (a), delete (b).

comment *3899* comment by: *FOM ANWB MAA*

OPS.CAT.235 Air Traffic Services - Motor-powered aircraft

(d) Notwithstanding (c), when operating from a site where it is impossible to submit a flight plan to ATS, it shall be transmitted as soon as possible after take-off by the pilot-in-command or an authorised person (f.i. flight dispatcher).

This could reduce pilot workload in certain circumstances.

comment *3965* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(d) ADD ..or an authorised person (f.i. flight dispatcher)

comment *4430* comment by: *Benedikt SCHLEGEL*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *4615* comment by: *Christophe Baumann*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *4961* comment by: *Benedikt SCHLEGEL*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *5141* comment by: *ADAC Luftrettung GmbH*

235 (d)

ADD ..or an authorised person (f.i. flight dispatcher)

ADD ..or an authorised person (f.i. flight dispatcher)

comment *5185* comment by: *Philipp Peterhans*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *5469* comment by: *ALFA-HELICOPTER*

(d) ADD ..or an authorised person (f.i. flight dispatcher)

comment *5718* comment by: *Peter Moeller*

(d) .....by the pilot-in-command or an authorised person

For HEMS operation it is not feasible to file a flight plan before commencing a rescue mission due to lack in time and possible loss of radio contact during low level operation.

Therefor HEMS operation should be excluded from (c) and (d). There is no degree on safety becaus a HEMS helicopter will always be in contact with the appropriate dispatch center.

comment *5785* comment by: *Norsk Luftambulanse*

(d) ADD ..or an authorised person (f.i. flight dispatcher)

comment *5842* comment by: *Ph.Walker*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *5852* comment by: *Ph.Walker*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *5905* comment by: *Dirk Hatebur*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *5984* comment by: *HSD Hubschrauber Sonder Dienst*

235(d) add at the very end:

"or an authorized person" (i.e. flight dispatcher)

comment *6280* comment by: *Hans MESSERLI*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *6396* comment by: *HDM Luftrettung gGmbH*

(d):

ADD ..or an authorised person (f.i. flight dispatcher)

comment *6624* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.CAT.235 Air Traffic Services - Motor-powered aircraft

(d) Notwithstanding (c), when operating from a site where it is impossible to submit a flight plan to ATS, it shall be transmitted as soon as possible after take-off by the pilot-in-command or an authorised person (e.g. flight dispatcher).

This could reduce pilot workload in certain circumstances.

comment *6686* comment by: *Heliswiss International*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *6716* comment by: *Heliswiss International*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *6771* comment by: *Trans Héli (pf)*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *6966* comment by: *Swiss Helicopter Group*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

comment *7213* comment by: *Eliticino SA*

(c) That should only be for commercial flights as for AW the crews are always in direct contact with the operations center via mobile, company flight plan or radio.

B. I. Draft Opinion - Part-OPS - Subpart B - Section II - OPS.CAT.240.A Threshold crossing height - Aeroplanes p. 67

comment *2828* comment by: *M Wilson-NetJets*

Original text:

When conducting precision approaches, an aeroplane shall cross the threshold of the runway by a safe margin and in a landing configuration and attitude.

Suggested new text:

When conducting any type of approaches, an aeroplane shall cross the threshold of the runway by a safe margin and in a landing configuration and attitude.

Comment/suggestion:

On any approach it is essential to pass the threshold at the predetermined margin in altitude, not only precision approaches.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III p. 68

comment *2624* comment by: *Pietro Barbagallo ENAC*

1) Comment: This part (requirements) should be rebuilt as current EU-OPS 1 (Subparts F, G, H, I).

Justification: EU-OPS 1 (Subparts F, G, H, I) is a mature set of requirements that ensure a common and well accepted level of safety. The use of alternative AMC could lead to an extended alteration of the present level of safety.

2)Comment: The use of GM/AMC should be limited rebuilding EU-OPS 1 (Subparts F, G, H, I) as it is today.

Justification: The use of an alternative AMC may lead to a different payload for the same type of aircraft, same operating scenario and different Operator. The final result may be an alteration of fair competition among Operators.

3) Comment: The use of GM/AMC should be limited rebuilding EU-OPS 1 (Subparts F, G, H, I) as it is.

Justification: The use of alternative AMC could lead to a different level of safety among operators

4) Comment: The use of alternative AMC could lead to a different level of safety among operators

Justification: GM/AMC are not legally binding. As a consequence a series of problem may arise. For example the probable difficulties in applying sanctions or revoke an AOC

comment *3066* comment by: *AEA*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *3650* comment by: *AUSTRIAN Airlines*

Comment:

AUSTRIAN is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *4301* comment by: *KLM*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete KLM review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *4520* comment by: *TAP Portugal*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *4724* comment by: *British Airways Flight Operations*

Comment:

British Airways is concerned that several (un)intentional changes may have been introduced in this section compared with EU-OPS. It is therefore important for EASA to highlight any difference compared with EU-OPS. Owing to time constraints a complete review of this section has not been possible before the closure of the comment deadline.

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4902* comment by: *Deutsche Lufthansa AG*

Comment:

Lufthansa is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete Lufthansa review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment in form of **literal transposition** of performance requirements of EU-OPS

comment *5149* comment by: *Directflight Limited*

NPA 2009-02b

Page 68 of 464

OPS.CAT.316A(c) Performance General – Aeroplanes

(c) "Two propeller-driven aeroplanes. Two propeller-driven aeroplanes which do not meet the applicable climb criteria shall be treated as single propeller-driven aeroplanes and shall comply with (b)."

This is a discriminator for false twins, but excludes capable aircraft whose original airworthiness code omitted certain criteria (eg gradient of climb OEI with wing flaps in the take-off position(s)) yet are currently regarded as CS-23A aircraft. This cannot be the purpose of the Rules and an equivalent level of safety should be admitted for BCAR Section K aircraft whose Performance Group C WAT limit performance otherwise demonstrates their ability.

FAR 23 Normal Category aircraft should also be accommodated when they demonstrate similar UK Performance Group classification.

comment *5168* comment by: *DGAC*

Please consider that the comments we have made on Section III (and generally speaking on the entire NPA) are not comprehensive: we do not pretend having understood and discovered all the differences that have occurred compared to the present rules (made intentionally are not by the drafter) and their possible consequences on flight safety…

comment *5481* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *6683* comment by: *Ryanair*

The structure of the Performance Section is too complicated and confusing.

Aeroplane Performance Class A should be separated from Class B and C Aeroplane and Helicopters.

There is no clear distinction between certified/dispatch and in-flight landing performance requirements and factors which should be considered for each class.

The Performance proposal in its current format should be rejected. We should stick to current EU-OPS Requirements and should change only those rules which have been identified as needing change.

comment *6822* comment by: *Icelandair*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the performance requirements of EU-OPS

comment *7258* comment by: *AIR FRANCE*

Comment:

As changes may have been introduced compared with EU-OPS, and that was no sufficient time to review all the details, ensure compliance with EU

OPS.

Proposal:

Ensure compliance with the EU OPS performation sub part.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.316.A Performance General - Aeroplanes p. 68

comment *441* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.316.A(a): add the proposed text:

(5) take into account the effect of an engine failure in all flight phases

Justification:

EU-OPS 1.485 (a)(1) and (2) are not included in the current proposal. The content of (1) can be considered covered by the proposed (a)(3), the occurrence of an engine failure might be covered by (a)(3) as well, however this is not directly intuitive. One can argue whether an engine failure is to be considered the 'operation of systems which have an adverse effect on performance'. One can also argue whether ER 4.c.(vi) in Annex IV covers the situation as the ER only refer to 'deterioration' instead of complete failure. To explicitly make clear that the occurrence of an engine failure in all flight phases should be considered ECA proposes either a new paragraph (5) or rewriting of paragraph (3).

comment *918* comment by: *CAA-NL*

Comment regarding

b) Single propeller-driven aeroplanes. An operator of an aeroplane powered by one propeller shall not operate that aeroplane

Suggestion CAA-NL:

Add single engine jet a/c

comment *1231* comment by: *Loganair Limited*

Turbine Powered aircraft with 19 seats Currently Operating to United Kingdom AN(G)R Performance C for Lifeline and Public Service Obligations where no alternative exists

The regulations do not cater for for turbine propeller powered aircraft with up to 19 passenger seats designed for STOL operations, such as the DHC6 Twin Otter, currently operating on Public Service Obligation and Lifeline

routes to United Kingdom AN(G)R Performance C (Broadly equivalent to EASA/EU-OPS Performance Class B.) The purpose for which the aircraft was designed (Commercial Air Transport Short Take-Off and Landing (STOL) operations) is not recognised, by omission rather than specifically stated, in either EU-OPS or the proposed implementing rules. **Both EU-OPS and the proposed implementing rules need to recognise that Commercial Air Transport STOL operations exist within Europe and are necessary to meet Public Service Obligation requirements.**

Performance Class A requirements cannot be met because of the physical characteristics of the runways and obstacles. Typical examples are operations where no hard runway is available such as where Commercial Air Transport Operations are required to operate from a beach or where it would not be physically possible extend an existing runway. Example airfields are the beach airfield at Barra (EGPR) and Isles of Scilly (EGHE).

Performance Class A data is becoming available for aircraft such as the DHC6 Twin Otter, but the aircraft cannot be operated from certain airfields in Performance Class A. In the case of the Beach airfield at Barra no aircraft currently exists that can comply with the Public Service Obligation requirements and meets either Performance Class A, Performance Class B or Performance Class C.

Enforcing the performance Class A requirement on aircraft which have operated safely out of these airfields under United Kingdom AN(G)Rs for over 40 years would terminate air services which are operated purely for Public service Obligations and to provide lifeline services to remote and isolated Islands and Regions. During the Winter months these services are frequently the only method of transport available. It is clear that the imposition of Performance Class A requirements on STOL - type aircraft such as the DHC6 Otter has effectively removed the Short Take Off capability of the type as there is no provision for Short Take Off techniques in Performance Class A. Loganair believes that there is no case to answer in this respect and that the operating safety record of the type under AN(G)R has been exemplary. Loganair cannot overstress the importance of short field capability in Public Service Obligation Commercial Air Transport Operations.

The only alternatives are:

1. Continue to allow operations with current aircraft to United Kingdom AN(G)R Performance C or EASA Performance Class B at airfields where Performance Class A requirements cannot be met.

OR

2. Cease operations to remote and isolated regions or Islands.

Proposal

Amend AMC OPS.CAT.316.A(1) by making it an acceptable means of compliance for Turbine Propeller aircraft with a seating capacity of 19 seats or less to operate to Performance class B criteria at airfields where Performance A criteria cannot be met ie STOL operations.

AMC OPS.CAT.316.A(a)(1)1. would then read:

Performance Class A. Performance class A aeroplanes should be multi-

engined aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700 Kg, amd all multi-engined turbojet powered aeroplanes. ***Turbine propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass not exceeding 5700 Kg may be classified as a performance B aeroplane at airfields where Performance A criteria cannot be be met for reasons of airfield physical characteristics. In this case supplemental Performance B data must be incorporated in the Aeroplane Flight Manual in addition to the Performance A data.***

This would cater for STOL operations*.*

Equivalent safety case

Operations would meet the current level of safety at the very few airfields where Performance A criteria could not be applied, but would meet the level of safety afforded by performance B. In effect the the level of safety of Performance A is met by the increased visibility requirements for take-off for Performance B, which will be the same for all aircraft with a maximum take-off mass of 5700Kg or less, irrespective of the number of passengers carried. The increased take-off visibility requirements will allow the pilot "to see and avoid" obstacles which is unlikely to be valid on aircraft with a maximum take-off mass greater than 5700Kg due the increased speed, energy, inertia and consequently radius of turn. This technique has served DHC6 operations well and has resulted in an exemplary safety record.

In summary provided operations are restricted to operating in Visual Meteorological Conditions (VMC) to 300ft above aerodrome level and the aircraft Maximum Take-Off Mass is limited to 5700Kg, regardless of the number of passengers, the level of safety will be equivalent to that of a Performance A aircraft operating in Instrument Meteorological Conditions (IMC) from Take-Off to 300ft. The Shortfield Landing case is already covered by the regulations and in the Rejected Take-off case level of safety is improved because the Take-off has to be made in VMC instead of visibilities down to 500 metres or less as the regulations permit.

comment *1407* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

No commercial flights in IMC with single propeller driven aeroplanes allowed.

Comment / Proposal:

The criteria "single propeller driven" seems not to be adequat as it doesn't reflect correctly the critical element, which is suffiecient reliability of the power supply and transmission. It is to our knowledge not established that propellers are less reliable than jet-fans. However, there might be a slight difference between piston and turbine. If this is the reason for the regulation it should be reflected therein and, thus, read as follows: No commercial flights in IMC with single engine piston driven Aeroplanes.

comment *1623* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

In addition, reference is made only to contaminated runway performance but the reference to wet runway performance is missing.

comment *1838* comment by: *claire.amos*

(a)(1)

Cross reference material details applicability of retroactive airworthiness requirements that are not specifically dealt with here.

(a)(2)

Not as explicit regarding complementary material.

(a)(4)

No allowance for approved weight reduction i.e. fuel jettisoning.

comment *2509* comment by: *Royal Aeronautical Society*

Paragraphs (b) and (c) both proscribe certain operations made by 'propeller-driven aeroplanes', whilst EU-OPS (OPS 1.125) currently omits any such constraint, instead proscribing such operations by 'single-engine' and by 'two-engine aeroplanes which do not meet the climb requirements etc' regardless of engine type. **In the absence of any evidence that such prohibitions should not continue to apply to single-engine *turbojet* aeroplanes and to poor-performing two-engine *turbojet* aeroplanes, it is suggest that constraints such as are currently prescribed through EU-OPS should remain in the text of OPS.CAT.316.A.**

comment *2995* comment by: *AOPA Switzerland*

Single propeller-driven Aeroplane: (sentence to add) The national authority may allow exeptions for single propeller driven aeroplane to operate at night and/or under IFR.

The reliability of single engine turboprop and single engine jet airplane are nowadays as such that commercial operation at night and/or under IFR do not compromise safety. It is up to the national authorities to evaluate whether such flights will be allowed.

comment *3203* comment by: *Austro Control GmbH*

(b)

~~*Single*~~ *propeller-driven* ***single engine*** *aeroplanes.*

An operator of a ***single propeller driven engine aeroplane*** *shall not operate that aeroplane*:

(a) (c)

~~*Tw Two*~~ *propeller-driven* ***multi engine*** *aeroplanes.*

~~*Two propeller*~~ ***multi propeller-driven multi engine aeroplanes*** *which do not meet the applicable climb criteria shall be treated as* ***propeller-driven single engine*** *aeroplanes and shall comply with (b).*

Justification:

Better wording is suggested: an aeroplane is powered by an engine and not by a propeller.

EU-OPS text was ok.

comment *3264* comment by: *Aero-Club of Switzerland*

(b) (1): Please delete this restriction.

Justification: We think, looking at the reliability of modern powerplants this restriction is obsolete.

comment *3346* comment by: *UK CAA*

Page No: 68 of 464

Paragraph No:

OPS.CAT.316.A(a)(2)

Comment: EU-OPS 1 and JAR-OPS 1 paragraph 1.485(a) both require the supplemental data to the AFM to be acceptable to the operator's Authority. This aspect of approval has not been carried through to OPS.CAT.316.A(a)(2).

Justification: The performance data which is used to comply with the operating requirements must be seen to meet a minimum standard of derivation, and this standard needs to be applied uniformly to all operators.

Proposed Text (if applicable):

"*…use the performance data in the Aeroplane Flight Manual (AFM) and complement it, as necessary* ***with data acceptable to the Member State****;"*

comment *3347* comment by: *UK CAA*

Page No: 68 of 464

Paragraph No:

OPS.CAT.316.A(c)

Comment:

The term "Two propeller-driven aeroplanes" is confusing. Whilst the words "two-propeller-driven aeroplanes" would be clearer (as used in EU-OPS 1.525(b)), the optimum option would be to use the widely used term "multi-engined propeller-driven" aeroplanes.

Justification:

The current terminology is confusing, and also only applicable to aeroplanes with two engines, whereas it is equally applicable to multi-engined aeroplanes (i.e. all aeroplanes with more than one engine). In any case, OPS.CAT.340.A(b) already uses the term 'multi-engined'.

Proposed Text (if applicable):

~~***Two Multi-engined***~~ *propeller-driven aeroplanes.* ~~***Two Multi-engined***~~ *propeller-driven aeroplanes which do not meet the applicable climb criteria shall be treated as single propeller-driven aeroplanes and shall comply with (b).*

comment *3348* comment by: *UK CAA*

Page No: 68

Paragraph No:

OPS.CAT.316.A(c)

Comment:

This requirement need only apply to Class B aeroplanes (as in EU-OPS 1 and JAR-OPS 1.525(b)), as the climb requirements of Class A and C aeroplanes are covered elsewhere, predominantly by their certification bases.

Justification:

The climb requirements of Class A and C aeroplanes are covered elsewhere.

Proposed Text (if applicable):

~~***Two Multi-engined***~~ *propeller-driven* ***Class B*** *aeroplanes.* ~~***Two Multi-engined***~~ *propeller-driven* ***Class B*** *aeroplanes which do not meet the applicable climb criteria shall be treated as single propeller-driven aeroplanes and shall comply with (b).*

comment *3573* comment by: *Walter Gessky*

OPS.CAT.316.A Performance General - Aeroplanes

(b) ~~Single~~ propeller-driven **single engine** aeroplanes.

An operator of an aeroplane powered by one ~~propeller~~ **engine** shall not operate that aeroplane:

(a) ~~Two~~ propeller-driven **multi engine** aeroplanes. ~~Two propeller~~multi engine -driven aeroplanes which do not meet the applicable climb criteria shall be treated as single propeller-driven aeroplanes and shall comply with (b).

Justification:

Better wording an aeroplane is powered by an engine and not by a propeller.

comment *5170* comment by: *DGAC*

(b) Single propeller-driven aeroplanes :

Proposed text : Amend (b) and (c) as follows :

(b)Single ~~propeller-driven~~ **piston engine** aeroplanes **and single-engine turbine-powered aeroplanes which don't comply with "NPA JAA OPS 29"** . An operator of ~~an~~ **such** aeroplane**s** ~~powered by one propeller~~ shall not operate ~~that~~ **these** aeroplane**s**:

(1) at night; or

(2) in instrument meteorological conditions except under Special Visual Flight Rules.

(c)Two propeller-driven aeroplanes. Two ~~propeller-driven~~ **piston engines** aeroplanes which do not meet the applicable climb criteria shall be treated as ~~single propeller-driven~~ **single piston engine** aeroplanes and shall comply with (b).

Justification:

Many countries have developed SEIMC CAT operations with single-engine turbine-powered aeroplanes (SET) aeroplanes on the basis of NPA JAA OPS 29 in accordance with ICAO Annex 6 paragraph 5.4 Additional requirements for operations of single-engine turbine-powered aeroplanes at night and/or in IMC.

This paragraph seems to allow single turbo jets in IMC. Therefore there is no reason to forbid single turbo-propellers in IMC. Single turbo-propellers should be allowed, at least for cargo transportation.

In addition, only twin piston aeroplanes are concerned by the (c) restriction: indeed a difference should be made between piston engines and turbine engines which do not have the same reliability.

comment *5720* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(b) Single propeller-driven aeroplanes. An operator of an aeroplane powered by one propeller shall not operate that aeroplane:

Comment:

Single propeller-driven should be replaced by single engine-driven

Proposal (including ***new text***):

(b) Single ~~propeller~~ ***engine powered*** ~~driven~~ aeroplanes. An operator of an aeroplane powered by one ~~propeller~~ **engine** shall not operate that aeroplane:

comment

5743 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(c) Two propeller-driven aeroplanes. Two propeller-driven aeroplanes which do not meet the applicable climb criteria shall be treated as single propeller-driven aeroplanes and shall comply with (b).

Comment:

Two propeller-driven should be replaced by twin engine powered

Proposal (including ***new text***):

(c) ~~Two propeller-driven~~ ***Twin engine powered*** aeroplanes. ~~Two propeller-driven~~ ***Twin engine powered*** aeroplanes which do not meet the applicable climb criteria shall be treated as single ~~propeller-driven~~ ***engine powered*** aeroplanes and shall comply with (b).

comment

5920 comment by: *Civil Aviation Authority Finland*

Comment:

There are and will be also single engine JET aeroplanes, which have to do forced landing after the engine failure.

Proposal:

The requirements for single engine JET aeroplanes shall also be given as for single propeller-driven aeroplanes.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.326.A Take-off requirements -Aeroplanes p. 68

comment

448 comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.326.A: it is proposed to delete OPS.CAT.326.A and AMC1 OPS.CAT.326.A(1) and to revise OPS.GEN.320.A.:

~~**OPS.CAT.326.A Take-off requirements -Aeroplanes**~~
~~**The take-off distance shall not exceed the take-off distance available.**~~

Justification:

The current proposal only addresses take-off distance requirements. Take-off distance requirements however are not on a different level as e.g. accelerate-stop distance requirements or take-off run requirements. The requirements for TOD/TODA/ASD/ASDA/TOR/TORA are of equal level of importance and do not need the flexibility provided by the status of AMC material. Furthermore the current proposal includes a repetition for the take-off requirements in both OPS.GEN, OPS.CAT and the AMC and as such seems to be not in line with the directives for EU legislation.
Finally the requirement contained in EU-OPS 1.490(b)(5) is still valid and should be included. As such it is proposed to delete OPS.CAT.326.A and AMC1 OPS.CAT.326.A(1) and to revise OPS.GEN.320.A. See additional comments for that paragraph.

comment *1499* ☐ comment by: *Airbus*

Affected paragraphs:

- OPS.GEN.320.A(a)(1), p. 40
- OPS.CAT.326.A, p. 68
- AMC1 OPS.CAT.326.A § 1.b, p. 296

Comment:

These provisions as written are unclear. A consistency check is needed for provisions on take-off distance vs. TODA/clearway, in relation with categories of operations and aeroplane performance classes.

comment *1624* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *3349* comment by: *UK CAA*

Page No: 68 of 464

Paragraph No:

OPS.CAT.326

Comment:

The take-off distance is only one aspect of the take-off field length parameters. This requirement does not cover the other, distinct, components that constitute take-off field lengths, and so is inadequate. The text from EU-OPS 1 and JAR-OPS 1 that addressed these distances has been relegated to AMC. Unless the rule specifically addresses these other components, operators might not take them into account.

Justification:

The take-off field lengths compromise, for most aeroplanes, the take-off run as well as the take-off distance together with, for some aeroplanes the accelerate-stop distance as well. These have to be assessed against the separate runway lengths available, i.e. TORA, TODA, and ASDA.

Proposed Text (if applicable):

Transfer AMC1 OPS.CAT.326.A to OPS.CAT.326.

comment *5171* comment by: *DGAC*

What is the difference between this provision and the one stated in (a)(1) of OPS.GEN.320.A ?

The term "take-off distance" is not defined in GEN.010. Is it an all-engine operating take-off distance, or a take-off distance taking into account an engine failure?

There should at least be a mention of Part 21 and CS airworthiness as was mentioned in (b) of EU-OPS 1.480 :

"(b) The terms "accelerate-stop distance", "take-off distance", "take-off run", "net take-off flight path", "one engine inoperative en-route net flight path" and "two engines inoperative en-route net flight path" as relating to the aeroplane have their meanings defined in the airworthiness requirements under which the aeroplane was certificated, or as specified by the Authority if it finds that definition inadequate for showing compliance with the performance operating limitations."

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes p. 68

comment *74* comment by: *Air Southwest*

Typographical error/misused word: The paragraph reads as if it is a requirement to have all obstacles along the take off path removed. The

word 'cleared' needs to be replaced by 'clear.'

comment *472* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.327.A: change as follows:

~~**The take-off flight path shall be cleared of all obstacles by lateral distance and horizontal or vertical distances depending on the aeroplane size and type of engines.**~~

The net take-off flight path shall be cleared of all obstacles by adequate horizontal or vertical distances.

Justification:

It is essential that reference is made to the net take-off flight path to ensure that climb gradient reductions according to the certification specifications are taken into account. Furthermore it seems that lateral distance is the same as horizontal distance and as such it can be removed.

comment *474* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.327.A: Move to OPS.GEN

Justification:

Current proposal for OPS.GEN includes requirements for take-off in OPS.GEN.320.A, en-route in OPS.GEN.325.A and landing in OPS.GEN.330.A. As such there is no need for a repetition of the take-off requirements in OPS.CAT.326.A. Furthermore the requirements of OPS.CAT.327.A are of equal importance as the take-off requirements and are of equal general nature and as such should be included in OPS.GEN.

comment *1500* comment by: *Airbus*

Replace "type of engines" by "performance class".

Reason: "type of engines" refers to a specific make/model. The actual criteria to define the required clearance are the aeroplane size and performance class.

OPS 1 provisions have to be accurately transposed.

comment *1625* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in

order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *2835* comment by: *M Wilson-NetJets*

Original text:

The take-off flight path shall be cleared of all obstacles by lateral distance and horizontal or vertical distances depending on the aeroplane size and type of engines.

Suggested new text:

The take-off flight path shall be cleared of all obstacles by lateral distance and horizontal or vertical distances depending on the aeroplane size, type of engines and navigation accuracy.

Comment/suggestion:

Besides the wingspan and type of engine, the navigation accuracy is essential to the risk in determining the lateral distance to an obstacle or terrain. Future improvements in navigation accuracy, including autopilot and auto throttle capabilities may warrant a reduction in planned lateral distances from obstacles and terrain.

comment *3350* comment by: *UK CAA*

Page No: 68 of 464

Paragraph No:

OPS.CAT.A.327

Comment:

Take-off obstacle clearance is demonstrated by either a net or gross flight path, depending on the category (Class A, B or C) of aeroplane under consideration. Grouping all Classes together into one paragraph in this way has lost this detail and this needs to be corrected. This is another example of the significant problems resulting from moving away from the EU-JAR-OPS 1 structure.

Justification: The intent of EU/JAR-OPS 1 needs to be preserved.

Proposed Text (if applicable):

*The **net or gross** take-off flight path, **as applicable,** shall be cleared of all obstacles by lateral distance and horizontal or vertical distances depending on the aeroplane size and type of engines.*

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.340.A p. 68-69

En-Route requirements - Aeroplanes

comment *75* comment by: *Air Southwest*

OPS.CAT.340.A(c) The first sentence defines the requirement for one engine inoperative. The second sentence is vaguely ambiguous in that it implies the definition of one engine inoperative (!). Suggest amending second sentence to read: "This requirement shall be met ....."

comment *519* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.340.A(d)(2): change as follows:

(d) Three or more engines aeroplanes, two engines inoperative.

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than 90 minutes away from an aerodrome at which the performance requirements applicable at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.

(2) Notwithstanding (d)(1), the 90 minutes criteria may be exceeded, if, in the case of two engines inoperative en-route, the **~~flight path~~** **net flight path** with two engines inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the expected landing mass are met. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

Justification:

Editorial. Current text does not fit the intent.

comment *1231* ☐ comment by: *Loganair Limited*

Turbine Powered aircraft with 19 seats Currently Operating to United Kingdom AN(G)R Performance C for Lifeline and Public Service Obligations where no alternative exists

The regulations do not cater for for turbine propeller powered aircraft with up to 19 passenger seats designed for STOL operations, such as the DHC6 Twin Otter, currently operating on Public Service Obligation and Lifeline routes to United Kingdom AN(G)R Performance C (Broadly equivalent to EASA/EU-OPS Performance Class B.) The purpose for which the aircraft was designed (Commercial Air Transport Short Take-Off and Landing (STOL) operations) is not recognised, by omission rather than specifically stated, in either EU-OPS or the proposed implementing rules. **Both EU-OPS and the proposed implementing rules need to recognise that Commercial Air**

Transport STOL operations exist within Europe and are necessary to meet Public Service Obligation requirements.

Performance Class A requirements cannot be met because of the physical characteristics of the runways and obstacles. Typical examples are operations where no hard runway is available such as where Commercial Air Transport Operations are required to operate from a beach or where it would not be physically possible extend an existing runway. Example airfields are the beach airfield at Barra (EGPR) and Isles of Scilly (EGHE).

Performance Class A data is becoming available for aircraft such as the DHC6 Twin Otter, but the aircraft cannot be operated from certain airfields in Performance Class A. In the case of the Beach airfield at Barra no aircraft currently exists that can comply with the Public Service Obligation requirements and meets either Performance Class A, Performance Class B or Performance Class C.

Enforcing the performance Class A requirement on aircraft which have operated safely out of these airfields under United Kingdom AN(G)Rs for over 40 years would terminate air services which are operated purely for Public service Obligations and to provide lifeline services to remote and isolated Islands and Regions. During the Winter months these services are frequently the only method of transport available. It is clear that the imposition of Performance Class A requirements on STOL - type aircraft such as the DHC6 Otter has effectively removed the Short Take Off capability of the type as there is no provision for Short Take Off techniques in Performance Class A. Loganair believes that there is no case to answer in this respect and that the operating safety record of the type under AN(G)R has been exemplary. Loganair cannot overstress the importance of short field capability in Public Service Obligation Commercial Air Transport Operations.

The only alternatives are:

1. Continue to allow operations with current aircraft to United Kingdom AN(G)R Performance C or EASA Performance Class B at airfields where Performance Class A requirements cannot be met.

OR

2. Cease operations to remote and isolated regions or Islands.

Proposal

Amend AMC OPS.CAT.316.A(1) by making it an acceptable means of compliance for Turbine Propeller aircraft with a seating capacity of 19 seats or less to operate to Performance class B criteria at airfields where Performance A criteria cannot be met ie STOL operations.

AMC OPS.CAT.316.A(a)(1)1. would then read:

Performance Class A. Performance class A aeroplanes should be multi-engined aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700 Kg, amd all multi-engined turbojet powered aeroplanes. ***Turbine propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass not exceeding 5700 Kg may be classified as a performance B aeroplane***

at airfields where Performance A criteria cannot be be met for reasons of airfield physical characteristics. In this case supplemental Performance B data must be incorporated in the Aeroplane Flight Manual in addition to the Performance A data.

This would cater for STOL operations*.*

Equivalent safety case

Operations would meet the current level of safety at the very few airfields where Performance A criteria could not be applied, but would meet the level of safety afforded by performance B. In effect the the level of safety of Performance A is met by the increased visibility requirements for take-off for Performance B, which will be the same for all aircraft with a maximum take-off mass of 5700Kg or less, irrespective of the number of passengers carried. The increased take-off visibility requirements will allow the pilot "to see and avoid" obstacles which is unlikely to be valid on aircraft with a maximum take-off mass greater than 5700Kg due the increased speed, energy, inertia and consequently radius of turn. This technique has served DHC6 operations well and has resulted in an exemplary safety record.

In summary provided operations are restricted to operating in Visual Meteorological Conditions (VMC) to 300ft above aerodrome level and the aircraft Maximum Take-Off Mass is limited to 5700Kg, regardless of the number of passengers, the level of safety will be equivalent to that of a Performance A aircraft operating in Instrument Meteorological Conditions (IMC) from Take-Off to 300ft. The Shortfield Landing case is already covered by the regulations and in the Rejected Take-off case level of safety is improved because the Take-off has to be made in VMC instead of visibilities down to 500 metres or less as the regulations permit.

comment *1549* comment by: *ECA - European Cockpit Association*

Comment: add the following text to (a):

(a) Single-engined aeroplanes. In the event of an engine failure, single-engined aeroplanes shall be capable of reaching a place at which a safe forced landing can be made. **For landplanes a place on land is required unless otherwise approved by the Authority**

Justification:

Forced landings on places other than land should be limited to exceptional cases approved by the authority as reflected in EU-OPS 1.542(a)

comment *1553* comment by: *ECA - European Cockpit Association*

Comment: change (b)(2)(i) as follows:

[..] (2) aeroplanes powered by reciprocating engines with a maximum take-off mass exceeding 5 700 kg or a maximum passenger seating configuration of more than 9

shall at any point on the route or on any planned diversion there from, be capable of a rate of climb of at least 300 ft per minute with all engines operating within the maximum continuous power conditions specified:

i. **at the minimum safe altitude for a safe flight** ~~**at the minimum altitudes for a safe flight on each stage of the route to be flown; and**~~

Justification:

Any point on the route or any planned diversion there from is mentioned in the text preceding (i). The current wording could lead to the interpretation that the climb gradient requirement is only intended for the route and not any diversion there from. To clarify that the requirement is applicable to diversion from the planned route as well the text should be amended as proposed.

comment *1626* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *1689* comment by: *Dassault Aviation*

Technical comment.

Page 69 OPS.CAT.340.A(d): En-route requirements aeroplanes / three or more engines aeroplane with two engines inoperative. Considering the regulatory difference between an Implementing Rule (which is at the level of Safety Objectives) and an AMC/GM (which are at the level of Technical Details), we suggest that OPS.CAT.340.A(d) does not quote any specific flight time duration away from an adequate aerodrome with two engines inoperative. The corresponding AMC OPS.CAT.340.A(d) is commented in a comment below. Our proposed modification to paragraph OPS.CAT.340.A(d) is:

(d) Three or more engines aeroplanes, two engines inoperative.

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than a determined flight time away from an aerodrome at which the performance requirements applicable at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.

(2) Notwithstanding (d)(1), the determined flight time may be exceeded, if, in the case of two engines inoperative en-route, the flight path with two engines inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the

expected landing mass are met. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

comment *1837* comment by: *claire.amos*

Point C

Doesn't specify 1500 ft abover diversion airfield.

comment *2862* comment by: *M Wilson-NetJets*

Original text:

(d) Three or more engines aeroplanes, two engines inoperative.

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than 90 minutes away from an aerodrome at which the performance requirements applicable at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.

(2) Notwithstanding (d)(1), the 90 minutes criteria may be exceeded, if, in the case of two engines inoperative en-route, the flight path with two engines inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the expected landing mass are met. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

Suggested new text:

(d) Three or more engines aeroplanes, two engines inoperative (MPSC of 20 or more or a MTOM of 45360 Kg or more).

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than 90 minutes away from an aerodrome at which the performance requirements applicable at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.

(2) Notwithstanding (d)(1), the 90 minutes criteria may be exceeded, if, in the case of two engines inoperative en-route, the flight path with two engines inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the expected landing mass are met. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

(e) Three or more engines aeroplanes, two engines inoperative (MPSC of 19

or less and a MTOM of less than 45360 Kg).

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than 90 minutes away from an aerodrome at which the performance requirements applicable at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.

(2) Notwithstanding (e)(1), the 90 minutes criteria may be exceeded, if, in the case of

(i) one engine inoperative en-route, the flight path with one engine inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the expected landing mass are met, not to exceed 240 minutes at one engine inoperative cruise speed an altitude; or

(ii) two engines inoperative en-route, the flight path with two engines inoperative permits the aeroplane to continue the flight to an aerodrome at which the performance requirements applicable at the expected landing mass are met. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

Comment/suggestion:

This paragraph is much more penalizing for three engined aeroplanes than four engined aeroplanes. Four engined business aeroplanes are often not an option due to their size and layout and therefore manufacturers are only left with the choice of only three engines and not four. Therefore, the performance gradient is not in favor of business aeroplanes. As with OPS.CAT.225.A (IR and AMC material), a difference should be made between aeroplanes with an MPSC of 19 or less and a MTOM of less than 45360 Kg. This allows business aeroplane manufacturers and operators to build/use business aeroplanes that are more environmentally friendly due to less demand for high engine thrust performance and additional fuel to be carried to adhere to this paragraph.

comment *3247* comment by: *Eurocontrol CND*

OPS.CAT.340A En-route requirements – Aeroplanes

Regarding (a), this is a requirement which in many (or most) cases is not possible to achieve (see ICAO Annex 2, paragraph 3.1.2 regarding minimum heights).

comment *3351* comment by: *UK CAA*

Page No: 69 of 464

Paragraph No:

OPS.CAT.340.A (c)

Comment:

Another consequence of the amendment of the JAR-OPS/EU-OPS structure has resulted in this paragraph not specifying whether obstacle clearance needs to be based on a net or gross flight path.

Justification:

Proposed Text (if applicable):

Preferably, reintroduce the separate en-route paragraphs for Class A, B and C aeroplanes as rule material, or, less satisfactorily, amend paragraph (c) as follows:-

One engine inoperative. Multi-engined aeroplanes shall, in the event of one engine becoming inoperative at any point on the route or on any planned diversion there from, be capable of continuing the flight to an altitude above an aerodrome where a landing can be made in accordance with OPS.CAT.345.A. This shall be met with ***the net or gross one-engine inoperative flight path, as applicable, and*** *with the other engine or engines operating within the maximum continuous power conditions specified.*

comment *3352* comment by: *UK CAA*

Page No: 69 of 464

Paragraph No:

OPS.CAT.340.A (d)

Comment:

Clarification text developed and agreed by the JAA Performance Sub-Committee for this paragraph should be considered for inclusion here.

Justification:

Provides clarification of the requirement, i.e. that the aerodrome from which the 90-minute distance is measured is that at which the landing distance requirements of OPS.CAT 345 are satisfied.

Proposed Text (if applicable):

(d) Three or more engines aeroplanes, two engines inoperative.

(1) An aeroplane with three or more engines shall, at no point along the intended track, be more than 90 minutes away from an aerodrome at which the ~~performance~~ requirements of ***OPS.CAT.345*** *~~applicable~~ at the expected landing mass can be met. This shall be met at the all-engines long range cruising speed at standard temperature in still air.*

(2) Notwithstanding (d)(1), the 90 minutes criteria may be exceeded, if, in the case of two engines inoperative en-route, the flight path with two engines inoperative permits the aeroplane to continue the flight to ~~an~~ ***the aerodrome specified in (d)(1)*** *~~at which the performance requirements~~*

~~applicable at the expected landing mass are met~~. In this case, the diversion shall start from the point where two engines are assumed to fail simultaneously, to an aerodrome at which the performance requirements applicable at the expected landing mass are met.

comment *3522* comment by: *Heliswiss AG, Belp*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *5175* comment by: *DGAC*

(d) 'Three or more engines aeroplanes, two engines inoperative'

Proposal:

add a (d)(3) as follows :

"(3) For turbojet aeroplanes with a maximum take-off mass of 45 360 kg or less and a maximum passenger seating configuration (MPSC) of 19 or less, if approved by the Authority, the threshold of 90 minutes can be extended up to 180 minute one-engine inoperative (OEI) provided engine reliability and systems redundancy are sufficient."

Justification: There is no reason to be more restrictive for small three-turbojets than for small twin-turbojets which are allowed to be operated up to 120Nm without authorisation and up to 180Nm provided authority approval.

comment *7147* comment by: *ECA - European Cockpit Association*

Comment: change (b)(2)(i) as follows:

(b) [...] (2) [...]

(i) at the minimum **safe** altitudes for a safe flight ~~**on each stage of the route to be flown**~~; and

Justification:

Any point on the route or any planned diversion there from is mentioned in the text preceding (2). The current wording could lead to the interpretation that the climb gradient requirement is only intended for the route and not any diversion there from. To clarify that the requirement is applicable to diversion from the planned route as well the text should be amended as proposed.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.345.A Landing requirements - Aeroplanes p. 69

comment *76* comment by: *Air Southwest*

OPS.CAT.345.A(b) Suggest amending paragraph to read: " ..... provided that applicable criteria can be met."

OPS.CAT.345.A(c) Suggest amending paragraph to read: " .....aeroplanes provided that applicable criteria can be met."

comment *521* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.345.A(a)(2):

Paragraph (a)(2) should be rewritten to reflect the intent of EU OPS 1.520.

Justification:

The proposed text under (i) refers to any data provided in the AFM for wet and contaminated runways without providing a quality standard and removes the 15% margin contained in the original EU-OPS 1.520 requirement. Wet runway data should be certified according to the certifications specifications whereas contaminated runway data should be approved by the Authority.

The 1.15 factor under (ii) should not be applied to the landing distance available but to the landing distance required. Furthermore the current proposal would allow operation to contaminated runways based on wet performance data when no AFM data is available for contaminated runways which clearly is unsafe. The original requirement from EU-OPS 1.515 required a 15% margin on approved contaminated runway data with a minimum of the wet runway performance which in turn is 15% of the dry runway data.

comment *523* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.345.A(c): change as follows: remove

~~**(c) The operator may use short landing operations for the operation of turbojet-engined or propeller-driven aeroplanes provided that suitable criteria are met.**~~

Justification:

In order to ensure an acceptable safety level short landing operations should only be approved in exceptional cases by the Authority. As such it seems inappropriate to include short landing operations in the rule. Instead it should be referenced as an exceptional case in the AMC.

comment *530* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.345.A(a): Rephrase in such way that "may be" is not reflecting the dry runway situation, but only the wet/contaminated runway:

(a) When the weather information available to the pilot-in-command indicates that the runway at the estimated time of arrival ~~**may be**~~:

(1) **is** dry, the landing mass of the aeroplane shall allow a full stop landing from 50 ft above the threshold within a safe margin of the landing distance available at the destination aerodrome and at any alternate aerodrome which is appropriate to the performance class of the aeroplane; and

(2) **may be** wet or contaminated, the landing distance available in (a)(1) shall be:

(i) calculated in accordance with any data provided in the AFM for wet and contaminated runways; or

(ii) multiplied by a factor of 1.15, in the case that no data is provided in the AFM.

Justification:

"may be dry" is not strict. Eg. a wet runway can also be interpreted as "may be" dry.

comment *1627* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *1780* comment by: *Dassault Aviation*

Pages 27, 69 and 311 (resp. OPS.GEN.010 §67, OPS.CAT.345.A §(b) and AMC OPS.CAT.345.A(b)) (same comment as #1704) - Steep Approach and

Screen Heights: these operational paragraphs consider that the landing distances data are based on a screen height of less than 50 feet but not less than 35 feet. It is to be noted that this 35-50 feet interval may be inadequate versus some airworthiness certification requirements. For example, NPA 25B-267 dealing with Steep Approach, allows screen heights from 35 feet up to 60 feet for the determination of landing distances data. Although it is a NPA, it is taken as it is through a Certification Review Item (CRI) therefore becoming an airworthiness certification bases on certain programs. The proposal is - if a maximum screen height needs to be mentioned - to increase the 50 feet proposed in the NPA 2009-02 to the value of 60 feet.

comment *1836* comment by: *claire.amos*

(a) (1) SAFE MARGIN

Safe margin?

(b)

Limit still 4.5 deg for performance benefit.

comment *1843* comment by: *Airbus SAS*

For short landing operations in OPS.CAT.345.A(c), the regulation requires to meet "suitable" criteria, while in subpara (b) for steep approaches "applicable" criteria are mentioned.

For both operations, there are defined conditions in applicable documents (AFM, OPS-Manual, airport regulations, minimum weather conditions, etc.). The explanatory note does not provide reasons for using terms of different stringency for these operations.

==> Airbus proposes to replace in subpara (b) "applicable criteria" by "suitable criteria" because these criteria are defined in the AMC and not in the rule.

comment *3079* comment by: *M Wilson-NetJets*

Original text:

LANDING DISTANCE
(a) When the weather information available to the pilot-in-command indicates that the runway at the estimated time of arrival may be: (1) dry, the landing mass of the aeroplane shall allow a full stop landing from 50 ft above the threshold within a safe margin of the landing distance available at the destination aerodrome and at any alternate aerodrome which is appropriate to the performance class of the aeroplane; and (2) wet or contaminated, the landing distance available in (a)(1) shall be:

(i) calculated in accordance with any data provided in the AFM for wet and contaminated runways; or
(ii) multiplied by a factor of 1.15, in the case that no data is provided in the AFM.

Suggested new text:

LANDING DISTANCE

(a) When commencing a flight, the weather information available to the pilot-in-command indicates that the runway at the estimated time of landing may be:

(1) dry, the landing mass of the aeroplane shall allow a full stop landing from 50 ft above the threshold within a safe margin of the landing distance available at the destination aerodrome and at any alternate aerodrome which is appropriate to the performance class of the aeroplane; and

(2) wet or contaminated, the landing distance available in (a)(1) shall be:
(i) calculated in accordance with any data provided in the AFM for wet and contaminated runways; or

(ii) multiplied by a factor of 1.15, in the case that no data is provided in the AFM.

Comment / suggestion:

The definition of "Estimated Time of Arrival" according ICAO (Doc 9713 Part 1) is:

"For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome."

Therefore, the ETA does not coincide with the time the aeroplane is estimated to touchdown, which should the defining moment for the runway condition.

Furthermore, the paragraph does not clearly indicate that the requirement is only valid for dispatch phase. Half way into a flight the landing time is still estimated, but this paragraph should not be applicable.

comment *3354* comment by: *UK CAA*

Page No: 69 of 464

Paragraph No:

OPS.CAT.345.A

Comment:

It is recommended that it is clarified, by adding a new paragraph (d) (see below), that the special steep approach and short landing provisions must

not be used together.

Justification:

The steep approach and short landing criteria may not be compatible. It is generally understood that they must not be used together.

Proposed Text (if applicable):

(d) The steep approach and short landing provisions of paragraphs (b) and (c) above must not be used for the same landing.

comment *3355* comment by: *UK CAA*

Page No: 69 of 464

Paragraph No:

OPS.CAT.345.A & AMC OPS.CAT.345.A(a)(1) et seq.

Comment:

It is not sufficient in the rule just to specify that the landing can be completed "within a safe margin". The specific margins (i.e. the landing distance factors), for all Classes of aeroplane, must be specified in the rule and not left to AMC.

Justification:

To achieve the objectives of EC Regulation 216/2008 and the intended level of safety of JAR-OPS/EU-OPS 1, the specific factors must be contained in rule material. By being relegated to AMC/GM they will become open to local negotiation with the Member States oversight system, which will inevitably result in uneven implementation between operators and MS.

Proposed Text (if applicable): Reassign AMC material as rule text.

comment *3356* comment by: *UK CAA*

Page No: 69 of 464

Paragraph No:

OPS.CAT.345.A(c)

Comment:

An error in the JAR-OPS 1/EU-OPS 1 text needs to be corrected. The existing text is only applicable to steep approaches with screen heights less than 50ft, which is wrong. A suitable correction, proposed below, was developed and agreed by the JAA Performance Sub-Committee.

Justification:

Steep approaches are defined as 4.5º or more, regardless of the screen height being used .

Proposed Text (if applicable):

"*(b) The operator may apply Steep Approach procedures for the operation of turbojet-engined or propeller-driven aeroplanes using glide slope angles of 4.5° or more and with screen heights of* ***~~less than 50 ft but~~*** *not less than 35 ft, provided applicable criteria are met."*

comment *5178* comment by: *DGAC*

This paragraph is not worded consistently with the rest of section III of OPS.CAT. It contains quantitative requirements while other paragraphs contain general safety objectives as explained in the explanatory note (paragraph 59 p. 35).

(a)(2) :

Proposal : Amend the beginning of (2) as follows :

"(2) wet or contaminated, the landing distance **required** ~~available~~ in (a)(1) shall be:"

Justification : As written the provision does not make any sense.

- **(a)(2)(ii)** allows operations of aeroplanes on contaminated runways without any manufacturer data in the AFM, which contradicts the objectives of the AMC section (AMC OPS.CAT.345(a)(2)).

comment *6423* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

"Suitable criteria" should be defined regarding short landing operations.

Proposal

Add a paragraph defining those criteria.

Justification

This is not clear for operators.

comment *7409* comment by: *Axel Schwarz*

(2) should read: "wet or conaminated, the landing distance REQUIRED in (a)(1) shall be: ...".

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.355.H Performance applicability - Helicopters p. 69-70

comment *543* comment by: *EUROCOPTER*

Performance Class 2 operations without an assured SFL capability are only allowed during take-off and landing phases, while, by consistency with OPS.SPA.005.SFL(d)(3), Performance Class 3 operations may be conducted without an assured safe forced landing capability not only during take-off and landing phases but also en-route. Consequently the case of PC 3 operations is different from the case of PC 2 operations. Moreover the reference should be Subpart D Section VI instead of OPS.SPA.SFL.

Proposed wording modifications:

(e) Helicopters operated in performance class 2 ***~~or 3~~*** *may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in* ***~~OPS.SPA.SFL~~ Subpart D Section VI (SFL)***.

(e) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *784* comment by: *Swiss Air Ambulance*

Author : von Boletzky, Swiss Air Ambulance SAA Ltd. Switzerland

Considerations PC 1:

- operations according PC 1 criteria does not have any major implications for REGA operations when operating

from or to an aerodrome

- most of the HEMS-Missions flown by REGA have at least one movement to/from a congested and hostile environment !! special emphasis regarding hostile environment is to be put on the **absence of a safe forced landing possibility** and the **risks involved for persons and objects on ground not involved in operation !!**

As stated in (a)(3) operations on HEMS operating and public interest sites may be executed respecting PC 2.

With regards to the

comment *927* comment by: *REGA*

Attachments #9 #10

(a) (1) Following the EASA's definitions of "congested" and "hostile" area: most of the HEMS operations begin at and end at an aerodrome/operating site located in a congested hostile environment.

Considerations

Definition: *'Congested area' means in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.* (...)

As commented on page 23, this definition covers quite every area in Europe. An unchanged definition of "congested area" will seriously curtail a number of existing HEMS-operations.

HEMS-Base: Even with modern twin helicopters (e.g. EC135; EC145; BK117), due to variable operational conditions (e.g. weight; temperature; altitude), operations on HEMS-bases/-aerodromes meeting the requirements of ICAO Annex 14 are not able to guarantee the operation within Performance Class 1 at any time.

HEMS-bases not meeting the requirements of ICAO Annex 14: Like the situation of hospital sites, the problems are historical as well related to geographical aspects (e.g. mountainous terrain providing small places for constructions; obstacles). If EASA or national authorities or used at such a low weight that critical power unit failure performance is assured, it would seriously curtail a number of existing HEMS-operations.

The HEMS Operating Bases, builded before 1 July 2002, should treated like the public interest sites

HEMS-Operating Sites: Meeting the Performance Class 2 requirement at HEMS-operating sites is even with modern twin helicopters (e.g. EC145; EC135) not possible at all time: Due to the "character" of HEMS-missions and their operating sites (e.g. within a forest or a mountainous terrain; wind, temperature) twin helicopters (CAT A certified) are operating within all three performance classes; even for short period in Performance Class 3 without the assurance of a safe forced landing (see examples below).

Aerodrome, landings sites at hospital according ICAO annex 14

EASA itself has mentioned in the GM (P.436) the performance problem. Even at hospital sites, compliant with ICAO annex 14, most of the modern twin helicopter are not able to be operated within Performance Class 1 (PC1) at all time (see examples below).

Proposal 1:

(a) (3) *operations to/from a HEMS-aerodrome/-base or a Public Interest Site in a congested hostile environment; or operations to/from a helideck conducted with a helicopter having a MPSC of more than 19, may be operated in performance class 2.*

(a) (4) *HEMS-operations to/from an HEMS Operating Site may be operated in performance class 2 or 3.*

(f) *Helicopters HEMS-missions operated in:*

Performance class 1, 2 or 3 shall be certificated in Category A.

or

Proposal 2:

(a) Except as specified in (f) below, helicopters shall be operated in performance class 1 when:

(...)

~~*(a) (3)*~~

(f) *HEMS-operations: If it is not possible to comply with the requirement of performance class 1 due to performance or operational reasons, HEMS operations may be carried out with multi-engine helicopters (Category A certified), in performance class 2 or 3 providing that these deviations are described in the operations manual and have been approved by the competent authority.*

(g) *Helicopters operated in performance class 1 or 2 not meeting entirely the Category A certification standards should not be operated beyond 2015.*

Examples (CAT A - Limitation VTOL - elevated helipad)

BK117 B-2 (Lycoming)

Mission weight (without patient) = 2'910 kg

Max. CAT A weight at 1'000ft/30° = 2'860 kg

Max. CAT A weight at 2'200ft/20° = 2'870kg

Max. CAT A weight at 3'500ft/20° = 2'740 kg

Max. CAT A weight at 8'500/10° = 2'360 kg

BK117 C-1 (Arriel)

Mission weight (without patient) = 2'910 kg

Max. CAT A weight at 1'000ft/30° = 3'100 kg

Max. CAT A weight at 2'200ft/20° = 3'070 kg

Max. CAT A weight at 3'500ft/20° = 2'960 kg

Max. CAT A weight at 8'500/10° = 2'525 kg

BK117 C-2 (EC145)

Mission weight (without patient) = 3'150 kg

Max. CAT A weight at 1'000ft/30° = 3'150 kg

Max. CAT A weight at 2'200ft/20° = 3'130 kg

Max. CAT A weight at 3'500ft/20° = 3'000 kg

Max. CAT A weight at 8'500/10° = 2'550 kg

EC135 P2+

Mission weight (without patient) = 2'768 kg

Max. CAT A weight at 1'000ft/30° = 2'825 kg

Max. CAT A weight at 2'200ft/20° = 2'800 kg

Max. CAT A weight at 3'500ft/20° = 2'630 kg

Max. CAT A weight at 8'500/10° = - kg

comment *1152* comment by: *AgustaWestland*

Attachment #11

A) CAT Operations to/from a helideck conducted with helicopters having a MPSC of more than 19 should not be permitted in Performance Class 2.

The type of operations for which OPS.CAT.355.H (a)(3) gives alleviation (HEMS at Operating Site, HEMS at a Public Interest Site or Ops to/from Helideck) with respect to OPS.CAT.355.H (a)(2), are significantly different and it is improper to group them together.

In fact in the HEMS ops at the Operating Site or at a Public Interest Site the alleviation is reasonable as the rescued person is not transported for compensation, but because is life is at serious risk.

The HEMS operating site can not be predicted and, therefore, it might not satisfy PC1 requirements in terms of size, obstacle clearance, lighting system.

Instead flights to/from helideck are CAT Ops. People are transported for compensation. They are passengers at all effects. The departure and landing site are defined and should be adequate, in term of size and strength, for PC1 operations for the specific type of helicopter being used.

In this case they, the passengers, must be protected adopting the highest level of

safety only granted by helicopters whose design and performance comply with CS/FAR

29 Category A and hence, from a performance stand point, with PC1 requirements.

B) It should be noted that, according to CS/FAR 29.1, the number of passenger seats that allow a large helicopter to be certificated Category B is 9. Above 9 passenger seats the helicopter may be certificated in Cat B provided the maximum certificated mass is less than 9072 Kg .

C) In addition OPS.CAT.355.H(e) allows helicopters with more than 19 MPSC to be operated PC2 without an assured safe forced landing capability(see OPS.SPA.005.SFL (b)). It means that, following an engine failure during Landing or during Take-off to/from a helideck, the resulting ditching could be uncontrolled and then potentially catastrophic.

D) The alleviations mentioned above for the helicopters with more than 19 MPSC are not consistent with the Performance requirements for HHO Operations (see OPS.SPA.025.HHO).

This rules prescribes that those HHO ops performed as CAT (typically the Harbour Pilot Transfer) must be conducted at a mass that allows OEI HOGE performance therefore at a mass that comply with engine failure accountability. And this limitation constitutes a severe mass penalty for every helicopter models, limiting the operational mass to the mass that allows Hover Out of Ground Effect with One Engine Inoperative (HOGE OEI).

Therefore while for this HHO CAT Ops the full stay up capability is required,

the same requirement is not applied for CAT Ops on helidecks.

E) It is worth to note that the above alleviation was never present in JAR.OPS 3 and that it was introduced with Amdt 5 (see attached file from NPA OPS 38 (JAR-OPS 3) " Helicopter Performance & Miscellaneous Items").

The argument that none helicopter is operated, to day, to/from helideck with more than 19 passenger is not a sound argument. There are several helicopter models, certificated with a MAPSC above 19 and MTOM above 9072 Kg, that may be operated in PC2 to/from helideck.

comment *1628* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *2270* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Performance applicability - Helicopters

Comment / Proposal:

Modify text:

(b)(3) operations to a HEMS Operating Site or a Public Interest Site in a congested hostile environment; or operations to/from a helideck conducted (delete: with a helicopter having a MPSC of more than 19) may be operated in performance class 2 or 3.

Remarks:

See general statement regarding multi-engine helicopters

comment *2597* comment by: *Walter Mayer, Heliswiss*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in

performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2604* comment by: *Catherine Nussbaumer*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2612* comment by: *Jan Brühlmann*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2621* comment by: *Air-Glaciers (pf)*

e) and f) :The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe

forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2724* comment by: *Heliswiss NV*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2729* comment by: *Heli Gotthard*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2955* comment by: *Pascal DREER*

e) and f)

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in

performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *3175* comment by: *Heli Gotthard AG Erstfeld*

OPS CAT 355 H (e) e) and f)

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *3357* comment by: *UK CAA*

Page No: 70

Paragraph No:

OPS.CAT.355.H (a)(3)

Comment:

The performance conditions of the operations described in the paragraph have not been correctly transposed from JAR-OPS 3.470. The operations to/from a helideck for a MPSC of more than 19 are only approved if conducted in accordance with the conditions contained in OPS.SPA.SFL and the text of paragraph (a)(3) needs to be linked to (e). Additionally, the text would be better associated with paragraph (a)(2) for clarity.

A separate change has been proposed for the AMC.

Justification:

Correction of performance conditions and clarification of purpose.

Proposed Text (if applicable):

(2) having a maximum passenger seating configuration (MPSC) of more than 19, ***except that when such helicopters are operated to/from a helideck they may be operated in performance class 2 but are subject to the requirements of paragraph (e)***.

(3) ~~operations~~ ***operating*** to a HEMS Operating Site or a Public Interest Site in a congested hostile environment~~.; or operations to/from a helideck conducted with a helicopter having a MPSC of more than 19, may be~~

~~operated in performance class 2.~~

comment

3430 comment by: *SNEH Organisation representing all french commercial helicopters operators*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations. By consistency with OPS.SPS.005.SFL (d) (3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capabilité en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL.

Proposed wording modifications :

(e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL).

(f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL)

comment

3707 comment by: *Civil Aviation Authority of Norway*

Comment:

The performance conditions of the operations described in the paragraph have not been correctly transposed from JAR-OPS 3.470. The operations are only approved if conducted in accordance with the conditions contained in SPL.SPA.SFL and the text of paragraph (a)(3) needs to be linked to (e).

Justification:

Correction of performance conditions.

(3)

Proposed Text

(if applicable):

operations to a HEMS Operating Site or a Public Interest Site in a congested hostile environment; or operations to/from a helideck conducted with a helicopter having a MPSC of more than 19, may be operated in performance class 2 ***but are subject to the requirements of paragraph (e)***.

comment

4407 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

In OPS.COM.350 Category A is required for operating to/from an

aerodrome/operating site located in a congested hostile environment;, where the OPS.CAT.355.H does not require Cat. A for operating to/from an aerodrome/operating site located in a congested hostile environment, OPS.CAT.355.H should read**:(a) Except as specified in (a)(3) below, helicopters shall be operated in performance class 1 and certificated in category A when**:

comment *4625* comment by: *Christophe Baumann*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *4965* comment by: *Benedikt SCHLEGEL*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *5177* comment by: *DGAC*

(e) :

Proposal: delete "or 3" and add a new paragraph as follows:

"(f)helicopters operated in PC3 may be operated without an assured safe forced landing capability under the conditions contained in OPS.SPA.SFL"

Justification:

For Performance Class 3 operations, (d)(3) of OPS.SPA. 005.SFL allows for operations without an assured safe forced landing capability not only during take-off and landing but also during the cruise.

comment *5212* comment by: *Philipp Peterhans*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *5388* comment by: *Berner Oberländer Helikopter AG BOHAG*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *5911* comment by: *Dirk Hatebur*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *5969* comment by: *Irish Aviation Authority*

Comment:

OPS.CAT.355H considers helicopter performance that is applicable to all helicopter operations. As such it should be placed under the OPS.COM or OPS.GEN heading.

comment *6301* comment by: *Hans MESSERLI*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.

By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *6333* comment by: *SHA (AS)*

e) and f) :The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of

OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *6413* comment by: *Trans Héli (pf)*

e) and f) :The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *6728* comment by: *Heliswiss International*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *7171* comment by: *Swiss Helicopter Group*

The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed

wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.360.H Performance General - Helicopters p. 70

comment *453* comment by: *EHOC*

Paragraph (b)

The text of GM OPS.SPA.001.SFL(b) belongs to OPS.CAT.360.H; it has nothing to do with operations without SFL. It would better if it were (b) of the IR above:

OPS.CAT.360.H

"(b) The approved performance data contained in the Helicopter Flight Manual is used to determine compliance with the requirements of the appropriate performance class, supplemented as necessary with other data acceptable to the competent authority as may be prescribed in the relevant requirements. When applying the factors prescribed for the appropriate performance class, account should be taken of any operational factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of these factors."

Renumber old (b) to (c).

comment *1629* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the performance requirements into the AMC – material. We request to re-establish the performance requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification Justification: see LBA - General Comment, reasons 1 and 2.

comment *3359* comment by: *UK CAA*

Page No: 70

Paragraph No:

OPS.CAT.360.H

Comment:

The text of GM OPS.SPA.001.SFL(b) belongs to OPS.CAT.360.H; it has nothing to do with operations without SFL. It would better if it was transferred to (b) of this section and the relevant GM deleted.

Justification:

Correction of information and improvement of text.

Delete GM OPS.SPA.001.SFL(b)

Proposed Text (if applicable):

(b) The approved performance data contained in the Helicopter Flight Manual is used to determine compliance with the requirements of the appropriate performance class, supplemented as necessary with other data acceptable to the competent authority as may be prescribed in the relevant requirements. When applying the factors prescribed for the appropriate performance class, account ~~should~~ shall be taken of any operational factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of these factors.

Renumber old (b) to (c).

Delete GM OPS.SPA.001.SFL(b)

comment *3705* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of GM OPS.SPA.001.SFL(b) belongs to OPS.CAT.360.H; it has nothing to do with operations without SFL. It would better if it were transferred to (b) of this section and the relevant GM deleted.

Justification:

Correction of information and improvement of text.

(b)

Proposed Text

(if applicable):

The approved performance data contained in the Helicopter Flight Manual is used to determine compliance with the requirements of the appropriate performance class, supplemented as necessary with other data acceptable to the competent authority as may be prescribed in the relevant requirements. When applying the factors prescribed for the appropriate performance class, account ~~should~~ shall be taken of any operational factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of these factors.

Renumber old (b) to (c).

comment *5971* comment by: *Irish Aviation Authority*

Comment:

OPS.CAT.360H considers helicopter performance that is applicable to all helicopter operations. As such it should be placed under the OPS.COM or OPS.GEN heading.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.365.H Obstacle accountability - Helicopters p. 70-71

comment *5973* comment by: *Irish Aviation Authority*

Comment:

OPS.CAT.365H considers helicopter performance that is applicable to all helicopter operations. As such it should be placed under the OPS.COM or OPS.GEN heading.

comment *6178* comment by: *ADAC Luftrettung GmbH*

OPS.CAT.365.H (c)(1,2)

Für was steht die Abkürzung "R"? Unter OPS.GEN.010 Definitionen ist "R" nicht beschrieben. Im Text findet sich auch kein Bezug dazu.

B. I. Draft Opinion - Part-OPS - Subpart B - Section III - OPS.CAT.370.H Flight hours reporting - Helicopters p. 71

comment *454* comment by: *EHOC*

General

Although this reporting will be used to ascertain the rates for reliability of engines, it is not only for that purpose; it will also be used to assess the accident rates in all areas of operation.

This is an operational procedure and should therefore be contained in General requirements or Operational procedures.

The ACJ that accompanied this rule appears to be missing!

[ACJ OPS 3.426

Flight hours reporting

(See JAR-OPS 3.426)

The requirement of JAR-OPS 3.426 may be achieved by making available either:

- the flight hours flown by each helicopter – identified by its serial number and registration mark -

during the elapsed calendar year; or

- the total flight hours of each helicopter – identified by its serial number and registration mark – on

the 31s t of December of the elapsed calendar year.

Where possible, the operator should have available, for each helicopter, the breakdown of hours for CAT,

aerial work, general aviation. If the exact hours for the functional activity cannot be established, the

estimated proportion will be sufficient.

comment *3360* comment by: *UK CAA*

Page No: 71

Paragraph No: OPS.CAT.370.H

Comment:

Although this reporting will be used to ascertain the rates for reliability of engines, it is not only for that purpose; it will also be used to assess the accident rates in all areas of operation.

This is an operational procedure and should therefore be contained in General Requirements (Section I) or Operational Procedures (Section II).

The JAR-OPS ACJ that accompanied this rule appears to be missing and would be suitable, as modified, for a new associated AMC.

(ACJ OPS 3.426, Flight hours reporting, (See JAR-OPS 3.426))

Justification:

Clarification of purpose and improvement in compliance.

Proposed Text (if applicable):

AMC OPS.CAT.370.H Flight Hours Reporting - Helicopters

(a) The requirement of OPS.CAT.370.H may be achieved by making available either:

(1) the flight hours flown by each helicopter, identified by its serial number and registration mark, during the elapsed calendar year; or

(2) the total flight hours of each helicopter, identified by its serial number and registration mark, on the 31st of December of the elapsed calendar year.

(b) Where possible, the operator should have available, for each helicopter, the breakdown of hours for CAT, commercial and non-commercial flying. If the exact hours for the functional activity cannot be established, the estimated proportion will be sufficient.

comment *3574* comment by: *Walter Gessky*

OPS.CAT.370.H Flight hours reporting - Helicopters

Delete OPS.CAT.370.H here and transfer to **OPS.GEN.370**

New OPS **OPS.GEN.370**

An operator shall make available to the competent authority the hours flown for each aircraft operated during the previous calendar year.

Justification

This point shall be transferred to OPS.GEN.370 and required for all operators. Reporting of flight hours is important for the state safety program for a quantitative analysis.

comment *3797* comment by: *Civil Aviation Authority of Norway*

Comment:

Although this reporting will be used to ascertain the rates for reliability of engines, it is not only for that purpose; it will also be used to assess the accident rates in all areas of operation.

This is an operational procedure and should therefore be contained in General Requirements (Section I) or Operational Procedures (Section II).

The JAR-OPS ACJ that accompanied this rule appears to be missing and would be suitable, as modified, for a new associated AMC.

(ACJ OPS 3.426, Flight hours reporting, (See JAR-OPS 3.426))

Justification:

Clarification of purpose and improvement in compliance.

Proposed Text

(if applicable):

AMC OPS.370.H Flight Hours Reporting - Helicopters

(a) The requirement of OPS.CAT.370.H may be achieved by making available either:

(1) the flight hours flown by each helicopter, identified by its serial number and registration mark, during the elapsed calendar year; or

(2) the total flight hours of each helicopter, identified by its serial number and registration mark, on the 31st of December of the

elapsed calendar year.

(b) Where possible, the operator should have available, for each helicopter, the breakdown of hours for CAT, commercial and non-commercial flying. If the exact hours for the functional activity cannot be established, the estimated proportion will be sufficient.

comment *5186* comment by: *DGAC*

We wonder why the requirement for the flight hours reporting is in the sub-part dealing with performance of CAT. It should rather be in the operational procedures. There could be an AMC explaining the reason for this requirement and giving some more details: it could be interesting to have the number of flight hours flown in aerial work (COM) and in CAT for example.

comment *6278* comment by: *Aero-Club of Switzerland*

We have one simple question: Why?

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV p. 72

comment *3067* comment by: *AEA*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *3651* comment by: *AUSTRIAN Airlines*

Comment:

AUSTRIAN is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete review of this section has not been possible before the closure of

the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *4303* comment by: *KLM*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete KLM review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *4523* comment by: *TAP Portugal*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *4907* comment by: *Deutsche Lufthansa AG*

Comment:

Lufthansa is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete Lufthansa review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete and **literal** realignment with the Subpart K and L requirements of EU-OPS

comment *5484* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *6824* comment by: *Icelandair*

Comment:

The AEA is concerned that several (un)intentional changes may have been introduced compared to EU-OPS. Its therefore important for EASA to highlight any difference compared to EU-OPS (due to time-constraints a complete AEA review of this section has not been possible before the closure of the comment deadline)

Proposal:

Ensure a complete realignment with the Subpart K and L requirements of EU-OPS

comment *7139* comment by: *ECA - European Cockpit Association*

A paragraph OPS.CAT.530 Pressure-altitude-reporting transponder should be added as follows:

OPS.CAT.530 Pressure-altitude-reporting transponder

Aircraft shall be equipped with a pressure-altitude-reporting Secondary Surveillance Radar (SSR) transponder.

An operator shall not operate an airplane under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks unless the airplane is equipped with SSR transponder.

Justification:

Reference: EU OPS 1.865 (a)

comment *7259* comment by: *AIR FRANCE*

Comment:

As changes may have been introduced compared with EU-OPS, and that was no sufficient time to review all the details, ensure compliance with EU OPS.

Proposal:

Ensure compliance with the EU OPS performation sub part.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.405 Hand fire extinguishers – Motor powered aircraft p. 72

comment *101* comment by: *EUROCOPTER*

The number of required hand fire extinguishers in the passengers compartment should not be in addition to the one required in OPS.GEN.405 (a)(1)(ii)

Wording modification proposal:

"***Notwithstanding OPS.GEN.405 (a)(1)(ii),*** *hand fire extinguishers shall be evenly distributed ..."*

comment *3432* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(b)

The number of required hand fire extinguishers in the passengers compartment should not be in addition to the one required in OPS.GEN.405 (a) (1) (ii)

Wording modification proposal :

"**Notwithstanding OPS.GEN.405(a) (1) (ii),** hand fire extinguishers shall be evenly distribued..."

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.406.A Safety harness - Aeroplanes p. 72

comment *77* comment by: *Air Southwest*

The requirement refers to aeroplanes with a max certificated TOM <5700kg. This is inconsistent with other requirements. The usual cases are MTOM =<5700kg, or MTOM >5700kg. Suggest amending to read ".... take off

mass equal to or less than 5700kg ....."

On the subject of consistency, in the SI system of numbering the thousands separator is applied for all cases where more than 4 digits are present either side of the decimal point. So the correct number format could be either 5 700kg or 5700kg. Whichever is used I suggest a consistent approach is adopted. Note OPS.CAT.406.A compared to OPS.CAT.410 (b,c and d). There are numerous other examples of number inconsistency throughout the publication.

comment *3227* comment by: *Austro Control GmbH*

Safety harness for each passenger seat seems to be an "overkill" and has a big economical impact for operators.

Belts are suggested to be sufficient for passengers.

Proposal is to change wording *".... with **belts** on each...."*

comment *3575* comment by: *Walter Gessky*

OPS.CAT.406.A Safety harness - Aeroplanes

Aeroplanes with a maximum certificated take-off mass of less than 5 700 kg and with a maximum passenger seating configuration of less than 9 **the front row seats** shall be fitted with a safety harness for each passenger seat.

Comment:

Safety belt for each passenger seat seems to be an "overkill" and has a big economic impact for small operators. Only for front row seats safety harnesses shall be required.

comment *4231* comment by: *Airlec Air Espace / Paul Tiba*

This point is impossible to implement. For example, on our Swearingen Merlins, there are no compatible passenger seats with such a harness. Also, it will be very difficult or impossible to have passengers understood that they take an aircraft with harness. For them, it would represent a lack of safety of that class of aircraft. I really think that this paragraph should only refer to the recommendation letter but could not be compulsory. Thanks for taking in consideration my comment.

comment *5745* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

1. The term 'safety harness' should be replaced by 'shoulder harness'.

2. The referenced aeroplanes could only with a huge cost be modified with shoulder harness instead of only safety belts.The paragraph should be changed to require safety belt only.

Proposal (including ***new text***):

Aeroplanes with a maximum certificated take-off mass of less than 5 700 kg and with a maximum passenger seating configuration of less than 9 shall be fitted with a safety ~~harness~~ ***belt*** for each passenger seat.

comment *5994* comment by: *DGAC*

Proposal : insert the following § : "A safety belt with a diagonal shoulder strap for aeroplanes with a maximum certificated take-off mass not exceeding 5700 kg or a safety belt for aeroplanes with a maximum certificated take-off mass not exceeding 2730 kg may be permitted in place of a safety belt with shoulder harness if it is not reasonably practicable to fit the latter".

Justification : it is simply not possible for some "small" aircraft to meet the certification requirement for harnesses that require any harness to be able to bear 9 G force.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.410 Flight instruments and equipment for VFR flights – Motor powered aircraft p. 72-73

comment *455* comment by: *EHOC*

Paragraph (b)

The text in GEN and CAT are two ways of doing similar things; the discriminant in GEN is objective and superior to CAT (which contains a prescriptive requirement). No further text is required for helicopters in CAT as GEN covers the requirement. Because accuracy is required it may be necessary only to provide a GM for CAT helicopters stating that:

"GM OPS.GEN.410(b)

REDUCED VISUAL CUE ENVIRONMNENT - HELICOPTERS

1. Environmental condition where the risk of loss of control is high and reference to one or more flight instruments may be necessary occurs when:

a. operating over land or water with a visibility of less than 1500m; and/or

b. operating over water and out of sight of land.

2. Because instruments cannot be fitted or removed temporarily, the net effect of not having the specified instruments is an operational limitation."

However, that does leave aeroplanes and helicopters with MCTOM > 3175 kg; this can be accommodated with an abbreviated rule text:

"(b) Helicopters with a maximum certificated take-off mass exceeding 3175 kg and aeroplanes shall, in addition to (a), be equipped with a means of measuring and displaying:"

This text appears to call for double compliance as it appears both in OPS.GEN.410(b) and OPS.CAT.410(b). To avoid this, it may be necessary to have a statement somewhere in the rule to avoid the necessity for double compliance.

Paragraph (c)

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). It is usually located in the centre of the windscreen.

comment *827* comment by: *Reto Ruesch*

Flight instruments and equipment-VFR flights

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). It is usually located in the centre of the windscreen.

comment *1128* comment by: *Heli Gotthard*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1176* comment by: *Stefan Huber*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1246* comment by: *Air Zermatt*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1297* comment by: *Air-Glaciers (pf)*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1347* comment by: *AECA helicopteros.*

OPS CAT 410(b)(3)

It is not clear where the requirement for two attitude indicators comes from; no text that can be found (ICAO or JAR) specifies this for helicopters.

comment *1465* comment by: *EUROCOPTER*

§ (c):

A second OAT indication is not required by JAR-OPS 3.650 (h) whenever two pilots are required.

Proposal: to delete applicability to helicopters:

*(c) Whenever two pilots are required for the operation, aeroplanes **~~and helicopters~~** shall, in addition to OPS.GEN.410(c), be equipped with an independent means of indicating (a)(1)(i) for each pilot.*

comment *1468* comment by: *EUROCOPTER*

§ (a)(1)(iii):

It is proposed to write:

*(iii) turn and slip for aeroplanes**; ~~and~~** slip for helicopters;*

Reason: it has to be clear that only the display of slip is required for helicopters.

comment *1794* comment by: *Heli Gotthard AG Erstfeld*

OPS CAT 410 Flight instruments and equipment-VFR flights

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1862* comment by: *SHA (AS)*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *1938* comment by: *Berner Oberländer Helikopter AG BOHAG*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2021* comment by: *Heliswiss AG, Belp*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2096* comment by: *Dirk Hatebur*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2130* comment by: *Heliswiss*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2137* comment by: *Heliswiss NV*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2325* comment by: *heliswiss ag, belp*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2420* comment by: *Jan Brühlmann*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2452* comment by: *Catherine Nussbaumer*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2552* comment by: *Walter Mayer, Heliswiss*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2840* comment by: *Philipp Peterhans*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2930* comment by: *Pascal DREER*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *2973* comment by: *REGA*

Delete: helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3

comment *3002* comment by: *AOPA Switzerland*

For airplane with a MTOM less than 5,7 tons and less than 19 PAX, Point (a)(3) shall only applicable for flights at night.

comment *3362* comment by: *UK CAA*

Page No: 72

Paragraph No:

OPS.CAT.410 (c)

Comment:

A second outside air temperature gauge is not required for either helicopters or aeroplanes. This paragraph should be removed.

Justification:

Correction of equipment requirements.

Proposed Text (if applicable):

~~Whenever two pilots are required for the operation, aeroplanes and helicopters shall, in addition to OPS.GEN.410(c), be equipped with independent means of indicating (a)(1) (i) for each pilot.~~

comment *3363* comment by: *UK CAA*

Page No: 73

Paragraph No: OPS.CAT.410(d)(2)

Comment:

The date of the certificate of airworthiness date is incorrect.

Delete 1999 and insert 1998.

Justification:

Incorrect compliance date.

Proposed Text (if applicable):

(2) aeroplanes first issued with an individual certificate of airworthiness on or after 1 April ~~1999~~ ***1998***;

comment *3900* comment by: *FOM ANWB MAA*

OPS.CAT.410 Flight instruments and equipment for VFR flights – Motor powered aircraft

~~(c) Whenever two pilots are required for the operation, aeroplanes and helicopters shall, in addition to OPS.GEN.410(c), be equipped with independent means of indicating (a)(1) (i) for each pilot~~.

Helicopters are generally fitted with one OAT sensor, no requirement for this in JAR-OPS 3.

comment *3960* comment by: *HDM Luftrettung gGmbH*

OPS CAT 410: A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *3964* comment by: *HDM Luftrettung gGmbH*

OPS CAT 415: Landing light at least adjustable on vertical axis AMC CAT 415 page 202

comment *3967* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(c) Delete!

Helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3

comment *4112* comment by: *Benedikt SCHLEGEL*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *4408* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Didn't find that requirement in CS 27 and 29. A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). It is usually located in the centre of the windscreen.

comment *4529* comment by: *Christophe Baumann*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *4620* comment by: *Bristow Helicopters*

Paragraph c states "in addition to OPS GEN 410(c), be equipped with independent means of indicating (a)(1)(i) for each pilot" This should be (a)(1)(ii), i.e. vertical speed

comment *5142* comment by: *ADAC Luftrettung GmbH*

410(c)

2 OAT displays, or should the helicopter be fitted with 2 OAT sensors and indicators?

Delete: helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *5476* comment by: *ALFA-HELICOPTER*

(b) Delete: helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3.

comment *5721* comment by: *Peter Moeller*

delete 410(c)

comment *5786* comment by: *Norsk Luftambulanse*

(c) Delete: helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3

comment *5802* comment by: *Ph.Walker*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6007* comment by: *HSD Hubschrauber Sonder Dienst*

410(c): delete, because the requirement of two OAT-gauges with two pilots seems really overdone, or there is a numeration error and you intended

other equipment to be doubled.

comment *6134* comment by: *Hans MESSERLI*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6302* comment by: *Heliswiss International*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6361* comment by: *Trans Héli (pf)*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6409* comment by: *HDM Luftrettung gGmbH*

410 (c):

Delete: helicopter are fitted with one OAT sensor, no requirement for this in JAR-OPS 3

comment *6629* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.CAT.410 Flight instruments and equipment for VFR flights - Motor powered aircraft

~~(c) Whenever two pilots are required for the operation, aeroplanes and helicopters shall, in addition to OPS.GEN.410(c), be equipped with independent means of indicating (a)(1) (i) for each pilot~~.

Helicopters are generally fitted with one OAT sensor; no requirement for this in JAR-OPS 3.

comment *6909* comment by: *Swiss Helicopter Group*

A second outside air temperature gauge is not required for helicopters or

even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6928* comment by: *Christian Hölzle*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *6978* comment by: *Eliticino SA*

A second outside air temperature gauge is not required for helicopters or even aeroplanes (one has always been the requirement). Usually located in the centre of the windscreen.

comment *7055* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

The text should be revised to:

"(a) In addition to OPS.GEN.410(a) ***and (b)***, aeroplanes and helicopters operating under Visual Flight Rules (VFR) shall be equipped with: (...)"

Otherwise, for VFR flights under OPS.CAT, aeroplanes would not be required to be equipped with means of measuring and displaying attitude and stabilised heading (as per OPS.GEN.410(b)(3) and (4)).

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.415 Flight instrument and equipment for VFR night flights and IFR flights – Motor powered aircraft p. 73-74

comment *78* comment by: *Air Southwest*

OPS.CAT.415(a)(2) - what does this mean! I assume it means that the aircraft must have a light or caption that illuminates (or an audio warning that sounds) when the ice/condensation detection system has failed.

comment *102* comment by: *EUROCOPTER*

Comment on OPS.CAT.415 (a)(2)(iii) and (iv):

The requirement of a 'pitot heater failure annunciation system' included in JAR-OPS 3.652 (d) says that this requirement does not apply for:

- helicopters with a MAPSC of 9 or less, or with a MCTOM of 3175 kg or less

- and issued with an individual Certificate of Airworthiness prior to 1 August 1999

The negative form of this requirement says that a 'pitot heater failure annunciation system' applies only for:

- helicopters with a MCTOM exceeding 3175 kg and with a MPSC of more than 9

- or first issued with an individual Certificate of Airworthiness on or after 1 August 1999

Wording modification proposal:

(iii) aeroplanes first issued with an individual Certificate of Airworthiness on or after 1 August 1999; ***~~and~~ or***

(*iv) helicopters with a maximum certificated take-off mass exceeding 3175 kg* ***~~or~~ and*** *a maximum passenger seating configuration of more than 9;* ***~~and issued with an individual Certificate of Airworthiness before 1 August 1999;~~***

comment *103* comment by: *EUROCOPTER*

Comment on OPS.CAT.415 (a)(4):

By consistency with aeroplanes, only helicopters with a MCTOM exceeding 3175 kg or with a MPSC of more than 9 should be under the scope of OPS.CAT.415 (a)(4)

Wording modification proposal:

(4) In the cases of aeroplanes ***and helicopters*** *with a maximum certificated take-off mass exceeding* ***respectively*** *5700 kg* ***and 3175 kg*** *or* ***with*** *a maximum passenger seat configuration of more than 9* ***~~and helicopters~~****:*

(i) ...

(ii) ...

(iii) ...

comment *456* comment by: *EHOC*

Paragraph (a)(1)

No method of compliance is present; a suggested text is:

"AMC OPS.CAT.415(a)(1)

MEANS OF INDICATING ALTITUDE

For single pilot operations with helicopters, the additional means of

indicating altitude may be a radio altimeter."

Paragraph (d)

The text of (d) appears to be a method of compliance of (a)(3); modern helicopters are now beginning to introduce more imaginative landing light systems using LEDs - these use less power, reduce the amount of heat and last longer. They can also provide alternative ways of achieving lighting to "illuminate the ground in front of and below the helicopter and the ground on either side of the helicopters" - other than being "adjustable in flight".

It is suggested either that paragraph (d) be removed and placed into AMC OPS.CAT.415.H(a)(3). (If there is subsequently a method of compliance which can meet the same objective it can be quickly added.)

Or:

Paragraph (d) is amended to provide an objective -thus allowing for alternative method of compliance:

" (d) In the case of helicopters the second landing light required shall be ~~adjustable in flight so as to~~ **capable of** illuminate**ing** the ground in front of and below the helicopter and the ground on either side of the helicopter.

comment *828* comment by: *Reto Ruesch*

no attitude indicator for hel<5700

Shall be compulsory for all helicopters flying in VFR night flight.

comment *829* comment by: *Reto Ruesch*

Means of indicating altitude

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter

comment *830* comment by: *Reto Ruesch*

Night VFR landing light adjustable

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1177* comment by: *Stefan Huber*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *1178* comment by: *Stefan Huber*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *1179* comment by: *Stefan Huber*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1247* comment by: *Air Zermatt*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *1248* comment by: *Air Zermatt*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *1249* comment by: *Air Zermatt*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1298* comment by: *Air-Glaciers (pf)*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *1299* comment by: *Air-Glaciers (pf)*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *1344* comment by: *AECA helicopteros.*

(a)(4) delete this paragraph.

The same as in OPS GEN 410 (a) (2)

comment *1630* comment by: *Luftfahrt-Bundesamt*

The LBA requests to stay away from the performance base rule making here. If this system shall be used, OPS.GEN 405 should be phrased in a similar way. However, this does not make much sense at all. Same with this paragraph.

Justification: see LBA - General Comment, reason 3.

comment *1795* comment by: *Heli Gotthard AG Erstfeld*

Ops cat 415 (4) no attitude indicator for hel<5700

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight

comment *1863* comment by: *SHA (AS)*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *1864* comment by: *SHA (AS)*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *1865* comment by: *SHA (AS)*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1939* comment by: *Berner Oberländer Helikopter AG BOHAG*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *1940* comment by: *Berner Oberländer Helikopter AG BOHAG*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *1941* comment by: *Berner Oberländer Helikopter AG BOHAG*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2022* comment by: *Heliswiss AG, Belp*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2098* comment by: *Dirk Hatebur*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2099* comment by: *Dirk Hatebur*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2100* comment by: *Dirk Hatebur*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2133* comment by: *Heliswiss*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2135* comment by: *Heliswiss*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2138* comment by: *Heliswiss NV*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2139* comment by: *Heliswiss NV*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2140* comment by: *Heliswiss*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2141* comment by: *Heliswiss NV*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2326* comment by: *heliswiss ag, belp*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2421* comment by: *Jan Brühlmann*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2422* comment by: *Jan Brühlmann*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2423* comment by: *Jan Brühlmann*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2453* comment by: *Catherine Nussbaumer*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2553* comment by: *Walter Mayer, Heliswiss*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2554* comment by: *Walter Mayer, Heliswiss*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2555* comment by: *Walter Mayer, Heliswiss*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2841* comment by: *Philipp Peterhans*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2842* comment by: *Philipp Peterhans*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *2843* comment by: *Philipp Peterhans*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *2844* comment by: *Philipp Peterhans*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *2931* comment by: *Pascal DREER*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *3961* comment by: *HDM Luftrettung gGmbH*

OPS CAT 415 (4): Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *3963* comment by: *HDM Luftrettung gGmbH*

OPS CAT 415: For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *4113* comment by: *Benedikt SCHLEGEL*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *4114* comment by: *Benedikt SCHLEGEL*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *4409* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *4536* comment by: *Christophe Baumann*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *4538* comment by: *Christophe Baumann*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter

comment *4539* comment by: *Christophe Baumann*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *5803* comment by: *Ph.Walker*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *5804* comment by: *Ph.Walker*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter

comment *5805* comment by: *Ph.Walker*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202

comment *6003* comment by: *DGAC*

Proposal:

Complete (a)(1) with "with the same layout"

Justification:

A different altimeter layout is a potential cause of accident and has been identified as such by human factors. Two different layouts should be avoided.

comment *6138* comment by: *Hans MESSERLI*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *6139* comment by: *Hans MESSERLI*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6140* comment by: *Hans MESSERLI*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *6304* comment by: *Heliswiss International*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *6305* comment by: *Heliswiss International*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6306* comment by: *Heliswiss International*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *6362* comment by: *Trans Héli (pf)*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *6363* comment by: *Trans Héli (pf)*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6365* comment by: *Trans Héli (pf)*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *6911* comment by: *Swiss Helicopter Group*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6912* comment by: *Swiss Helicopter Group*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *6929* comment by: *Christian Hölzle*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *6930* comment by: *Christian Hölzle*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6983* comment by: *Eliticino SA*

Attitude indicator : Shall be compulsory for all helicopters flying in VFR night flight.

comment *6986* comment by: *Eliticino SA*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6987* comment by: *Eliticino SA*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *7057* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

The text should be revised to:

"(a) In addition to OPS.GEN 415 ***and OPS.CAT.410***, aeroplanes and helicopters, when operating night flights under Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) flights, shall be equipped with: (...)"
Otherwise, for VFR night and IFR flights, aeroplanes and helicopters would not be required to be equipped with means of indicating outside air temperature for each pilot (as per OPS.CAT.410(c)).

comment *7319* comment by: *ADAC Luftrettung GmbH*

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *7635* comment by: *Cirrus Design Corporation*

This requirement limits landing light technology to filaments and fails to include other light technologies such as LED or HID. Instead of requiring a specific quantity of landing lights or filaments, this requirement should focus on the reliability of maintaining a specific luminosity since luminosity is already addressed by the Certification Specifications. For instance, a landing light could be powered by multiple LED, which could provide any level of redundancy depending on the number of diodes used. Failure of one or more diodes could be acceptable as long as the minimum luminosity is maintained. The rule, as written, could not be adequately applied to LED technology. The use of HID technology also does not use filaments and not literally allowed by this rule as written.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.416 Airborne weather equipment p. 74

comment *79* comment by: *Air Southwest*

OPS.CAT.416 is cumbersome and not particularly descriptive. The wording of EU-OPS 1.670 is clear and unambiguous. I suggest replacing the paragraph with the verbatim transcript of EU-OPS 1.670.

comment *1796* comment by: *Heli Gotthard AG Erstfeld*

Ops cat 415 Means of indicating altitude

For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

Ops Cat 415 Night VFR landing light adjustable

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1844* comment by: *Airbus SAS*

The title of the regulation "Airborne weather equipment" is misleading. In particular because the text specifies the function to detect "... hazardous weather conditions regarded as detectable with airborne radar equipment".

It is understood and supported that EASA has made all efforts to comply with the objective to avoid technical specifications in regulations.

Consequently, as it was obviously impossible to keep the proven title "Airborne Weather Radar" from EU-OPS-1.760, and to clearly define the safety objective in OPS.CAT.416,

==> Airbus proposes to revise the regulation title to read: "Airborne weather detecting equipment".

comment *2454* comment by: *Catherine Nussbaumer*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *6931* comment by: *Christian Hölzle*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.417.A Equipment to wipe windshield - Aeroplanes p. 74

comment *1846* comment by: *Airbus SAS*

If the performance-based–requirement approach prevents requiring explicetly a windshield wiper (instead requiring "means to maintain a clear portion of the windshield), the requirement title should be consistent, and not reading "equipment to wipe windshield"

==> Airbus proposes to revise the requirement title to read: "Equipment to

clear windshield".

comment *2327* comment by: *heliswiss ag, belp*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *3081* comment by: *M Wilson-NetJets*

Original text:

OPS.CAT.417.A Equipment to wipe windshield - Aeroplanes

Aeroplanes with a maximum certificated take-off mass of more than 5700 kg shall be equipped at each pilot station with a means to maintain a clear portion of the windshield during precipitation.

Suggested new text:

OPS.CAT.417.A Equipment to **clear the** windshield - Aeroplanes

Aeroplanes with a maximum certificated take-off mass of more than 5700 kg shall be equipped at each pilot station with a means to maintain a clear portion of the windshield during precipitation.

Comment/suggestion:

Wipe insinuates a moving motion while there are other means available to clear the windscreen of rain or other contaminants.

comment *4623* comment by: *Bristow Helicopters*

This should be applied to all aircraft and so A should be removed

comment *7411* comment by: *Axel Schwarz*

The requirement should be restricted to operations under IFR (this would exclude e.g. commercial operations of Performance Class C aeroplanes for scenic flights...).

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.418.H Radio altimeters - Helicopters p. 75

comment *97* comment by: *EUROCOPTER*

In order to:

a) ensure a similar level of IR/AMC balance than the one applied with many other requirements as the radio altimeter requirements in OPS.SPA.010.NVIS and AMC OPS.SPA.010.NVIS (a), as well as for all Flight Performance requirements, where the detailed technical requirements have been transferred into AMCs. We also remind that it is written in Explanatory Note, item n° 35, page 31, that the general approach developed by the Agency was to put the safety objectives in the Implementing Rules and to include the technical specifications of the different instrument, data or equipment in AMC and GM.

b) take into account the fact that the rulemaking task OPS.054(b) (*'Helicopter radio-altimeters. Review of the AMC/GM due to implementing/interpretation problems'*) is included in the EASA '4-year Rulemaking Programme 2009-2012' (document dated 10 February 2009),

the proposal is to transfer into AMC OPS.CAT.418.H the detailed technical part of the radio altimeter warning function. The advantage of this proposal will be to allow in the future an easier and quicker modification of the detailed technical requirement in accordance with the outcome of the OPS.054(b) rulemaking task.

In addition 'or' as been omitted in the first two conditions (a) and (b).

Wording modification proposal:

'OPS.CAT.418.H: Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting ***an audio and a visual warning*** ~~***below a preset height and a visual warning at a height selectable by the pilot,***~~ *when operating:*

- out of sight of the land; ***or***

- in a visibility of less than 1500 m; ***or***

- ...'

See also: the associated proposed modification (n° 98) of AMC OPS.CAT.418.H.

comment *1129* comment by: *Heli Gotthard*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *1181* comment by: *Stefan Huber*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *1250* comment by: *Air Zermatt*

Point c : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *1301* comment by: *Air-Glaciers (pf)*

Landing light at least adjustable on vertical axis AMC CAT 415 page 202.

comment *1797* comment by: *Heli Gotthard AG Erstfeld*

Ops Cat 418 Radio altimeter helicopter

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed

comment *1866* comment by: *SHA (AS)*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *1942* comment by: *Berner Oberländer Helikopter AG BOHAG*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2024* comment by: *Heliswiss AG, Belp*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2101* comment by: *Dirk Hatebur*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2142* comment by: *Heliswiss*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2143* comment by: *Heliswiss NV*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2424* comment by: *Jan Brühlmann*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2455* comment by: *Catherine Nussbaumer*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2556* comment by: *Walter Mayer, Heliswiss*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2845* comment by: *Philipp Peterhans*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *2932* comment by: *Pascal DREER*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *3438* comment by: *SNEH Organisation representing all french commercial helicopters operators*

In order to :

a) ensure a similar level of IR/AMC balance than the one applied with many

other JAR-OPS3 requirements as Flight Performances where the detailed technical requirements have been transferred into AMCs,

b) take into account the fact that the rulemaking task OPS.054 (b) (Helicopter radio-altimeters. reniew of the AMC/GM due to implementing/interpretation problems) is included in the EASA

The proposal is to transfer into AMC OPS.CAT.418. H the detailed technical part of the radio altimeter warning function. The advantage of this proposal will be to allow in the future an easier and quicker modification of the detailed technical requirement in accordance with the outcome of the OPS.054 (b) rulemaking task.

Wording modification proposal :

OPS.CAT.418.H : Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio and a visual warning below a preset height and a visual warning at a height selectable by the pilot, when operating...

See the associated proposed modification of AMC OPS.CAT.418.H

comment *3969* comment by: *HDM Luftrettung gGmbH*

OPS CAT 418: Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *4115* comment by: *Benedikt SCHLEGEL*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *4541* comment by: *Christophe Baumann*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *4628* comment by: *Bristow Helicopters*

This is an error in transcription from JAR OPS 3. It should state "capable of emitting an aural warning below a preset height".

Aural warnings are required as audio warnings are not suitable under all high workload conditions.

comment *5806* comment by: *Ph.Walker*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6144* comment by: *Hans MESSERLI*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6309* comment by: *Heliswiss International*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6367* comment by: *Trans Héli (pf)*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6913* comment by: *Swiss Helicopter Group*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6932* comment by: *Christian Hölzle*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *6990* comment by: *Eliticino SA*

Point d : at a distance from land corresponding to 10 minutes at normal cruising speed.

comment *7321* comment by: *ADAC Luftrettung GmbH*

Point d should be changed to : at a distance from land corresponding to **10**

minutes at normal cruising speed.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.420 Flight over water – Motor-powered aircraft p. 75

comment *942* comment by: *Aersud*

Comment

The requirement asks for CAT operations the "emergency exit illumination" which means "the exit should be illuminated".

Comparing CS29 and CS27 concerning this requirement there is a big difference.

The CS 29.811 Emergency exit marking and CS 29.812 Emergency lighting reports specific requirements as requested by this paragraph of EU.OPS. In case of CS27 we do not have any requirements about Emergency Illumination neither in "CS 27.807 Emergency exits".

So it is an inconsistency that in the Operative requirements foresees to add the exit illumination not requested in the CS.

For light helicopter the exit it's very close to the passengers, so it's not necessary an illumination of the exit, but it's maybe enough an emergency exit marking. A different and acceptable proposal could be a fluorescent sticker.

Consider also that this topic was discussed also in a JAA HSST meeting held between Monday 14th June - Wednesday 16th June 2004. It emerged the same problems and Authorities agreed that this requirement could be applied only for helicopters with Maximum Certified Take-off Mass greater than 3.175 kg.

Proposal

Change: (c) In addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f), helicopters *with a Maximum Certified Take-off Mass greater than 3.175 kilograms (kg) and up to 7.000 kilograms (kg), shall be equipped with emergency exit illumination marking. Helicopter over 7.000 kilograms (kg)* shall be equipped with emergency exit illumination when operated on a flight over water.

Note

Priority **H**

comment *1232* comment by: *EUROCOPTER*

Wording modification proposal:

(c) In addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f),

helicopters shall be equipped with emergency exit ***~~illumination~~ markings visible in daylight or in the dark*** *when operating on a flight over water*

Rationale:

This requirement raises the following questions:

- does it refer to the illumination of the exterior of the emergency exit (JAR.29 812(b) or to the illumination of the internal exit signs?

This question was raised by ENAC in 2004 and the answer of the JAA HSST was as follows:

Extract from the JAA HSST 2004-02 meeting minutes:

"3. JAR-OPS 3.830(a)(4) emergency exit illumination: ENAC requested clarification if this JAR-OPS 3 requirement refers to the illumination of the external area in front of the emergency exit (JAR 29.812(b)), or to the illumination of the internal exit signs (JAR 29.811(a)). After comparing all rule and airworthiness material the following was concluded:

• JAR-OPS 3.830(a)(4) refers to the internal lighting, however;

• JAR 29.812(d) gives the requirement for CAT. B certified JAR 29 helicopters

• JAR 29.812 (a) gives the requirement for CAT. A certified JAR 29 helicopters

• The airworthiness requirements in JAR 29 helicopters, contains sufficient rule material for 3.830(a)(4).

• JAR 27 does not contain airworthiness requirements for internal emergency exit lighting. should there be a requirement FOR jar 27. If not, deletion of 3.830(a)(4) is appropriate."

Advantages of the wording modification proposal:

- clarifies that the requirement refers to the (internal) markings and not to the external part of the emergency exit

- ensures consistency with the wording ("remain visible' and 'daylight or in the dark') used in OPS.CAT.427.H (d) (Helidecks in hostile seas)

- ensures consistency with CS 27.807 (b)(3) ('marked so as to be operated even in darkness')

- specifies the function to be achieved (visibility in darkness) instead of the means to ensure the function (illumination)

comment *1761* comment by: *claygate*

There really has not been much thought regarding the private helicopter Pilot on this one, this is totally unreasonable and would mean i would not be able to fly to France in a Private Jetranger ! The cost of adding floats for a private pilot is too expensive for us to retro fit and would curtail my European flying and British Isles flying for that matter !

Also, to carry a life raft on what is already a heavy helicopter is again

unreasonable, life vests, yes without a doubt we all use, but to make the carrying of a life raft mandatory for a private pilot is taking the safety issue too far !

come on guy's , be reasonable and sensible about these changes !

Mel Streek - Claygate Distribution Ltd

comment *2346* comment by: *Dassault Aviation*

Editorial comment:

Page 75 OPS.CAT.420 §(a)(2) Flight Over Water: reference to OPS.GEN.420(f) should be removed as the subparagraph (a) deals with Aeroplane and OPS.GEN.420(f) deals with helicopters.

comment *3364* comment by: *UK CAA*

Page No: 75

Paragraph No:

OPS.CAT.420(a)

Comment:

Under the heading of AEROPLANES, the references to equipment in OPS.GEN includes OPS.GEN.420(f) which is a helicopter equipment requirement.

Justification:

Incorrect reference.

Proposed Text (if applicable):

Delete reference to OPS.GEN.420(f)

comment *3369* comment by: *UK CAA*

Page No: 75

Paragraph No: OPS.CAT.420(b)

Comment:

OPS.CAT.420(b) duplicates one of the conditions of the of OPS.CAT.420(c). The duplication will be removed by reformatting (b) and deleting (c).

Justification:

Reformatting of requirement required.

Proposed Text (if applicable):

(b) Helicopters certificated for operating on water, when so doing, shall,

in addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f), be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring, or manoeuvring the aircraft on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals prescribed in the International Regulations for the prevention of collisions at sea; and

~~(c) In addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f), helicopters shall be equipped with~~

(3) emergency exit illumination ~~when operated on a flight over water~~:

(i) in Performance Class 1 or 2, at a distance corresponding to more than 10 minutes flying time at normal cruising speed; or

(ii) in Performance Class 3, at a distance corresponding to more than 3 minutes flying time at normal cruising speed.

comment *3446*

comment by: *SNEH Organisation representing all french commercial helicopters operators*

Wording modification proposal :

(c) In addition to complying with OPS.GEN.420(e) and OPS.GEN.420 (f), helicopters shall be equipped with emergency exit illumination markings visible in daylight or in the dark when operating on a flight over water.

Rationale :

This requirement raises the following questations :

- does it refer to the illumination of th exterior of the emergency exit (JAR.29.812 (b) or to the illumination of the internal exit signs ?

This question was raised by ENAC in 2004 and the answer of the JAA HSST was as follows :

Extract from the JAA HSST 2004-02 meeting minutes :

"3.JAR OPS 3.830 (a) (4) emergency exit illumination : ENAC requested clarification if this JAR OPS 3 requirement refers to the illumination of the external area in front of the emergency exit (JAR 29.811 (a)). After comparing all rule and airworthiness material the following was concluded :

-jAR OPS 3.830 (a) (4) refers to the internal lighting, however;

- JAR 29.812 (d) gives the requirement for CAT.B certified JAR 29 helicopters

- JAR 29.812 (a) gives the requirement for CAT.A certified JAR 29 helicopters

- The airworthiness requirements in JAR 29 helicoptres, contains sufficient rule materiel for 3.830 (a) (4)

- JAR 27 does not contain airworthiness requirements for internal emergency exit lighting should there be a requirement FOR JAR 27. If not, deletion of

3.830 (a) (4) is appropriate"

Advantages of the wordin modification proposal :

-clarifies that the requirement refers to the (internal) marking and not to the external part of the emergency exit

- ensure consistency with the wordin ("remain visible and daylight or in the dark") used in OPS.CAT.427.H (d)

- ensure consistency with CS 27.807 (b) (3) (marked so as to be operated even in darkness)

- specifies the function to be achieved (visibility in darkness) instead of the means to ensure the function (illumination)

Regarding to the fact that non complex motor powered helicopters have small passenger cabins volumes, we don't think that the emergency exit illumination is necessary. We propose to request this equipment for complex motor powered helicopter only.

comment *3713* comment by: *Civil Aviation Authority of Norway*

Proposed Text

(if applicable):

AMC OPS.370.H Flight Hours Reporting - Helicopters

(a) The requirement of OPS.CAT.370.H may be achieved by making available either:

(1) the flight hours flown by each helicopter, identified by its serial number and registration mark, during the elapsed calendar year; or

(2) the total flight hours of each helicopter, identified by its serial number and registration mark, on the 31st of December of the elapsed calendar year.

(b) Where possible, the operator should have available, for each helicopter, the breakdown of hours for CAT, commercial and non-commercial flying. If the exact hours for the functional activity cannot be established, the estimated proportion will be sufficient.

Justification:

Reformatting of requirement required.

Proposed Text

(if applicable):

(b) Helicopters certificated for operating on water, when so doing, shall, in addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f), be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring, or manoeuvring the aircraft on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals prescribed in the International Regulations for the prevention of collisions at sea; and

~~*(c) In addition to complying with OPS.GEN.420(e) and OPS.GEN.420(f), helicopters shall be equipped with*~~

(3) *emergency exit illumination ~~when operated on a flight over water~~:*

(i) *in Performance Class 1 or 2, at a distance corresponding to more than 10 minutes flying time at normal cruising speed; or*

(ii) *in Performance Class 3, at a distance corresponding to more than 3 minutes flying time at normal cruising speed.*

comment *4318* comment by: *Civil Aviation Authority of Norway*

Comment:

Specific Norwegian requirements for surveillance and alarm equipment.

Justification:

Safety enhancing equipment

Proposed Text

(if applicable):

Helicopters operating offshore should must be equipped with a surveillance and alarm system approved by the NCAA.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.424.A Ditching - Aeroplanes p. 76

comment *683* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.424.A: NIL

There has been a change from EU OPS, but it is accepted.

comment *3068* comment by: *AEA*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *3370* comment by: *UK CAA*

Page No: 76

Paragraph No: OPS.CAT.424.A

Comment:

This is a certification requirement and not an equipment requirement. It should be deleted.

Justification:

Inappropriate equipment regulation.

Proposed Text (if applicable):

Delete OPS.CAT.424.A

~~**OPS.CAT.424.A Ditching - Aeroplanes**~~

~~Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.~~

comment *3652* comment by: *AUSTRIAN Airlines*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the

EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *4305* comment by: *KLM*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *4527* comment by: *TAP Portugal*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *4912* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *5184* comment by: *Virgin Atlantic Airways*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness***

code'

comment *5485* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *5889* comment by: *ERA*

European Regions Airline Association Comment

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

The above proposed wording is different from EU-OPS and could create the illusion that ditching can be safely executed. Therefore, the existing paragraph should be replaced with the following less confusing EU-OPS paragraph:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall comply with the ditching requirements prescribed in the applicable airworthiness code when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

comment *5935* comment by: *DGAC*

Proposal: **Replace** with wording from EU-OPS 1.060

comment *6286* comment by: *Lufthansa CityLine GmbH*

The proposed wording is different from EU-OPS and could create the illusion that ditching can be safely executed. Therefore, the existing paragraph should be replaced with the following less confusing EU-OPS paragraph:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall comply with the ditching requirements prescribed in the applicable airworthiness code when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

comment *6825* comment by: *Icelandair*

Relevant Text:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

Comment:

There should not be specific requirements for certifying aircraft for ditching. Ditching requirements are part of the aircraft certification requirements without a need for a specific approval. We therefore suggest to stick to the EU-OPS wording (OPS 1.060). which states '***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

Proposal:

Stick to EU-OPS 1.060 to add ***unless the aeroplane complies with the ditching requirements prescribed in the applicable airworthiness code'***

comment *7088* comment by: *IACA International Air Carrier Association*

This requirement does not belong to Air Operations but to Certification Specifications.

comment *7285* comment by: *ANE (Air Nostrum) OPS QM*

Aeroplanes with a maximum passenger seating configuration of more than

30 shall be certificated for ditching when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400 nautical miles, whichever is the lesser.

The above proposed wording is different from EU-OPS and could create the illusion that ditching can be safely executed. Therefore, the existing paragraph should be replaced with the following less confusing EU-OPS paragraph:

Aeroplanes with a maximum passenger seating configuration of more than 30 shall comply with the ditching requirements prescribed in the applicable airworthiness code when flying over water at a distance, from land suitable for making an emergency landing, which is greater than 120 minutes at cruising speed, or 400

nautical miles, whichever is the lesser.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.426.H Crew survival suits - Helicopters p. 76

comment *7516* comment by: *Civil Aviation Authority of Norway*

OPS.CAT426.H Crew survival suits – Helicopters

(a) This section states that each member of the crew of a helicopter shall wear a survival suit when the sea temperature will be less than plus 10 ºC during the flight, or the estimated rescue time exceeds the estimated survival time;

Recommendation:

Increasing the sea temperature level from +10ºC to +15ºC.

A higher temperature requirement will harmonize design survival time through the sea water temperature range. An individual passenger on a flight over +15ºC sea water should not be less protected than an individual wearing an immersion suit at +2 ºC. A Class B suit system is verified to support 4 hours survival in calm water at 0 to +2 ºC. An individual not wearing an immersion suit need a sea water temperature of near +20 ºC to obtain an equal survival time.

This is also supported by the IMO in MSC/Circ. 1046 which shows that the survival time by 10ºC is 0.8h and by 20 ºC is 1.7h wearing un-insulated suit. EASA ETSO 2C-502 and 2C-503 requires Class B isolated suit which by 15 ºC has a survival time of 7h (EN ISO 15027-1:2002 Table A.1).

The consequences of cold shock, which can occur up to 20 ºC, is eliminated by wearing an immersion suit.

Recommendation:

Delete the text:" ..*or the estimated rescue time exceeds the estimated*

survival time".

Estimating survival time is explained in GM OPS.CAT.426.H Crew Survival Suits – Helicopters.

Delete GM OPS.CAT.426.H Crew Survival Suits – Helicopters.

EASA has issued European Technical Standard Orders for survival suit that satisfies the test requirements of paragraph 3.8 of EN ISO 15027-3:2002 as a class B suit system. The information given in GM OPS.CAT.426.H Crew Survival Suits – Helicopters is not relevant for Class B certified survival suits.

comment *7517* comment by: *Civil Aviation Authority of Norway*

OPS.CAT426.H Crew survival suits – Helicopters

(b) .. temperature will be less than plus 10 ºC.

Recommendation:

Increasing the temperature level from 10 ºC to 15 ºC.

Higher temperature requirement will increase survival time and give time to be rescued. This is also supported on MSC/Circ. 1046 which shows that the survival time by 10ºC is 0.8h and by 20 ºC is 1.7h wearing un-insulated suit. EASA ETSO 2C-502 and 2C-503 requires Class B isolated suit which by 15 ºC has a survival time of 7h (EN ISO 15027-1:2002 Table A.1). The risk of cold shock, which can occur up to 20 ºC, will be reduced by wearing an immersion suit.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.427.H Additional requirements for helicopters operating to or from helidecks located in a hostile sea area p. 76

comment *458* comment by: *EHOC*

Introduction to the rule

The word 'offshore' has been added to the original text without being defined; for retention of clarity, it would best be removed.

comment *7518* comment by: *Civil Aviation Authority of Norway*

OPS.CAT427.H Additional requirements for helicopters operating to or from helidecks located in a hostile sea area

(a) .. temperature will be less than plus 10 ºC.

Recommendation:

Increasing the temperature level from 10 ºC to 15 ºC.

Higher temperature requirement will increase survival time and give time to be rescued. This is also supported on MSC/Circ. 1046 which shows that the survival time by 10ºC is 0.8h and by 20 ºC is 1.7h wearing un-insulated suit. EASA ETSO 2C-502 and 2C-503 requires Class B isolated suit which by 15 ºC has a survival time of 7h (EN ISO 15027-1:2002 Table A.1)

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.430 Emergency Locator Transmitter (ELT) – Motor-powered aircraft p. 77

comment *943* comment by: *Aersud*

Comment

The regulation asks for the installation of a Automatic Deployable ELT (ELT(AD)), In that case the ELT requested by OPS.GEN.430 (c) is no more necessary. The article should be modified adding that one ELT, independently of the type, it's enough.

Proposal

Add: [omissis] shall be equipped with an Automatic Deployable Emergency Locator Transmitter (ELT(AD))*; in this case the automatic ELT requested in OPS.GEN.430 (c) is no more required.*

Note

Priority: **L**

comment *1631* comment by: *Luftfahrt-Bundesamt*

The ELT rule does not include the frequency requirement, asking for 121,5 and 406 MHz capability. This, however, is included in AMC OPS.GEN.430 No.2, which is not acceoptable.

Applicability date 1 July 2008 needs to be adjusted.

comment *1690* comment by: *Dassault Aviation*

Technical comment.

Page 77 OPS.CAT.430 §(a)(2) ELT motor-powered aircraft: paragraph (a)(1) requires 2 ELTs on aeroplanes first issued with an individual certificate of airworthiness after 04-jul-2008, whereas paragraph (a)(2) requires 1 ELT(A) or 2 ELT of any type *in other cases*. Our comment is replace the term "other cases" by "before and including 01-jul-2008", so as to improve the text in clarity, and to keep wording consistency with OPS.GEN.430.

comment *3600* comment by: *jim reeve*

i do not see any safety benefit in everyone corrying elt.false alarms and inadvertant activation already tie up precious emergency services,and this will increase by several orders of magnitude. em. servicies will ignore them unless backed by second opinion due to too many false alarms.this will actually reduce service for those that wisely carry elt for flight in inhospitable areas.there is always a farmer around for 99.99% of forced landings

comment *3944* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(b) OPS 3 allows the use of an equivalent system. The text should be either:

Notwithstanding OPS.GEN.430 (c), helicopters operated in performance Class 1 or 2 used in offshore operations on a flight over water, in a hostile environment and at a distance corresponding to more than 10 minutes flying time at normal cruising speed shall be equipped with an Automatically Deployable Emergency Locator Transmitter (ELT(AD)) or equivalent system.

Or : mandatory only for aircraft with the first airworthiness certificate delivered after 2012

comment *5890* comment by: *ERA*

European Regions Airline Association Comment

The requirement of carriage of a second ELT of any type, provided the first one is automatic has been in question since the introduction of the requirement in July 2008. There is a recognised need is to have one automatic ELT. The second one be it portable or fixed could be considered obsolete. EASA should review the need as this was a compromise not based on performance based requirements but based on an original flawed assumption that the original requirements that were changed in July 2008 would not be used as bargaining chips by ICAO member states to offset other equipment requirements. Therefore EASA need to consider the following:

- File an ICAO difference with the July 2008 requirement
- Change wording of (a)(1) to the following:

(1) one automatic ELT in the case of aeroplanes first issued with an individual Certificate of Airworthiness after 1 January 2002; or

comment *5941* comment by: *DGAC*

Proposal: At the end of (b) add: "or an equivalent means acceptable to the competent authority"

Justification: Already accepted in french version of JAR-OPS3

comment *6287* comment by: *Lufthansa CityLine GmbH*

The requirement of carriage of a second ELT of any type, provided the first one is automatic has been in question since the introduction of the requirement in July 2008. There is a recognised need is to have one automatic ELT. The second one be it portable or fixed could be considered obsolete. EASA should review the need as this was a compromise not based on performance based requirements but based on an original flawed assumption that the original requirements that were changed in July 2008 would not be used as bargaining chips by ICAO member states to offset other equipment requirements. Therefore EASA need to consider the following:

File an ICAO difference with the July 2008 requirement

Change wording of (a)(1) and (a)(2) to the following:

a) Notwithstanding OPS.GEN.430(a) and OPS.GEN.430(b), aeroplanes with a maximum passenger seating configuration of more than 19 shall be equipped with at least:

1) one automatic ELT in the case of aeroplanes first issued with an individual Certificate of Airworthiness after 1 January 2002; or

2) one automatic Emergency Locator Transmitter (ELT), or two ELTs of any type , in other cases.

2) one automatic Emergency Locator Transmitter (ELT), or two ELTs of any type , in other cases.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.432 Megaphones – Motor-powered aircraft p. 77

comment *367* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.432:

The term "sufficient number" is ambiguous: the exact number shall be defined in the rule.

comment *1633* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of major parts of the former megaphone

requirements into the AMC – material. We request to re-establish the requirements on the required number of megaphones which are currently in place in JAR-OPS 3 and EU-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1729* comment by: *claire.amos*

EU-OPS states the required number of megaphones dependant on seats fitted. This only states a sufficient number. What will be considered a sufficient number by each individual NAA? Clarity is required to ensure consistency across all European operators.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.440 High altitude flights – Oxygen requirements for motor powered aircraft p. 77-79

comment *80* comment by: *Air Southwest*

OPS.CAT.440 inconsistency. This paragraph (and others) use the word 'cockpit' to refer to the pilot station area. Other sections refer to the flight deck (OPS.GEN.485.A for instance). One dictionary definition of 'flight deck' is "the part at the front of an aircraft, larger than a cockpit, where the pilot and other crew sit." I suggest standardisation in CAT to 'flight deck.'

comment *878* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Regarding OPS.CAT.440 Table 1 (4):

Please clarify by using the following wording:

- 30% of passengers: "… when the cabin pressure altitude exceeds 14.000 ft, but does not exceed

15.000 ft"

Regarding OPS.CAT.440 Table 1 (5):

Please clarify by using the following wording:

- 10% of passengers: "…when the cabin pressure altitude exceeds 10.000 ft, but does not exceed

14.000 ft..."

comment *977* comment by: *REGA*

The originally JAR (JAR-OPS 3.385) rules for high altitude helicopter (e.g. hems) operations take into account the performance decline due to the increased weight of oxygen equipment (=less power available) at higher altitudes.

Experience did not show any incident or accident during HEMS operations in relation to oxygen supply. Many ski, hiking and climbing areas within the Alps are situated above 10'000 ft. To be able to continue HEMS operations - guarantee rescue service - in the mountains, duration of maximum 30 minutes between 10'000 ft and 13'000 ft without supplemental oxygen shall be allowed.

Proposal (a) (1) (ii) (12)

Use of supplemental oxygen. With prior approval of the authority, HEMS operations between 10 000 ft and 13 000 ft for a duration of maximum 30 minutes may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the HEMS operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided).

comment *1849* comment by: *Airbus SAS*

The following comment on OPS.CAT.440 focuses on inconsistencies with the requirement GM1 OPS.CAT.440. It is also introduce there as comment no.1848 :

The allocation of GM sentences to OPS.CAT.440 Table 1 seem to be incorrect, or table 1 points may at least be insufficiently clarified:

- With reference to Table 1 point 5., GM sentence 1 specifies a quantity of necessary oxygen for a period of 10 min descent from max certified operating altitude to 10000 ft, followed by 20 min at 10000ft.

- OPS.CAT.440 table 1 point 5 specifies oxygen required for 10 % of the passengers for the remainder of the flight between 10000 and 14000 ft , after the initial 30 min at these altitudes.

=> There is a need to better clarify the time/altitude relations.

- With reference to Table 1 point 4., GM sentence 4 specifies the minimum necessary quantity of oxygen for a constant rate of descent from max certified operating altitude to 15000 ft in 10 minutes.

- OPS.CAT.440 table 1 point 4 requires minimum oxygen supply for 30 % of passenger for the entire flight between 14000 and 15000 ft.

=> Also for these details of regulation and GM, the relation is difficult to understand.

==> Airbus proposes to re-investigate OPS.CAT.440 and related GM1 for consistency and clarity of wording.

comment *2271* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

High altitude flights – Oxygen requirements for motor powered aircraft

Comment / Proposal:

Modify text:

Insert the following possibility into table 2:

With prior approval of the authority, excursions between 10 000 ft and 16 000 ft for a short duration may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided.)

comment

2389 comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

There is an Untidiness and lack of clarity in the wording and tables in this IR. These need to be clarified and corrected.

e.g The wording is not clear where the 14000 ft belongs to, whereas **Appendix 1 to EU-OPS 1.770:**

4. 30% of passengers (note 5) Entire flight time when the cabin pressure altitude exceeds 14000 ft but does not exceed 15000 ft

5. 10% of passengers (note 5). Entire flight time when the cabin pressure altitude exceeds 10000 ft but does not exceed 14000 ft after the first 30 minutes at these altitudes.

Proposal:

The EU-OPS [Appendix 1 to EU-OPS 1.770] wording is clearer and the EASA wording should be changed to this to provide clarity.

comment

2510 comment by: *Royal Aeronautical Society*

The reason for having oxygen supplied in the manner described is to *supplement* oxygen that is naturally available, and is distinct from oxygen that may be required for *emergency* or *therapeutic* reasons. It is suggested that the heading be amended to read, **'High altitude flights – Supplemental oxygen requirements for motor-powered aircraft'**.' so that this distinction is clear. See also and contrast with OPS.CAT.447 A 'First aid oxygen – Aeroplanes', and GM CAT.447 A General, paragraph 2 where this description is used: 'supplemental oxygen as calculated in accordance with Table 1 OPS.CAT 440 and Table 2 OPS CAT 440 … etc'.

For the same reason, it is suggested that the headings to both Tables on pages 78 and 79 should also be amended to read, **'Supplemental oxygen**

minimum requirements …etc'.

comment *3003* comment by: *AOPA Switzerland*

Again, all flights consisting of parachute operation shall be exempted from OPS.CAT.440

comment *3070* comment by: *AEA*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to AEA.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *3371* comment by: *UK CAA*

Page: 78/79

Paragraph No:

OPS.CAT.440 Tables 1 & 2

Comment:

The notes to Tables 1 & 2 of the Regulation are an integral part of the methodology in calculating the oxygen requirements from the OPS.CAT.440 Tables 1 & 2. It is inappropriate to relegate them to the status of GM.

In addition the notes provided by GM1 OPS.CAT.440 are incorrect.

The corrected text in GM1 OPS.CAT.440 should be included as notes to Tables 1 & 2 OPS.CAT.440 and GM1 OPS.CAT.440 deleted.

Justification:

Insufficient information provided in the Rule.

Proposed Text (if applicable):

Oxygen – Minimum Requirements for Supplemental Oxygen for Pressurised Aeroplanes During and Following Emergency Descent

Table 1 OPS.CAT.440 Oxygen minimum requirements for pressurised aeroplanes

Supply for:	Duration and cabin pressure altitude

1. Occupants of cockpit seats on cockpit duty	(a) The entire flight time when the cabin pressure altitude exceeds 13 000 ft (b) The remainder of the flight time when the cabin pressure altitude is between 10 000 ft and 13 000 ft, after the initial 30 minutes at these altitudes, but in no case less than: (i) 30 minutes supply for aeroplanes certificated to fly at altitudes below 25 000 ft ***(Note 1)***; and (ii) 2 hours supply for aeroplanes certificated to fly at altitudes more than 25 000 ft ***(Note 2)***.
2. Required cabin crew members	(a) The entire flight time when cabin pressure altitude is above 13 000 ft but not less than 30 minutes. ***(Note 1)***, (b) The remainder of the flight time when the cabin pressure altitude is between 10 000 ft and 13 000 ft, after the initial 30 minutes at these altitudes.
3. 100% of passengers (Note 4)	The entire flight time when the cabin pressure altitude exceeds 15 000 ft but in no case less then 10 minutes supply. ***(Note 3)***.
4. 30% of passengers (Note 4)	The entire flight time when the cabin pressure altitude is between 14 000 ft and 15 000 ft.
5. 10% of passengers (Note 4).	The remainder of the flight time when the cabin pressure altitude is between 10 000 ft and 13 000 ft, after the initial 30 minutes at these altitudes

Note 1: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10 000 ft in 10 minutes and followed by 20 minutes at 10 000 ft.

Note 2: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10 000 ft in 10 minutes and followed by 110 minutes at 10 000 ft.

Note 3: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 15 000 ft in 10 minutes.

Note 4: For the purpose of this table "passengers" means passengers actually carried and includes infants.

Table 2 OPS.CAT.440 Oxygen minimum requirements for non-pressurised aeroplanes

Add at bottom of table:

For the purpose of this table "passengers" means passengers actually carried and includes infants.

Delete: GM1 OPS.CAT.440 in total

comment *3653* comment by: *AUSTRIAN Airlines*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to AUSTRIAN.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *3947* comment by: *SNEH Organisation representing all french commercial helicopters operators*

There was alleviation in JAR OPS 3.005 (e) allowing the incursion between 13 000 ft and 16 000 ft for short period without oxygen. We propose to keep this alleviation.

comment *4306* comment by: *KLM*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to KLM.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *4530* comment by: *TAP Portugal*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between

10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to AEA.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *4730* comment by: *British Airways Flight Operations*

Comment:

The wording is different from that in EU-OPS 1.770, in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than 'between 10000 feet and 13000 feet'). The change, which could have a significant impact on flight operations, is therefore unacceptable.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4914* comment by: *Deutsche Lufthansa AG*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example "exceeds 10000 feet but does not exceed 13000 feet" (EU-OPS) is less restrictive than "between 10000 feet and 13000 feet"). This change which would have huge impact on flight operations and is therefore not acceptable to Lufthansa.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording, especially not in determining the value ranges in the tables

comment *5188* comment by: *DGAC*

a)(2) and table 2 OPS.CAT.440 :

Proposal : Reintroduce alleviation provided by (f) of Appendix 1 to JAR OPS 3.005(e) allowing the incursion between 10000 ft and 13000 ft for short period without oxygen, by amending first line of table 2 as follows:

Table 2 OPS.CAT.440 - Oxygen minimum requirements for non-pressurised aircraft

	Supply for:	Duration and cabin pressure altitude
1.	Occupants of cockpit seats on cockpit duty and crew members assisting flight crew in their duties	The entire flight time at pressure altitudes above ~~10 000 ft~~ **13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.**

comment *5486* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to AEA.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *5746* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

ALL AIRCRAFT

(a) Notwithstanding OPS.GEN.440(a), crew members and passengers in:

(1) Pressurised aeroplanes shall be supplied with oxygen in accordance with Table 1 OPS.CAT.440.

(2) Non-pressurised aircraft shall be supplied with oxygen in accordance with Table 2 OPS.CAT.440.

Comment:

(1) states airplanes and this section is "all aircraft".

Proposal (including ***new text***):

ALL AIRCRAFT

(a) Notwithstanding OPS.GEN.440(a), crew members and passengers in:

(1) Pressurised ~~aeroplanes~~ ***aircraft*** shall be supplied with oxygen in accordance with Table 1 OPS.CAT.440.

(2) Non-pressurised aircraft shall be supplied with oxygen in accordance with Table 2 OPS.CAT.440.

comment *6826* comment by: *Icelandair*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet). This change which would have huge impact on flight operations is therefore not acceptable to AEA.

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *7090* comment by: *IACA International Air Carrier Association*

Table 1

Squalidness within the table shall be corrected. The EASA wording is not clear where the 14 000 ft belongs to, whereas ***Appendix 1 to EU-OPS 1.770*** *:*

4. 30 % of passengers (Note 5) Entire flight time when the cabin pressure altitude exceeds 14 000 ft but does not exceed 15 000 ft

5. 10 % of passengers (Note 5). Entire flight time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 14 000 ft after the first 30 minutes at these altitudes

Hence; 14 000 ft is included in 5.

comment *7260* comment by: *AIR FRANCE*

Comment:

The wording is different from the EU-OPS 1.770 wording in particular in relation to the **cabin pressure altitudes** (for example 'exceeds 10000 feet but does not exceed 13000 feet' (EU-OPS) is less restrictive than between 10000 feet and 13000 feet).

Proposal:

Realign with EU-OPS 1.770 with no changes in wording

comment *7419* comment by: *Axel Schwarz*

The requirements should be the same for all operations. OPS.GEN.440 should therefore be sufficient.

Furthermore, Table 1 is not in compliance with ICAO Annex 6 Part I (14000ft and 15000ft - requirements for passengers).

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.442.A Crew protective breathing equipment - Aeroplanes p. 79

comment *1691* comment by: *Dassault Aviation*

Technical comment.

Page 79 OPS.CAT.442.A §(b) Protective Breathing Equipment aeroplanes: §(b) requires an additional portable PBE to be located near the hand fire extinguishers required in OPS.CAT.405 (b) and (c). Although the additional portable PBE associated to the hand fire extinguisher required by OPS.CAT.405(c) - near cargo/baggage compartment - may be useful on "large" aeroplanes, it is useless on aeroplanes with "small" cabin where the flight crew can instead use the portable PBE associated to the hand fire extinguisher required by OPS.CAT.405(b) - near each galley - to fight a fire in the cargo/baggage compartment. We propose to reword §(b) of OPS.CAT.442.A as follows: "*In addition, the aeroplanes in (a) shall be equipped with an additional portable PBE located near the hand fire extinguishers required in OPS.CAT.405 (b) and (c)****, except that aeroplanes with a MPSC < 20 and MTOM < 45,360 kg need not to comply with the additional portable PBE located near the hand fire extinguisher required in OPS.CAT.405(c)***".

comment *2391* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

EU-OPS 1.780 Crew protective breathing equipment

(a)2. States: it has sufficient portable PBE to protect the eyes, nose and mouth of all required cabin crew members and to provide breathing gas for a period of not less than 15 minutes.

Proposal:

OPS.CAT.442.A (a)(2) Replace "oxygen" by "breathable air".

comment *6890* comment by: *Flybe*

This requirement is for PBE to be provided for all flight crew members at their assigned duty station and is an addition to the existing requirement for at least one PBE to be provided to flight crew.

Flight crew are already provided with personal oxygen supplies and smoke goggles. It is suggested that provided that each flight crew member has access to a dedicated oxygen supply and smoke protection for the eyes, then the requirement for a separate PBE should be limited to at least one PBE for

the flight crew.

"Note to (1)

Provided that each flight crew member has access to a dedicated oxygen supply and smoke protection for the eyes, either as a separate or combined mask, the number of required PBE can be changed to at least one"

comment *7094* comment by: *IACA International Air Carrier Association*

(a)(2)

Provide "oxygen" or provide "breathing gas" ?

EU-OPS 1.780 Crew protective breathing equipment

(a)2. it has sufficient portable PBE to protect the eyes, nose and mouth of all required cabin crew members and to provide breathing gas for a period of not less than 15 minutes.

Replace "oxygen" by "breathable air".

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.447.A First aid oxygen - Aeroplanes p. 79

comment *1634* comment by: *Luftfahrt-Bundesamt*

LBA cannot agree to the move of major parts of the former requirements into the AMC – material. We request to re-establish the first aid oxygen requirements currently in place in JAR-OPS 3 and EU-OP in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.457.A Emergency medical kit – Aeroplanes p. 79-80

comment *81* comment by: *Air Southwest*

OPS.CAT.457.A (b) states that the PIC shall ensure that drugs are only administered by qualified personnel, but does not define 'qualified personnel.' EU-OPS 1.755 states that drugs are only to be administered by doctors, nurses or similarly qualified personnel. Notwithstanding AMC OPS.CAT.457.A(b) I suggest this paragraph is replaced with the verbatim wording of EU-OPS 1.755(b).

comment *560* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.457.A(c)(3): change as follows:

(c) The emergency medical kit shall be:

(1) dust and moisture proof;

(2) carried under security conditions; and

(3) maintained **and replenished at regular intervals**.

Justification:

Compliance with EU-OPS 1.755

comment *2395* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

"Personnel" implies an employment relationship; doctors and nurses on-board are passengers and not employed by the operator.

Proposal:

Change the wording to"…by qualified individuals."

comment *2511* comment by: *Royal Aeronautical Society*

Paragraph (c) (2) contains the word 'security'. **In this context, the noun 'security' should be replaced by the adjective 'secure'.**

comment *3073* comment by: *AEA*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *3083* comment by: *M Wilson-NetJets*

Original text:

AMC OPS.CAT.457.A(c)(2) Emergency medical kit – Aeroplanes

CARRYING UNDER SECURITY CONDITIONS

Where applicable the emergency medical kit should be carried on the flight deck.

Suggested new text:

AMC OPS.CAT.457.A(c)(2) Emergency medical kit – Aeroplanes

CARRYING UNDER SECURITY CONDITIONS

Where **possible** the emergency medical kit should be carried on the flight deck.

Comment / suggestion:

Business aeroplanes have small flight decks that often do not allow stowage of an EMK.

comment *3085* comment by: *M Wilson-NetJets*

Original text:

(c) The emergency medical kit shall be: (1) dust and moisture proof; (2) carried under security conditions;

Suggested new text:

(c) The emergency medical kit shall be: (1) dust and moisture proof; (2) carried under **such conditions that prevents unauthorized access by passengers without the crew's knowledge.**

Comment / suggestion:

The part "security conditions" is open to interpretation.

comment *3654* comment by: *AUSTRIAN Airlines*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *4307* comment by: *KLM*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *4533* comment by: *TAP Portugal*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to

date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *4915* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *5190* comment by: *Virgin Atlantic Airways*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) 'security' is wrong and should read 'secure'

The wording of (3) 'maintained' is unclear and should read 'be kept up to date'

Proposal:

The wording of (2) and (3) should read

(2) 'secure'

(3) 'be kept up to date'

comment *5488* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *6828* comment by: *Icelandair*

Relevant Text:

(c) The emergency medical kit shall be:

(1) Dust and moisture proof

(2) Carried under security conditions and

(3) Maintained

Comment:

The wording of (2) is wrong and should read 'secured' (editorial)

The wording of (3) maintained is unclear and should read 'be kept up to date'

Proposal:

Editorial comment The wording of (2) and (3) should read

(2) 'secured'

(3) 'be kept up to date'

comment *7100* comment by: *IACA International Air Carrier Association*

(b)

"Personnel" implies an employment relationship; doctors and nurses on-board are passengers and not employed by the operator. Better is to write "…by qualified individuals."

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.462.A Altitude alerting system – Aeroplanes p. 80

comment *777* comment by: *ECA - European Cockpit Association*

Comment on the following text:

"…an altitude alerting system capable of alerting the flight crew when approaching…"

"…the warning shall be made by an aural signal"

The Airbus family presently does not comply with this requirement, as there is not an aural signal alerting of the approach to the cleared altitude under normal operation with AutoPilot on.

comment *3375* comment by: *UK CAA*

Page No: 80

Paragraph No: OPS.CAT.462.A

Comment:

The condition specified in sub-paragraph (b) applies to all of sub-paragraph (a) and not just (a)(3).

Justification:

Incorrect condition applied to Regulation.

Proposed Text (if applicable):

OPS.CAT.462.A Altitude alerting system – Aeroplanes

The following aeroplanes shall be equipped with an altitude alerting system capable of alerting the flight crew when approaching, or deviating from, a pre-selected altitude:

turbine-powered aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg; or

aeroplanes with a maximum passenger seating configuration of more than 9; or

aeroplanes powered by turbo-jet engines.

(b) ~~In the case of (a)(3),~~ The warning shall be made by *at least* an aural signal.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.482 Seat belts and harnesses for the observer seat in the cockpit p. 80

comment *460* comment by: *EHOC*

General

The provision of this requirement is understood and supported. However, it must be pointed out that some legacy helicopters do not provide such harnesses; this will inevitably hinder the move towards LOFT.

comment *3205* comment by: *Austro Control GmbH*

Any observer seat in the cockpit of aircraft, except balloons, shall be equipped with a safety belt with shoulder harness ***or diagonal belt*** *incorporating a device which will automatically restrain the occupant's upper torso in the event of rapid deceleration.*

Justification:

The exemptions and derogations accordig to Art. 8 (2) and (3) show that there is an urgent practical need for this change!

comment *3576* comment by: *Walter Gessky*

OPS.CAT.482 Seat belts and harnesses for the observer seat in the cockpit

Any observer seat in the cockpit of aircraft, except balloons, shall be equipped with a safety belt with shoulder harness **or when adequately justified with a diagonal belt** incorporating a device which will automatically restrain the occupant's upper torso in the event of rapid deceleration.

Justification:

Several exemptions and derogations are filed according Art 8(2) and (3). There is a need for this change. A shoulder harness will provide on certain installation an adequately level of safety equal to a shoulder harness.

comment *5747* comment by: *Swedish Transport Agency, Civil Aviation Department*

(Transportstyrelsen, Luftfartsavdelningen)

Comment:

There is a problem with some aeroplane types which have a safety belt but no shoulder harness for the observer seat in the cockpit. Until EASA has completed a rule-making task for this subject the requirements for shoulder harness should be in line with the ICAO Annex 6, Part I standard that only requires shoulder harness for cabin crew jump seats in the cabin compartment. (Ref. OPS.CAT.406.A)

Proposal (including ***new text***):

Any observer seat in the cockpit of aircraft, except balloons, shall be equipped with a safety belt. ~~with shoulder harness incorporating a device which will automatically restrain the occupant's upper torso in the event of rapid deceleration~~

comment *6884* comment by: *Flybe*

This section does not include a definition of the required shoulder harness. Some aircraft (Dash 8 series) are equipped with a 3 point hrness on the jump seat for crew members and this is approved within the aircraft certification.

An additional definition of the type of harness should be include.

"Safety belts with shoulder harnesses shall have a single point release. The harness shall be a four point harness for operatring crew; however, flight deck jump seats may be equipped with a three point diagonal shoulder strap"

comment *7657* comment by: *Asociación Española de Pilotos de Aerostación (AEPA)*

OPS. CAT 482: Although the procedure is accurate typing CAT is not adequate. It would be better GEN

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.490 Flight data recorder – Motor powered aircraft p. 80-81

comment *1635* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1676* comment by: *Dassault Aviation*

Editorial comment.

Page 80 OPS.CAT.490 (FDR) §(a): requirement (a)(1) shall be dissociated from (a)(2), therefore, the word "and" at the end of (a)(1) shall be replaced by "or".

comment *3008* comment by: *AOPA Switzerland*

For aeroplane: Flight data recorder equipment shall only be mandatory in those aircraft mentioned in OPS.GEN.495 "Cockpit voice recorder", as flight data recorder are not in direct relation with flight safety.

However, should no FDR available on the market (especially for older aircraft) the national authority may allow exeptions.

comment *3377* comment by: *UK CAA*

Page No: 81

Paragraph No:

OPS.CAT.490(d)(3)

Comment:

The requirement for data to be recorded by OPS.CAT.490(d)(3) relates to an OPS.GEN.490 requirement and should be deleted from this requirement.

Justification:

Misplaced recording requirement.

Proposed Text (if applicable):

HELICOPTERS

(c) Notwithstanding OPS.GEN.490(c):

(1) helicopters with a maximum certificated take-off mass exceeding 3 175 kg and first issued with an individual Certificate of Airworthiness after 31 July 1999; and

(2) helicopters having a maximum certificated take-off mass exceeding 7 000 kg, or a maximum certificated seating configuration of more than 9, and first issued with an individual Certificate of Airworthiness between 1 January 1989 and 31 July 1999, inclusive, shall be equipped with a flight data recorder that uses a digital method of recording and storing data and a method of retrieving that data from the storage medium available.

(d) Notwithstanding OPS.GEN.490(d), the flight data recorder shall be capable of retaining the data recorded during at least:

(1) the last 8 hours, for helicopters referred to in (c)(1); or

(2) the last 5 hours, for helicopters referred to in (c)(2); ~~or~~

~~the last 10 hours for helicopter with a maximum certificated take-off mass exceeding 3 175 kg, and first issued with an individual certificate of airworthiness after 31 December 2009.~~

comment *3708* comment by: *Civil Aviation Authority of Norway*

Comment:

The requirement for data to be recorded by OPS.CAT.490(d)(3) relates to an OPS.GEN.490 requirement and should be deleted from this requirement.

Justification:

Misplaced recording requirement.

Proposed Text

(if applicable):

HELICOPTERS

(c) Notwithstanding OPS.GEN.490(c):

(1) helicopters with a maximum certificated take-off mass exceeding 3 175 kg and first issued with an individual Certificate of Airworthiness after 31 July 1999; and

(2) helicopters having a maximum certificated take-off mass exceeding 7 000 kg, or a maximum certificated seating configuration of more than 9, and first issued with an individual Certificate of Airworthiness between 1 January 1989 and 31 July 1999, inclusive, shall be equipped with a flight data recorder that uses a digital method of recording and storing data and a method of retrieving that data from the storage medium available.

(d) Notwithstanding OPS.GEN.490(d), the flight data recorder shall be capable of retaining the data recorded during at least:

(1) the last 8 hours, for helicopters referred to in (c)(1); or

(2) the last 5 hours, for helicopters referred to in (c)(2); ~~or~~

~~(3) the last 10 hours for helicopter with a maximum certificated take-off mass exceeding 3 175 kg, and first issued with an individual certificate of airworthiness after 31 December 2009.~~

comment *4906* comment by: *BEA*

OPS.CAT.490 (a)

The wording « FDR which uses a digital method of recording and storing data and has a method of retrieving that data from the storage medium available" is not precise enough:

- Does digital storing of the data implies that a non magnetic FDR is referred to ? ICAO is planning to issue shortly a new version of Annex 6 which deals with discontinuing the use of magnetic tape FDR after 2016, but until this date some airplanes will still be using magnetic tape FDR.
- The FDR does not usually contain a method to fully retrieve data from its storage medium, some additional information is needed, in particular the parameters frame layout.

comment *5983* ☐ comment by: *DGAC*

Proposal:

For GEN: apply dates and weights according to ICAO Annex 6 (2nd part for aeroplanes and 3rd part for helicopters)

For CAT: apply dates and weights from EU-OPS / JAR-OPS3

Justification:

Avoid costly retrofit.

comment *7063* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

Embraer believes that there is an editorial error in paragraph (a)(2) that where it should say ". . .multi-engine turbine powered aeroplanes with a maximum certificated take-off mass of 5 700 kg or less, ***and*** with a maximum passenger seating configuration of more than 9, and first issued with an individual Certificate of Airworthiness after 31 March 1998, . . ." As written this is a change to the existing requirements of EU OPS which should be addressed in the Regulatory Impact Assessment unless the requirement is changed to match the existing EU OPS.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.495 Cockpit voice recorder – Motor-powered aircraft p. 81

comment *1636* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *3009* comment by: *AOPA Switzerland*

Cockpit voice recorder equipment shall only be mandatory in those aircraft mentioned in OPS.GEN.495 "Cockpit voice recorder", as cockpit voice recorders are not in direct relation with flight safety.

comment *4908* comment by: *BEA*

OPS.CAT.495 (b)

The duration of CVR is not covered in the paragraph for aeroplanes with a maximum certificated take-off mass exceeding 5700 kg and issued before march 1998. It is suggested to include them in the (b) (2).

comment *5983* ☐ comment by: *DGAC*

Proposal:

For GEN: apply dates and weights according to ICAO Annex 6 (2nd part for aeroplanes and 3rd part for helicopters)

For CAT: apply dates and weights from EU-OPS / JAR-OPS3

Justification:

Avoid costly retrofit.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.515.A Microphones - Aeroplanes p. 81-82

comment *82* comment by: *Air Southwest*

OPS.CAT.515.A (a) states "...shall wear the headset with boom....." I suggest this should read "...shall wear a headset with boom....."

comment *115* comment by: *tbone aviation a/s*

Propose new wording for section (a):

Each flight crew member required to be on duty shall wear the headset with boom, throat or equivalent microphone and use it as the primary device to listen to the voice communication with Air Traffic Services:

This new proposed wording include the "equivalent" phrase to allow the use of other and newer technologies compared to the boom microphone.

comment *1835* comment by: *claire.amos*

easyJet compliant under OM-A 8.3.20.2

comment *3011* comment by: *AOPA Switzerland*

Airplane certified with an overhead loudspeaker system shall not be required to use headsets.

comment *3382* comment by: *UK CAA*

Page No: 81/82

Paragraph No: OPS.CAT.515.A

Comment:

The regulation is not clear due to incorrect formatting. Sub-paragraph (2) contains a heading plus a condition. Sub-paragraph (3) is a condition of sub-paragraph (2).

Justification:

Incorrect formatting.

Proposed Text (if applicable):

OPS.CAT.515.A Microphones - Aeroplanes

(a) Each flight crew member required to be on duty shall wear the headset with boom or throat microphones and use it as the primary device to listen to the voice communications with Air Traffic Services:

(1) on the ground:

(i) when receiving the ATC departure clearance via voice communication; and

(ii) when engines are running;

~~(2) in flight below transition altitude or 10000ft, which ever is higher; and~~

~~(3) whenever deemed necessary by the pilot-in-command.~~

(2) in flight:

(i) below transition altitude or 10000ft, which ever is higher; and

(ii) whenever deemed necessary by the pilot-in-command.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.516 Crew member interphone system – Motor-powered aircraft p. 82

comment *1677* comment by: *Dassault Aviation*

Editorial comment.

Page 82 : OPS.CAT.516 §(b): word "already" is missing to read "… with an individual Certificate of Airworthiness before 1 April 1965 and *already* register in a Member State on 1 April 1995 …".

comment *1692* comment by: *Dassault Aviation*

Technical comment.

Page 82 OPS.CAT.516 Crew Member interphone system: Although this proposed text is compliant with JAR/EU-OPS1.690, it is Dassault proposal to exclude aeroplanes with a MPSC less than 20 and with a MTOM less than 45,360 kg from a crew member interphone system. The rationale is that for that category of airplanes, the cabin is small enough to orally communicate without the need of an assisted device.

comment *3089* comment by: *M Wilson-NetJets*

Original text:

OPS.CAT.516 Crew member interphone system – Motor-powered aircraft AEROPLANES

(a) Aeroplanes with a maximum certificated take-off mass exceeding 15 000 kg, or with a maximum passenger seating configuration of more than 19 shall be equipped with a crew member interphone system.
(b) Notwithstanding (a), those aeroplanes first issued with an individual Certificate of Airworthiness before 1 April 1965 and registered in a Member State on 1 April 1995 are not required to be equipped with a crew member interphone system.

Suggested new text:

OPS.CAT.516 Crew member interphone system – Motor-powered aircraft AEROPLANES

(a) Aeroplanes with a maximum certificated take-off mass exceeding 15 000 kg, **and** with a maximum passenger seating configuration of more than 19 shall be equipped with a crew member interphone system.
(b) Notwithstanding (a), those aeroplanes first issued with an individual Certificate of Airworthiness before 1 April 1965 and registered in a Member State on 1 April 1995 are not required to be equipped with a crew member interphone system.

Comment/suggestion:

The communication in small cabin (MPSC of 19 or less) is more easily accomplished by directly talking between crewmembers or passengers.

Therefore this clause should be only applicable to aeroplane types with a MPSC of 20 or more.

comment *3403* comment by: *UK CAA*

Page No: 82

Paragraph No: OPS.CAT.516

Comment:

Although this reflects the requirement in EU-OPS, the UK CAA has consistently argued that this is not a reasonable requirement.

The Rule assumes that aeroplanes with a maximum certificated take-off mass exceeding 15,000 kg will carry a cabin crew member. Where the maximum passenger seating configuration is less than 19, a cabin crew member is not required. Therefore, the Regulation should not require an interphone to be fitted where cabin crew are not required.

Justification:

Inappropriate Regulation.

Proposed Text (if applicable):

AEROPLANES

(a) Aeroplanes with a maximum certificated take-off mass exceeding 15 000 kg, ~~or~~ ***and*** with a maximum passenger seating configuration of more than 19 shall be equipped with a crew member interphone system.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.517 Public address system – Motor-powered aircraft p. 82

comment *461* comment by: *EHOC*

Paragraph (a)

Perhaps a better construct might be:

(a) Except as provided in (b) below, the following aircraft shall..."

This could distinguish between a construct that overrules a rule in GEN (using 'notwithstanding'), and a local variation (using 'except as...').

comment *3383* comment by: *UK CAA*

Page No: 82

Paragraph No: OPS.CAT.517

Comment:

The paragraph construction is confusing by having two separate conditions for Helicopters. Separating the two aircraft types will provide clarity. In addition, the requirement is confusing by stating an upper limit (less than 19 passengers) without including a lower limit (9 Passengers)

Justification:

Clarity

Proposed Text (if applicable):

OPS.CAT.517 Public address system – Motor-powered aircraft

~~AEROPLANES AND HELICOPTERS~~

~~(a)~~ ***The following aircraft shall be equipped with a public address system:***

AEROPLANES

~~(1) aeroplanes~~ ***(a)*** With a maximum passenger seating configuration of more than 19; ~~and (2) helicopters with a maximum passenger seating configuration of more than 9.~~

HELICOPTERS

(b) ~~Notwithstanding (a),~~ ***With a maximum passenger seating configuration of more than 9.***

(c) The public address system may not be required for helicopters with a maximum passenger seating configuration ***of more than 9 but*** less than 19 if:

(1) the helicopter is designed without a bulkhead between the cockpit and passenger compartment; and

the operator can demonstrate to the competent authority that, in flight the pilot's voice is audible at all passengers seats.

comment *3794* comment by: *Civil Aviation Authority of Norway*

Comment:

The paragraph construction is confusing by having two separate conditions for Helicopters. Separating the two aircraft types will provide clarity. In addition, the requirement is confusing by stating an upper limit (less than19 passengers) without including a lower limit (9 Passengers)

Justification:

Clarity

Proposed Text

(if applicable):

OPS.CAT.517 Public address system – Motor-powered aircraft

~~AEROPLANES AND HELICOPTERS~~

~~(a)~~ ***The following aircraft shall be equipped with a public address system:***

AEROPLANES

~~(1) aeroplanes~~ ***(a)*** With a maximum passenger seating configuration of more than 19; ~~and (2) helicopters with a maximum passenger seating configuration of more than 9.~~

HELICOPTERS

(b) ~~Notwithstanding (a),~~ ***With a maximum passenger seating configuration of more than 9.***

(c) The public address system may not be required for helicopters with a maximum passenger seating configuration ***of more that 9 but*** less than 19 if:

(1) the helicopter is designed without a bulkhead between the cockpit and passenger compartment; and

(2) the operator can demonstrate to the competent authority that, in flight the pilot's voice is audible at all passengers seats.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.518 Fasten seat belts and no-smoking signs p. 82

comment *5097* comment by: *M Wilson-NetJets*

Original text:

Aircraft in which all passenger seats are not visible from the flight crew seat shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

Suggested new text:

No suggested text

Comment/suggestion:

change "all passenger seats" into "any passenger seats"

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.519.A Internal doors and curtains - Aeroplanes p. 82

comment *83* comment by: *Air Southwest*

OPS.CAT.519.A(a) - missing word. "...between the passenger and the

cockpit..." Amend to read " .....between the passenger compartment and the flight deck ...."

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.525 Communication and navigation equipment for VFR as controlled flights, night flights and IFR flights – Motor-powered aircraft p. 83

comment *463* comment by: *EHOC*

General

It is not clear why the separation of the rules in Subpart GEN – 525 for Communications; and 535 for Navigation - has not been followed in Subpart CAT. Having two rules in GEN and then combining them in CAT has no logic. Perhaps when the rules are once again separated, the requirement for a radio for VFR could be added.

An additional rule to provide a requirement for radios for VFR is required:

"OPS.CAT.524 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

(a) motor powered aircraft shall be provided with radio equipment that permits:

(1) communication with appropriate ground stations;

(2) communication with appropriate air traffic control facilities; and

(3) reception of meteorological information."

There is no rule for communication equipment for VFR - i.e. OPS.CAT.525 is not compliant with ICAO Annex 6 Part III Section II Chapter 5.1 - for which the Standard is unconditional.

comment *1637* comment by: *Luftfahrt-Bundesamt*

The LBA requests to stay away from the performance base rule making here. If this system shall be used, OPS.GEN 405 should be phrased in a similar way. However, this does not make much sense at all. Same with this paragraph.

Justification: see LBA - General Comment, reason 3.

comment *3092* comment by: *M Wilson-NetJets*

Original text:

(a) Motor powered aircraft shall be equipped with:

(1) two independent radio communication means;

(2) two independent navigation equipment appropriate for each phase of flight and appropriate to the route/area.

Suggested new text:

(a) Motor powered aircraft shall be equipped with:

(1) two independent **or redundant** radio communication means;

(2) two independent **or redundant** navigation equipment appropriate for each phase of flight and appropriate to the route/area. **Aeroplanes with a MPSC of less than 10 may have only one area navigation equipment if this equipment is capable of incorporating current positions from more than one navigation source and has sufficient warning capabilities to advise the flight crew of loss of either navigation source, unless required differently by airspace requirements for the route to be flown.**

Comment/suggestion:

Although the AMC specifies one are navigation for the route flown this IR clearly specifies two independent navigation equipment. This would imply also two independent area navigation equipment. Smaller business jets do not always have two completely independent area navigation equipment. Often it is just one FMS with one CDU and two GPS receivers. Technically this could not be considered fully independent. There should be an exclusion clause already in the IR to allow for single area navigation equipment to be used. Secondly, the terminology of "independent" might raise question with modern systems that use parts of equipment simultaneously or in back-up mode (like display units, avionics busses, graphics modules etc.). These systems have complete redundancy but cannot be considered fully independent.

comment *3384* comment by: *UK CAA*

Page No: 83

Paragraph No: OPS.CAT.525

Comment:

There is no rule for communication equipment for VFR - i.e. this rule is not compliant with ICAO Annex 6 Part I Chapter 7.1 or Part III Section II Chapter 5.1 - for which the Standard is unconditional.

A new section should be added as indicated.

Justification:

Compliance with ICAO Annex 6.

Proposed Text (if applicable):

OPS.CAT.524 Communication equipment for operations under VFR over routes navigated by reference to visual landmarks

(a) motor powered aircraft operated under VFR over routes navigated by reference to visual landmarks shall be provided with radio communication equipment that permits:

(1) communication with appropriate ground stations;

(2) communication with appropriate air traffic control facilities from any point in controlled airspace within which flights are intended; and

(3) reception of meteorological information.

(b) The radio communication equipment required in (a) shall provide communications on the aeronautical emergency frequency.

comment *3793* comment by: *Civil Aviation Authority of Norway*

Comment:

There is no rule for communication equipment for VFR - i.e. this rule is not compliant with ICAO Annex 6 Part I Chapter 7.1 or Part III Section II Chapter 5.1 - for which the Standard is unconditional.

A new section should be added as indicated.

Justification:

Compliance with ICAO Annex 6.

Proposed Text

(if applicable):

OPS.CAT.524 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

(a) motor powered aircraft shall be provided with radio equipment that permits:

(1) communication with appropriate ground stations;

(2) communication with appropriate air traffic control facilities from any point in controlled airspace wihtjhin which flights are intended; and

(3) reception of meteorological information.

(b) The radio communication equipment required in (a) shall provide communications on the aeronautical emergency frequency.

B. I. Draft Opinion - Part-OPS - Subpart B - Section IV - OPS.CAT.526 Audio selector panel p. 83

comment *400* comment by: *ECA - European Cockpit Association*

Comment on OPS.CAT.526:

ECA requests clarification:

Is this requirement binding for CAT only, therefore not for COM?

B. I. Draft Opinion - Part-OPS - Subpart C p. 84

comment *5192* comment by: *DGAC*

There should be a provision (*at least in the Cover Regulation*) equivalent to (3) EU/JAR-OPS 1/3.001, stating that subpart CAT does not apply "to flights immediately before, during, or immediately after an aerial work activity provided these flights are connected with that aerial work activity and in which, excluding crew members, no more than 6 persons indispensable to the aerial work activity are carried."

B. I. Draft Opinion - Part-OPS - Subpart C - Section I p. 84

comment *3296* comment by: *Austro Control GmbH*

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial operations other than CAT, to ensure compliance with Annex IV of Basic Regulation.

Comment:

a detailled definition for commercial operation is required in the rule or shall be at least explained in detail in AMC by examples (no definition in AMC for reasons of legal certainty!). The definition in the Basic Regulation seems not to be sufficient (e.g. training within clubs is unclear).

comment *6060* comment by: *DGAC*

We do not understand the rationale for mentioning R 216/2008 in the scope of part OPS subparts GEN, CAT & COM and not mentioning it in the scope of both part OR subpart OPS and part OPS subpart SPA?

If, as explained by EASA, the mere application of those subparts is not enough to ensure compliance with the BR, then mentioning the BR in the scope should be avoided as it is confusing and misleading.

"OPS.COM.005 Scope

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial operations other than Commercial Air

Transport, to ensure compliance with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations)."

B. I. Draft Opinion - Part-OPS - Subpart C - Section I - OPS.COM.005 Scope p. 84

comment *675* comment by: *ECA - European Cockpit Association*

Comment on OPS.COM.005: change as follows:

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial operations other than Commercial Air Transport~~**, to ensure compliance with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations)**~~.

Justification:

Everything necessary to comply with the BR must be found in the IR/AMC/GM. Reference to BR 216/2008 is inappropriate.

comment *1532* comment by: *Luftfahrt-Bundesamt*

Regarding the operation of sailplanes and powered sailplanes and the possible economic gain with such type of operation, we seriously doubt that the proposed regulations will improve the safety in any detectable way, but lead to a significant decrease of the activities and consequently to a decline in this kind of aviation.

We propose to exempt sailplanes and powered sailpanes from the scope of this NPA and add the following wording:

"The operation of sailplanes and powered sailpanes is exempted from the scope of this subpart."

comment *3577* comment by: *Walter Gessky*

OPS.COM.005 Scope

This subpart establishes additional and specific requirements to be met by an operator undertaking commercial operations other than Commercial Air Transport, to ensure compliance with Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations).

Comment:

Clear definition for commercial operation is required in the rule or at least in the AMC. The definition in the basic regulation is not sufficient (flight training in clubs etc) Based on that, additional requirements might be added.

comment *5194* comment by: *DGAC*

COM is not restricted to aerial work (as specified in §79 of appendix I Explanatory memorandum to Part OPS in NPA 2009-02 A in the explanatory note). Some of the paragraphs of Subpart COM refer to "specialized tasks". It is not clear however whether all COM operations are considered as specialized tasks. If specialized task are only a fraction of COM operations, a definition of "specialized task" should be added somewhere. If specialized task and COM operations are the same concept, then the use of the terms "specialized tasks" should be avoided to remove confusion.

Furthermore their might be some specialized tasks that are not COM.

comment *7422* comment by: *Axel Schwarz*

According to the definition of "Commercial Operations" in the Basic Regulation, this subpart would include operations under commercial hire.

Since for commercial hire of aircraft the owner/operator has only very limited control over the pilot hiring the aircraft, most provisions of this Subpart should not be applicable to commercial hire either by amending the scope or revising the definition in the Basic Regulation to exclude the hiring out of aircraft against remuneration by an operator to pilots.

B. I. Draft Opinion - Part-OPS - Subpart C - Section I - OPS.COM.035 Application and use of dangerous goods in specialised tasks p. 84

comment *919* comment by: *CAA-NL*

Comment CAa-NL:

Clarification required for 'specialised tasks'.

comment *953* comment by: *CAA-NL*

Comment CAA-NL:

The Agency should clarify what it means by 'specialised task'

comment *1165* comment by: *CAA-NL*

OPS.COM.035

Comment: The text states that an aircraft must not fly over cities, towns etc when using dangerous goods for the purposes of a specialised task. It is

suggested this text should be amended.

Justification: Elsewhere in the IRs (OPS.GEN.030 (b)) states that dangerous goods for "specialised purposes" are those specified in Part 1 of the Technical Instructions, which in turn refer to "specialized use"; in the Technical Instructions this term includes tasks (e.g. aeromedical operations, provision of veterinary aid) which could quite reasonably be allowed over cities, towns etc. It is suggested that the text need only apply to the application of dangerous goods.

Proposed Text (if applicable):

Amend OS.COM.035 as follows:

"OS.COM.035 Application ~~and use~~ of dangerous goods in specialised tasks

The operator shall not fly over congested areas of cities, towns or settlements or over an open-air assembly of persons when applying ~~or using~~ dangerous goods for the purpose of a specialised task."

comment *1414* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

The text states that an aircraft must not fly over cities, towns etc when using dangerous goods for the purposes of a specialised task. It is suggested this text should be amended.

Comment:

Elsewhere in the IRs (OPS.GEN.030 (b)) states that dangerous goods for "specialised purposes" are those specified in Part 1 of the Technical Instructions, which in turn refer to "specialized use"; in the Technical Instructions this term includes tasks (e.g. aeromedical operations, provision of veterinary aid) which could quite reasonably be allowed over cities, towns etc. It is suggested that the text need only apply to the application of dangerous goods.

Proposal:

Amend OS.COM.035 as follows:

"OS.COM.035 Application and use of dangerous goods in specialised tasks

The operator shall not fly over congested areas of cities, towns or settlements or over an open-air assembly of persons when applying or using dangerous goods for the purpose of a specialised task."

comment *1424* comment by: *International Air Transport Association*

OPS.COM.035 Application and use of dangerous goods in specialised tasks.

The text in this paragraph is rather vague in setting out just what constitutes "using dangerous goods for the purposes of a specialised task". Previously in

OPS.GEN.030(b) there was text regarding "dangerous goods on board for specialised purposes". Here it was commented that this was addressed by Part 1;1.1.3 of the ICAO Technical Instructions. This part of the ICAO TI addresses such operations as search and rescue, provision of medical aid to a patient during flight, etc. For these types of "specialised uses" there should be no impediment on flight over inhabited areas.

The text of OPS.COM.035 should perhaps clearly state that it is the release of dangerous goods from the aircraft over cities, towns, etc. that is prohibited.

comment *1632* comment by: *British Parachute Association*

We suggest that the following wording is added to the end of this paragraph.

"(except when carrying smoke trail devices to be used by parachute display jumpers after exiting the aircraft)."

We are not sure at this stage whether parachute operations are likely to be classsified as a specialised task, but in that event this rule could otherwise prohibit the use of smoke trails on many parachute displays. Smoke trails have long been an important visual feature of parachute displays.

This will also ensure consistency with our comments no. 1412, 1604 and 1657.

comment *2766* comment by: *Pietro Barbagallo ENAC*

Comment: The text states that an aircraft must not fly over cities, towns etc. when using dangerous goods for the purposes of a specialised task. It is suggested this text should be amended.

Justification: OPS.GEN.030 (b) states that dangerous goods for "specialised purposes" are those specified in Part 1 of the Technical Instructions, which in turn refer to "specialized use"; in the Technical Instructions this term includes tasks (e.g. aeromedical operations, provision of veterinary aid) which could quite reasonably be allowed over cities, towns etc. It is suggested that the text need only apply to the application of dangerous goods.

Proposal :Amend OPS.COM.035 as follows: "Application of dangerous goods in specialised tasks. The operator shall not fly over congested areas of cities, towns or settlements or over an open-air assembly of persons when applying dangerous goods for the purpose of a specialised task."Proposal:

comment *3385* comment by: *UK CAA*

Page No: 84

Paragraph No: OPS.COM.035

Comment:

The text states that an aircraft must not fly over cities, towns etc when using dangerous goods for the purposes of a specialised task. It is suggested this text should be amended.

Justification:

Elsewhere in the IRs (OPS.GEN.030 (b)) it states that dangerous goods for "specialised purposes" are those specified in Part 1 of the Technical Instructions, which in turn refer to "specialized use". In the Technical Instructions this term includes tasks (e.g. aeromedical operations, provision of veterinary aid) which could quite reasonably be allowed over cities, towns etc. It is suggested that the text need only apply to the application of dangerous goods.

Proposed Text (if applicable):

Amend OS.COM.035 as follows:

"OS.COM.035 Application ~~and use~~ of dangerous goods in specialised tasks

The operator shall not fly over congested areas of cities, towns or settlements or over an open-air assembly of persons when applying ~~or using~~ dangerous goods for the purpose of a specialised task."

comment *5196* comment by: *DGAC*

The text can be improved.

Proposed Text:

Amend text as follows: "The operator shall not **~~fly~~** **operate aircraft** over congested areas of cities, towns or settlements or over an open-air assembly of persons when applying or using dangerous goods for the purpose of a specialised task."

comment *5730* comment by: *Ryanair*

Defintion of "specialised task" required

B. I. Draft Opinion - Part-OPS - Subpart C - Section I - OPS.COM.040 Carriage and use of weapons in specialised tasks p. 84

comment *920* comment by: *CAA-NL*

Suggestion CAA-NL I:

Clarification required for 'specialised tasks'.

Suggestion CAA-NL II:

The Agency should clarify what it means by ' when the weapons are used'. When the Agency means the use by air marshals than this statement is unrealistic.

comment *1166* comment by: *CAA-NL*

Comment 1

OPS.COM.040(a)

Comment: It is not clear what "specialised tasks" are envisaged by OPS.COM.040.

Justification: Without an appropriate definition it is suggested the text is too vague and open to abuse.

Proposed Text (if applicable):

It is suggested a definition of "specialized tasks" should be developed.

Comment 2

OPS.COM.040(a)

Comment: Text needs expanding

Justification: "Securing" is only one measure which should be ensured in respect of weapons. Prevention from accidental discharge (in the case of guns) or activation (in the case of pyrotechnics, tear gas devices etc) should also be required.

Proposed Text (if applicable):

Amend OPS.COM.040(a) as follows:

"An operator may carry weapons on a flight for the purposes of a specialised task provided that the weapons are secured and protected against accidental discharge or activation when carried."

Comment 3

OPS.COM.040(b)

Comment: Text is unrealistic

Justification: It is queried how an operator could possibly ensure that, for example, if a policeman discharges his weapon this will not endanger the aircraft or persons. Also, the text could be interpreted as allowing the discharge of a weapon from an aircraft (e.g. to a target on the ground) which is not something allowed currently in the UK (without an exemption) because of the risk of structural damage (e.g. to main or tail rotors) by bullets, including ricochets.

Proposed Text (if applicable):

Delete OPS.COM.040(b)

comment *1415* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

It is not clear what "specialised tasks" are envisaged by OPS.COM.040.

Comment:

Without an appropriate definition it is suggested the text is too vague and open to abuse.

Proposal:

It is suggested a definition of "specialized tasks" should be developed.

comment *1416* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

OPS.COM.040(b)

Comment:

Text is unrealistic.

It is queried how an operator could possibly ensure that, for example, if a policeman discharges his weapon this will not endanger the aircraft or persons. Also, the text could be interpreted as allowing the discharge of a weapon from an aircraft (e.g. to a target on the ground) which is not something allowed currently in the UK (without an exemption) because of the risk of structural damage (e.g. to main or tail rotors) by bullets, including ricochets.

Proposal:

Delete OPS.COM.040(b)

comment *1417* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

OPS.COM.040(a)

Comment:

Text needs expanding.

"Securing" is only one measure which should be ensured in respect of weapons. Prevention from accidental discharge (in the case of guns) or activation (in the case of pyrotechnics, tear gas devices etc) should also be required.

Proposal:

Amend OPS.COM.040(a) as follows:

"An operator may carry weapons on a flight for the purposes of a specialised task provided that the weapons are secured and protected against accidental discharge or activation when carried."

comment *2767* comment by: *Pietro Barbagallo ENAC*

Comment: It is not clear what "specialised tasks" are envisaged by OPS.COM.040.

Justification: Without an appropriate definition it is suggested the text is too vague and open to abuse.

Proposal: It is suggested a definition of "specialized tasks" should be developed.

comment *2768* comment by: *Pietro Barbagallo ENAC*

Comment 040(a): Text needs expanding

Justification: "Securing" is only one measure which should be ensured in respect of weapons. Prevention from accidental discharge (in the case of guns) or activation (in the case of pyrotechnics, tear gas devices etc) should also be required.

Proposal: Amend OPS.COM.040(a) as follows: "An operator may carry weapons on a flight for the purposes of a specialised task provided that the weapons are secured and protected against accidental discharge or activation when carried."

comment *2769* comment by: *Pietro Barbagallo ENAC*

040(b) Comment: Text appears as unrealistic.

Justification: It is queried how an operator could possibly ensure that, for example, if a policeman discharges his weapon this will not endanger the aircraft or persons. Also, the text could be interpreted as allowing the discharge of a weapon from an aircraft (e.g. to a target on the ground) which is something not allowed (without an exemption) because of the risk of structural damage (e.g. to main or tail rotors) by bullets, including ricochets.

Proposal:Delete OPS.COM.040(b)

comment *3386* comment by: *UK CAA*

Page No: 84

Paragraph No:

OPS.COM.040(a)

Comment:

It is not clear what "specialised tasks" are envisaged by OPS.COM.040.

Justification:

Without an appropriate definition it is suggested the text is too vague and open to abuse.

Proposed Text (if applicable):

It is suggested a definition of "specialised tasks" should be developed.

comment *3387* comment by: *UK CAA*

Page No: 84

Paragraph No: OPS.COM.040(a)

Comment: Text needs expanding

Justification: "Securing" is only one measure that should be ensured in respect of weapons. Prevention from accidental discharge (in the case of guns) or activation (in the case of pyrotechnics, tear gas devices etc) should also be required.

Proposed Text (if applicable):

Amend OPS.COM.040(a) as follows:

"An operator may carry weapons on a flight for the purposes of a specialised task provided that the weapons are secured and protected against accidental discharge or activation when carried."

comment *3388* comment by: *UK CAA*

Page No: 84

Paragraph No:

OPS.COM.040(b)

Comment:

Text is unrealistic

Justification:

It is queried how an operator could possibly ensure that, for example, if a policeman discharges his weapon this will not endanger the aircraft or persons. Also, the text could be interpreted as allowing the discharge of a weapon from an aircraft (e.g. to a target on the ground) which is not

something allowed currently in the UK (without an exemption) because of the risk of structural damage (e.g. to main or tail rotors) by bullets, including ricochets.

Proposed Text (if applicable):

Delete OPS.COM.040(b)

comment *5198* comment by: *DGAC*

Paragraph (a) precludes aerial work operations such as those operations where a weapon onboard the aircraft is used to shoot vaccine or anaesthetic darts at wild animals.

Proposed Text:

Amend text as follows: "(a) An operator may carry weapons on a flight for the purpose of a specialised task provided that the weapons are secured when carried, **except when necessary for the specialized task"**"

comment *5318* comment by: *Department for Transport UK*

It is not clear what sort of specialised tasks are envisaged but it appears that the weapons may be used for the specialised task while the aircraft is in flight. If this is the case the weapons cannot be secured when being used for the specialised task. The text should therefore amended to reflect that the weapons will not be secured while in use.

Proposed text: OPS.COM.040(a) An operator may carry weapons on a fight for the purpose of a specialised task provided that the weapons are secured when not in use for that task.

comment *5731* comment by: *Ryanair*

Definition of "specialised task" required

comment *6185* comment by: *Finnish CAA*

Paragraph: OPS.COM.040(a)

Comment: It is not clear what "specialised tasks" are envisaged by OPS.COM.040.

Justification: Without an appropriate definition it is suggested the text is too vague and open to abuse.

Proposed text (if applicable): It is suggested a definition of "specialized tasks" should be developed.

comment *6211* comment by: *Finnish CAA*

Paragraph: OPS.COM.040(a)

Comment: Text needs expanding

Justification: "Securing" is only one measure which should be ensured in respect of weapons. Prevention from accidental discharge (in the case of guns) or activation (in the case of pyrotechnics, tear gas devices etc) should also be required.

Proposed text (if applicable):

Amend OPS.COM.040(a) as follows:

"An operator may carry weapons on a flight for the purposes of a specialised task provided that the weapons are secured and protected against accidental discharge or activation when carried."

B. I. Draft Opinion - Part-OPS - Subpart C - Section II p. 85

comment *5200* comment by: *DGAC*

Paragraph 81 of chapter IV of the Explanatory (NPA 2009-02 A, page 38) specifies the following concerning section II :

"Secondly, it requires the mitigating procedures to be applied when flying below the minimum flight altitudes."

However there is no such provision in the text of Section II

B. I. Draft Opinion - Part-OPS - Subpart C - Section II - OPS.COM.115 Briefing of operational personnel p. 85

comment *978* comment by: *REGA*

For HEMS purposes like evacuation and rescue flight within the mountains, specialists (e.g. mountain guides) has to be added to the already available and well trained operational personal.

Proposal (OPS.COM.115)

For HEMS missions, where exceptional situations require additional specialists for specific tasks, the pilot in command is exceptionally allowed to involve personnel without a standard briefing. The pilot has to proceed according the operators Standard Operating Procedure (SOP), described in the operational manual. Those operational personnel should be supervised

by the flight crew or technical crew member.

comment *2272* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Briefing of operational personnel

Comment / Proposal:

Modify text:

Operational personnel [...] except for mission which are described by Special Operating Procedures (SOP) in the manual of the operator.

comment *3680* comment by: *Austro Control GmbH*

Modification suggested:

Operational personnel [...] except for mission which are described by Special Operating Procedures (SOP) in the manual of the operator.

Justification:

SOPs are binding for crew members, therefore a duplication is not necessary.

comment *5733* comment by: *Ryanair*

Definition of "specialised task" required

comment *5750* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Operational personnel is not defined. Is this meant to be personnel carried for the operation, i.e photographer, power line inspector and others?

Proposal:

Define Operational personnel as personnel with work tasks on board during the mission/operation

B. I. Draft Opinion - Part-OPS - Subpart C - Section II - OPS.COM.270 Standard operating procedures - specialised operations other than the transport of persons, cargo or mail p. 85

comment *979* comment by: *REGA*

(b) HEMS-missions usually carry out special operations (e.g. evacuations) in accordance to standard operations procedures (SOP), described in the operational manual. For those specialized standard operations a generic risk assessment according AMC 1 OPS.COM.270, described in the operational manual and authorized by the competent authority, shall be acceptable.

Proposal (b)

For HEMS-missions carrying out special operations in accordance to standard operations procedures (SOP), described in the operational manual and authorized by the competent authority, shall be allowed to use generic risk assessment template according to AMC 1 OPS.COM.270. The generic risk assessment template shall be described in the operational manual and authorized by the competent authority.

comment *1655* comment by: *British Parachute Association*

At the end of (a) we suggest adding the words.....

"...or operations manuals that are approved by Competent Authorities or National Governing Bodies as being appropriate for specialised tasks."

We have in mind here the British Parachute Association Operations Manual which is approved by the UK Civil Aviation Authority. This comment may, of course, be disregarded if parachute operations are not regarded as a specialised task.

comment *2273* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Standard operating procedures - specialized operations other than the transport …

Comment / Proposal:

Modify text:

(b) Before commencing operations, the operator shall carry out a risk assessment and shall develop appropriate SOPs. A generic risk assessment template according to can be used by the operator.

comment *5202* comment by: *DGAC*

Proposal : If (a) is really meant to stay in subpart COM, then delete "other than the transport of persons, cargo or mail"

Justification : commercial operations involving "transport of persons, cargo or mail" are addressed in subpart B (CAT) , therefore commercial operations other than CAT (subpart C - COM) are obviously operations "other than the transport of persons, cargo or mail" !

Proposal : If (c) is really meant to stay in subpart COM, then amend the beginning of (c) as follows :

> "(c) ~~Applicants for an Air Operator Certificate~~ **Operators** shall demonstrate
>
> **Justification :** COM is dedicated to commercial operations other than CAT. All commercial operations are subject to an AOC. Then all operators under COM shall do make demonstration.

Proposal : Move OPS.COM.270 towards Subpart GEN and define "specialized operations"

Justification: It is not clear whether SOP are to be developed for all COM operations or only for specialized activities (as it is not clear what "specialized operations" are - *See also our comment to OPS.COM.005 Scope*). One EASA answered during a forum was that we would have the answer once the cover regulation is published. The problem is that, by that time, we will not have the opportunity to comment anymore…

Besides, the surprising wording of OPS.COM.270 (see comments on (a) and (c)) and diagram 1 of AMC OPS.COM.270 (see related comment as well), seem to mean that OPS.COM.270 was first tailored to be inserted into OPS.GEN, that for any specialized activities (commercial or not commercial) SOP have to be developed, and that in the case of COM those SOP require Ahthority approval as shcwn below :

This explanation would make sense.

We suggest further development of other SOP that could be used from the shelves for aerobatics flights, parachutes droppings, and other specialized activities to be defined.

comment *5734* comment by: *Ryanair*

Defintion of "specialised operations" required

comment *5751* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment: It is unclear what is meant with "specialised operations". The explanation that is given is that the proposal concerns private aerial work. If this is the case it doesn´t fit in to the context of COM "commercial operations other than commercial air transport". By putting rules concerning private flying in a context with commercial operations creates confusion.

Proposal: Restructure the text and put rules as concerns private aerial work

in another section.

comment *6347* comment by: *Heliswiss International*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *6348* comment by: *Heliswiss International*

Where is this document page 372 ?

comment *7300* comment by: *DHV*

Standard operating procedures - specialised operations other than the transport of persons, cargo or mail HELICOPTER EXTERNAL LOAD OPERATIONS (HELO)

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

Performance

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

B. I. Draft Opinion - Part-OPS - Subpart C - Section III p. 86

comment *5204* comment by: *DGAC*

What is the rational for the numbering of the paragraphs related to performance criteria (316.A for aeroplanes, 350.H for helicopters) ?

Some provisions are repeated in both paragraphs, where they could be mutualized.

comment *6238* comment by: *DGAC*

Clarify the use of occupants versus persons

comment *6933* comment by: *Christian Hölzle*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

comment *6934* comment by: *Christian Hölzle*

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

B. I. Draft Opinion - Part-OPS - Subpart C - Section III - OPS.COM.316.A Performance criteria aeroplanes p. 86

comment *3389* comment by: *UK CAA*

Page No: 86

Paragraph No:

OPS.COM.316.A

Comment:

For non-passenger commercial operations, the performance requirements should be the same as passenger-carrying operations.

Justification:

For all commercial operations, whether carrying passengers or not, the same

level of safety should be required.

Proposed Text (if applicable): The OPS.CAT requirements should apply to OPS.COM activities.

comment *5205* comment by: *DGAC*

See general comment on section III

comment *5389* comment by: *Berner Oberländer Helikopter AG BOHAG*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

B. I. Draft Opinion - Part-OPS - Subpart C - Section III - OPS.COM.350.H Performance criteria helicopter p. 86

comment *795* comment by: *French SAMU using helicopters for medical transport*

OPS 350H Performance criteria helicopter

Delete se first sentence and reverse the second in order to read:

" Unless the pilot is able to establish that the hover in ground effect (HIGE) performance level is applicable for take- off or landing on the site the hover out of ground effect (HOGE) performance level shall be applied"

Justification:

The hover in ground effect being the lowest possible performance level it should only be used if the obstacle environment permits to do so.

Helicopters are mainly using operating site and a minimum performance margin should be provided

comment *831* comment by: *Reto Ruesch*

Cat A for congested hostile

A more precise definition of hostile and congested is definitely needed.

comment *1102* comment by: *EUROCOPTER*

Comment on § (c):

Wording modification proposal:

*(c) When operating **outside a congested hostile with** helicopters which, in the event of a critical poser unit failure ...*

Reason: While helicopters operating in a congested hostile environment are dealt in § (a), it has to be clear that § (c) deals with helicopter operating outside a congested hostile environment.

comment *1103* comment by: *EUROCOPTER*

comment on (c)(6):

Proposal is to delete OPS.COM.350.H (c)(6):

~~(6) ensure compliance with OPS.SFL when persons are carried.~~

Reason: persons carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT; moreover, requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board.

comment *1130* comment by: *Heli Gotthard*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3

helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *1184* comment by: *Stefan Huber*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *1251* comment by: *Air Zermatt*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *1302* comment by: *Air-Glaciers (pf)*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *1343* comment by: *EUROCOPTER*

Proposal for § (c) (5):

(5) ensure that all occupants wear the appropriate ***individual*** *protective equipment; and*

Reason: consistency with OPS.COM.488 title

comment *1355* comment by: *AECA helicopteros.*

Proposal to change from category concept to performance concept assoicated with helicopter operation (as in OPS CAT 355)

comment *1580* comment by: *EUROCOPTER*

This requirement, with the associated requirements OPS.COM.487 and AMC OPS.COM.487, request that the helicopter is fitted with crash mitigation equipment such as crash-absorbing seats and self-sealing fuel tanks. Comments are:

- This requirement is disproportionate and, if maintained as such, will forbid Aerial Work operations to many helicopter types in Europe because of the dramatic induced development costs for operators to retrofit crash mitigation equipment. As a matter of fact, only a few helicopter types would be

compliant to this requirement thanks to having been certificated in accordance with recent certification bases.

- In addition we do not see the benefit of self-sealing fuel tanks in terms of crash mitigation.

Proposal: to delete OPS.COM.350.H § (c)(4), as well as the corresponding OPS.COM.487 and AMC OPS.COM.487:

~~(4) ensure that the helicopter is equipped with appropriate crash mitigation equipment pertinent to the operation~~;

comment

1593 comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

(c) (6)

Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ?

Proposal is to delete OPS.COM.350.H (c)(6)

Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT.

Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board.

comment

1594 comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

(a) (1)

Proposal : "(a) Helicopters operating in a congested hostile environment shall be:

(1) certificated in category A **or considered to satisfy the Category A criteria**; and"

Justification: AMC OPS.GEN.010(a)(9) & (10) defines, in its § 2., additional requirements for certain helicopter types to be eligible for Performance Class 1 or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the Category A criteria. It is so proposed to amend OPS.COM.350.H § (a)(1) and AMC OPS.GEN.010(a)(9)&(10) in this purpose.

comment

1757 comment by: *EUROCOPTER*

§ (a)(1):

Modification proposal:

(a) Helicopters operating in a congested hostile environment shall be: (1) certificated in category A ***or considered to satisfy the Category A criteria****; and*

Justification: AMC OPS.GEN.010(a)(9) & (10) defines, in its § 2., additional requirements for certain helicopter types to be eligible for Performance Class 1 or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the Category A criteria. It is so proposed to amend OPS.COM.350.H § (a)(1) and AMC OPS.GEN.010(a)(9)&(10) in this purpose.

comment *1798* comment by: *Heli Gotthard AG Erstfeld*

Ops COM 350 H Performance criteria outside congested and hostile

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

comment *1943* comment by: *Berner Oberländer Helikopter AG BOHAG*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use

for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2025* comment by: *Heliswiss AG, Belp*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *2103* comment by: *Dirk Hatebur*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement

comment *2144* comment by: *Heliswiss*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2146* comment by: *Heliswiss NV*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *2147* comment by: *Heliswiss NV*

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2274* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Performance criteria helicopter

Comment / Proposal:

Modify text:

(a) delete

(b) delete

The according AMC has to modified accordingly (delete AMC to OPS:COM.350.H (a))

comment *2356* comment by: *Austro Control GmbH*

Austro Control agrees with requirement OPS.COM.350.H.

As requested in NPA 02a, Point 84,page 39:

Austro Control pleads for the flexibility provisions in Art 14 since this subject concerns only a few helicopter types.

comment *2425* comment by: *Jan Brühlmann*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the

safest type.

comment *2426* comment by: *Jan Brühlmann*

More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2458* comment by: *Catherine Nussbaumer*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

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comment *2557* comment by: *Walter Mayer, Heliswiss*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of

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comment *2598* comment by: *Walter Mayer, Heliswiss*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2605* comment by: *Catherine Nussbaumer*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2613* comment by: *Jan Brühlmann*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2622* comment by: *Air-Glaciers (pf)*

e) and f) :The aim is to maintain the possibility to operate in PC3 without an assured SFL en route in the particular cases of mountain or remote operations.By consistency with OPS.SPA.005.SFL(d)(3) it should be indicated that Performance Class 3 operations may be conducted without an assured safe forced landing capability en-route. Moreover the requirement number to be referenced should be OPS.SPA.005.SFL instead of OPS.SPA.SFL. Proposed wording modifications: (e) Helicopters operated in performance class 2 or 3 may be operated without an assured safe forced landing capability during the landing and take-off phase under the conditions contained in OPS.SPA.SFL Subpart D Section VI (SFL). (f) Helicopters operated in performance class 3 may be operated without an assured safe forced landing capability under the conditions contained in Subpart D Section VI (SFL).

comment *2725* comment by: *Heliswiss NV*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2730* comment by: *Heli Gotthard*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2846* comment by: *Philipp Peterhans*

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *2933* comment by: *Pascal DREER*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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(c) (6) Who are the “persons” ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *2961* comment by: *Valair AG Switzerland*

Helicoper operating in congested hostile aeria

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *3176* comment by: *Heli Gotthard AG Erstfeld*

OPS COM 350 H Performance criteria helicopters

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *3390* comment by: *UK CAA*

Page No: 86

Paragraph No:

OPS.COM.350.H (c)

Comment:

The requirements at sub-paragraphs (4) and (5) are repeated at OPS.COM.487 and 488 respectively and therefore should be deleted.

Sub-paragraph (6) requires amendment to correct the reference and to

clarify the intent to require additional performance measures when persons other than crew are carried. This is in line with the original JAR-OPS 4.495(c)(6) intention.

Justification:

Deletion of duplication and clarification of the text and requirement.

Proposed Text (if applicable):

(~~6~~***4***) ensure compliance with OPS.***SPA.***SFL when persons ***other than crew members*** are carried.

comment *3524* comment by: *Heliswiss AG, Belp*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *3592* comment by: *Aero-Club of Switzerland*

Please leave the choice of helicopter types to the operators.

Justification: We think they know best what type is suited for their operations.

comment *3949* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(c) (6)

Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ?

Proposal is to delete OPS.COM.350.H (c) (6)

Reason : Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board;

Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment

3955 comment by: *SNEH Organisation representing all french commercial helicopters operators*

(a) (1)

Proposal : "(a) Helicopter operating in a congested hostile environment shall be :

(1) certificated in category A **or considered to satisfy the Category A criteria;** and"

Justification : AMC OPS.GEN.010 (a)(9) & (10) defines, in its §2, additional requirements for certain helicopter types to be eligible for Performance Class 1 or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the Category A criteria. It is so proposed to amend OPS.COM.350.H §(a) (1) and AMC OPS.GEN.010 (a) (9) & (10) in this purpose.

comment

3973 comment by: *HDM Luftrettung gGmbH*

OPS COM 350 H:

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment

4116 comment by: *Benedikt SCHLEGEL*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350.

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comment *4410* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

A more precise definition of hostile and congested is definitely needed.

comment *4544* comment by: *Christophe Baumann*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *4627* comment by: *Christophe Baumann*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *4966* comment by: *Benedikt SCHLEGEL*

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comment *5206* comment by: *DGAC*

(a)(1) and (b) :

We still have reservations on the requirement about cat A and B for COM as it could prevent operators from performing some aerial works which can be done by only big Russians helicopters.

(a)(2) :

Proposed Text:

Amend text as follows:

"(2) operated at a mass and in conditions **such** that, in the event of a critical power unit failure, the helicopter is capable of sustaining level flight. Measures shall be taken to prevent risk to persons on the ~~**ground**~~ **surface** and to alleviate risk to property on the surface.

Justification :

To improve the wording and to take into account the fact that the surface under the fight path may not be limited to ground.

(c)(6) :

We propose do delete paragraph (6) of (c) of OPS.COM.350.H. We do not really know who these persons are. We still have some reservations concerning the feasibility for operators of aerial work to implement some of SFL provisions, for instance those related to Usage Monitoring System.

comment *5216* comment by: *Philipp Peterhans*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *5807* comment by: *Ph.Walker*

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comment *5912* comment by: *Dirk Hatebur*

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comment *6146* comment by: *Hans MESSERLI*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences. From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type.

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comment *6303* comment by: *Hans MESSERLI*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *6311* comment by: *Heliswiss International*

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comment *6313* comment by: *Heliswiss International*

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comment *6315* comment by: *SHA (AS)*

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comment *6334* comment by: *SHA (AS)*

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comment *6368* comment by: *Trans Héli (pf)*

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comment *6414* comment by: *Trans Héli (pf)*

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comment *6487* comment by: *DGAC*

Clarify "persons" vs "occupants"

comment *6730* comment by: *Heliswiss International*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *6914* comment by: *Swiss Helicopter Group*

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ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.There is no justification not allowing Performance Class 2 and 3 helicopter operating in SAR-HEMS-AW-CAT over hostile environement.

comment *6999* comment by: *Eliticino SA*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *7173* comment by: *Swiss Helicopter Group*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT.

Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *7297* comment by: *DHV*

(c) (6) Who are the "persons" ? The pilots, other workers necessary to the mission, passengers ? Proposal is to delete OPS.COM.350.H (c)(6). Reason: Workers carried during aerial work operations are aware of the risks encountered and should not have the same level of protection as in CAT. Requesting compliance to OPS.SFL would forbid aerial work operations over forests with single engine helicopters and persons on board. Moreover, it is a heavy burden on operators to ask them to implement a Usage Monitoring System for example.

comment *7343* comment by: *new European Helicopter Association*

From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happened on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurrences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurrences.

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B. I. Draft Opinion - Part-OPS - Subpart C - Section IV - OPS.COM.406 Restraining devices p. 87

comment *1656* comment by: *British Parachute Association*

We suggest that at the end of the paragraph the following words are added.

"Except in the case of parachutists or jumpmasters who are wearing serviceable parachutes."

This rule would otherwise not be consistent with the nature of parachute operations and could restrict a jumpmaster in the correct performance of his duties.

comment *3391* comment by: *UK CAA*

Page No: 87

Paragraph No:

OPS.COM.406

Comment:

Identify which doors are referred to in the Requirement.

Justification:

Clarity.

Proposed Text (if applicable):

OPERATIONS WITH ***EXTERNAL*** DOORS OPENED OR REMOVED

Crew members other than flight crew shall be restrained when carrying out specialised tasks with ***external*** doors opened or removed.

comment *3719* comment by: *Civil Aviation Authority of Norway*

Comment:

Identify which doors are referred to in the Requirement.

Justification:

Clarity.

Proposed Text

(if applicable):

OPERATIONS WITH ***EXTERNAL*** DOORS OPENED OR REMOVED

Crew members other than flight crew shall be restrained when carrying out specialised tasks with ***external*** doors opened or removed.

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV - OPS.COM.420.H Life jackets - Helicopters p. 87

comment *1161* comment by: *EUROCOPTER*

It is not consistent to request that life jackets have to be worn during a flight by each person on board, while in CAT this is up to the pilot-in-command to decide (see OPS.GEN.420 (g), which is also applicable to CAT).

It is proposed to delete OPS.COM.420.H.

comment *1595* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

It is not consistent to request that life jackets have to be worn during a flight by each person on board, while in CAT this is up to the pilot-in-command to decide (see OPS.GEN.420 (g), which is also applicable to CAT). We consider that it is up to the operators to make the passengers wear the life jacket in COM depending on the time spent over water.

It is proposed to delete OPS.COM.420.H

comment *3957* comment by: *SNEH Organisation representing all french commercial helicopters operators*

It is not consistent to request that life jackets have to be worn during a flight by each person on board, while in CAT this is up to the pilot-in-command to decide (see OPS.GEN.420 (g), which is also applicable to CAT). We consider that it is up to the operators to make the passengers wear the life jacket in COM depending on the time spent over water.

It is proposed to delete OPS.COM.420.H

comment *5210* comment by: *DGAC*

We propose to delete this paragraph. We consider that it is up to the operators to make the passengers wear the life jacket in COM, depending upon the time spent over water.

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV -OPS.COM.425.H Ditching - Helicopters p. 87

comment *3392* comment by: *UK CAA*

Page No: 87

Paragraph No:

OPS.COM.425.H

Comment:

Some of the ditching requirements are in conflict with OPS.GEN.425.H. It is recommended that this paragraph be deleted.

Justification:

Clarity.

Proposed Text (if applicable):

Delete paragraph

comment *6052* comment by: *Irish Aviation Authority*

Comment:

The requirements as set out in OPS.CAT.425 H should apply equally to flights carried out under commercial operations.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Amend text to reflect requirements set out in OPS.CAT.425 H

comment *6271* comment by: *DGAC*

Proposal:

Delete paragraph OPS.COM.425.H

Justification:

Already covered by OPS.GEN.425

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV - OPS.COM.426.H Survival suits - Helicopters p. 87

comment *1229* comment by: *EUROCOPTER*

Wording modification proposal:

Each crew member shall wear a survival suit during a flight when operating on water or over water ***~~beyond auto-rotational/gliding distance from land~~ from more than 3 minutes*** *where, in the event of a mishap, there would be a likelihood of ditching, and when the weather reports or forecasts available to the pilot-in-command indicates that the* ***~~sea~~ water*** *temperature will be less than plus 10°C during the flight,* ***or when the estimated rescue time exceeds the estimated survival time.***

Reasons:

- this requirement should only apply when the aerial work mission over water exceeds a definite time (proposal is 3 minutes), in order to avoid to wear the survival suits as soon as a river is crossed for example.

- the words 'in th eevent of a mishap' do not bring anything useful; moreover the word 'mishap' is not adapted to regulatory wording

- replacing 'sea temperature' by 'water temperature' is for consistency with the title, and in order to cover operations on lakes or rivers.

- for consistency with other requirements such as OPS.CAT.426.H and OPS.CAT.427.H it is proposed to add the condition "or when the estimated time exceeds the estimated survival time".

comment *1596*

comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

Wording modification proposal:

Each crew member shall wear a survival suit during a flight when operating on water or over water **~~beyond auto-rotational/gliding distance from land~~ from more than 3 minutes** where, **in the event of a mishap**, there would be a likelihood of ditching, and when the weather reports or forecasts available to the pilot-in-command indicates that the **~~sea~~ water** temperature will be less than plus 10°C during the flight, **or when the estimated rescue time exceeds the estimated survival time.**

Reasons:

- this requirement should only apply when the aerial work mission over water exceeds a definite time (proposal is 3 minutes), in order to avoid to wear the survival suits as soon as a river is crossed for example.

- the words 'in the event of a mishap' do not bring anything useful; moreover the word 'mishap' is not adapted to regulatory wording

- replacing 'sea temperature' by 'water temperature' is for consistency with the title, and in order to cover operations on lakes or rivers.

- for consistency with other requirements such as OPS.CAT.426.H and OPS.CAT.427.H it is proposed to add the condition "or when the estimated time exceeds the estimated survival time".

comment *3393*

comment by: *UK CAA*

Page No: 87

Paragraph No:

OPS.COM.426.H

Comment:

The requirement for the wearing of survival suits should be extended to cover all persons on board for flights over water in the detailed conditions. The text would benefit from reflecting that at OPS.CAT.426.H and part of OPS.CAT.427.H to make this clear and proportionate to the type of helicopter performance class equivalence being used.

A new GM OPS.COM.426H with text directing readers to GM OPS.CAT.426H Crew Survival Suits would be prudent.

Justification:

Clarification of the text and requirement and better use of guidance material.

Proposed Text (if applicable):

OPS.COM.426.H Survival suits - Helicopters

~~Each crew member~~ ***All persons onboard*** shall wear a survival suit when operating***:*** ~~on a flight on water or over water beyond auto-rotational/gliding distance from land where, in the event of a mishap, there would be a likelihood of ditching, and when the weather reports or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10°C during the flight.~~

(a) in Performance Class 1 or 2 on a flight over water at a distance from the land corresponding to more than 10 minutes flying time at normal cruising speed, when the weather reports or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10°C during the flight, or the estimated rescue time exceeds the estimated survival time; or

(b) in Performance Class 3 on a flight over water beyond autorotational or safe forced landing distance from land, when the weather reports or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10°C during the flight.

New associated GM.

GM OPS.COM.426.H Survival Suits - Helicopters

Refer to GM OPS.CAT.426.H for information regarding Estimating Survival Times.

comment *3966* comment by: *SNEH Organisation representing all french commercial helicopters operators*

Wording modification proposal :

Each crew member shall wear a survival suit during a flight when operating

on water or over water ~~**beyond auto-rotational/gliding distance from land**~~ **from more than 3 minutes** where, **in the event of a mishap,** there would be a likelihood of ditching, and when the weather reports or forecasts available to the pilot-in-command indicates that the ~~**sea**~~ water temperature will be less than 10°C during the flight, **or when the estimated rescue time exceeds the estimated survival time.**

Reasons :

- This requirements should only apply when the aerial work mission over water exceeds a definite time (proposal is 3 minutes), in order to avoid to wear the survival suits as soon as a river is crossed for example.

- The words 'in the event of a mishap' do not bring anything useful ; moreover the word 'mishap' is not adapted to regulatory wording

- Replacing 'sea temperature' by 'water temperature' is for consistency with the title, and inorder to cover operations on lakes or rivers.

- For consistency with other requirements such as OPS.CAT.426.H and OPS.CAT.427.H it is proposed to add the condition "or when the estimated time exceeds the estimated survival time".

comment *5211* comment by: *DGAC*

Proposal: Replace "beyond auto-rotational/gliding distance" by "for more than 3 minutes"

Justification: this requirement should only apply when the aerial work mission over water exceeds a definite time (proposal is 3 minutes), in order to avoid wearing the survival suits as soon as a river is crossed.

comment *6053* comment by: *Irish Aviation Authority*

Comment:

The requirements as set out in OPS.CAT.426 H should apply equally to flights carried out under commercial operations.

Justification:

Standardisation with already accepted aviation normal practice.

Proposed text:

Amend text to reflect requirements set out in OPS.CAT.426 H

comment *6252* comment by: *DGAC*

Proposal:

Replace "sea" by "water" to read:

"... indicate that the ~~sea~~ **water** temperature will be less ..."

Justification:

Consistency with the rest of the paragraph and to cover operations on lakes or rivers.

comment *6472* comment by: *DGAC*

Proposal:

Delete "in the event of a mishap"

Justification:

These words don't bring anything useful; moreover the word 'mishap' is not adapted to regulatory wording.

comment *6474* comment by: *DGAC*

Proposal:

Add "...will be less than plus 10°C during the flight, **or when the estimated rescue time exceeds the estimated survival time**."

Justification:

Consistency with other requirements such as OPS.CAT.426.H and OPS.CAT.427.H

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV - OPS.COM.486 Emergency egress from the cockpit p. 87

comment *2918* comment by: *Pietro Barbagallo ENAC*

Comment: this requirement may have impact on existing fleet. Please consider a proper implementation date

comment *3394* comment by: *UK CAA*

Page No: 87

Paragraph No:

OPS.COM.486

Comment:

The requirements for effective means of breaking out of the cockpit are best

dealt with by OPS.GEN.485.A and its AMC. As written the requirement would also be addressed at helicopters which is incorrect.

Delete this paragraph and AMC OPS.COM.486.

Justification:

Clarity.

comment *6349* comment by: *Heliswiss International*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV -OPS.COM.487 Crash mitigation equipment p. 87

comment *1351* comment by: *EUROCOPTER*

OPS.COM.487 and AMC OPS.COM.487, request that the helicopter is fitted with crash mitigation equipment such as crash-absorbing seats and self-sealing fuel tanks. Comments are:

- This requirement is disproportionate and, if maintained as such, will forbid Aerial Work operations to many helicopter types in Europe because of the dramatic induced development costs for operators to retrofit crash mitigation equipment. As a matter of fact, only a few helicopter types would be compliant to this requirement thanks to having been certificated in accordance with recent certification bases.

- In addition we do not see the befefit of self-sealing fuel tanks in terms of crash mitigation.

Proposal: to delete OPS.COM.487 and AMC OPS.COM.487:

~~***OPS.COM.487 Crash mitigation equipment***~~

~~***Aircraft shall be equipped with crash mitigation equipment which is adequate for the type of operation.***~~

comment *3395* comment by: *UK CAA*

Page No: 87

Paragraph No:

OPS.COM.487

Comment:

The expression "crash mitigation equipment" is vague and could be taken to mean either equipment that helped prevent an aircraft crash or equipment that helped to prevent injury to aircraft occupants from the effects of a crash.

Justification:

Clarification of the Rule is required.

B. I. Draft Opinion - Part-OPS - Subpart C - Section IV - OPS.COM.488 Individual protective equipment p. 87

comment *1349* comment by: *EUROCOPTER*

Wording modification proposal:

"***When operating under OPS.COM.350.H § (c)****, persons on board shall wear* ***individual*** ~~***personal***~~ *protective equipment which is adequate for the type of operation."*

Reason: individual protective equipment should not be requested for in the conditions of OPS.COM.350 (a) (operations in a congested hostile environment).

B. I. Draft Opinion - Part-OPS - Subpart D p. 88

comment *1076* comment by: *Alexander Fitz/AUA*

The Subpart D (SPA) does not contain all operations requiring special approval. The Operations Specification of an Air Operator Certificate usually contains ETOPS together with an authorized maximum diversion time which should be a dedicated part of SPA. Other specific approvals could also be stated, e.g. FANS, ADS-B or other e.g. defined in AMC-20.

18.06.2009 Alexander Fitz

comment *3074* comment by: *AEA*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *3655* comment by: *AUSTRIAN Airlines*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *4313* comment by: *KLM*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *4534* comment by: *TAP Portugal*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *4734* comment by: *British Airways Flight Operations*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seems to have been written through copying some – but not all – of the requirements currently specified in EU-OPS and AMC 20 material. This process could lead to unintentional mistakes and certainly creates confusion, potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4918* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *5242* comment by: *Civil Aviation Authority of Norway*

Comment:

The Civil Aviation Authority of Norway (CAA-N) feels that Part OPS is incomplete as long as there is no Specific Approval for offshore operations conducted more than 10 minutes away from shore at normal cruising speed.

Norway – among with Great Britain, Ireland, Denmark and the Netherlands – has extensive operations of helicopters between the mainland and oil- and gas-installations. Each of these countries have national regulations aimed especially at these operations. The regulations are designed to minimise the extra risks affiliated with the operation.

Among the subjects that need to be regulated are

- supplementing operating procedures
- performance requirements
- operating minima
- crew training and experience requirements
- crew composition requirements
- equipment requirements

Regarding equipment requirements CAA-N feels it is of the utmost importance that helicopters are equipped with some extra form of Flight Following-system that can inform national FlightServices about its exact position (longitude, latitude and altitude) in real-time. This is the best way for SAR to find an aircraft after an accident and gives the best chance of survival for crew and pax.

CAA-N notes that EASA, when writing Part OPS, has tried to incorporate all the rules in JAR-OPS 3. From what we can understand, EASA has not proposed any regulation on Offshore Helicopteroperations due to the fact that no such rules were to be found in JAR-OPS 3. This is only partly correct.

The JIP for JAR-OPS 3, Section four, Part 2; Operations, describes how the AOC and Operations Spesification is to be compiled. In pages 51 and 55, under the label E) Special Authorisations/Approvals, it is assumed that any operator wanting to perform Offshore Helicopter Operations needs such a Special Authorisation/Approval. The basis for this Authorisation/Approval has been national legislation.

We therefore feel that the Part OPS does not truly reflect the necessary levels of safety from JAR-OPS 3 unless an SPA for Offshore Helicopter Operations is included in the rules.

comment *5489* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying

some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

comment *6829* comment by: *Icelandair*

Relevant Text:

Entire Subpart D

Comment:

The special approval section seem to have been written through copying some – but not all – requirements as currently specified in EU-OPS and AMC 20 material. This could lead to unintentional mistakes and leads to further confusion potentially even leading to decreased flight safety and extra costs.

Proposal:

Ensure a complete realignment with existing AMC20 material/EU-OPS for specific approvals.

B. I. Draft Opinion - Part-OPS - Subpart D - Section I p. 88

comment *6061* comment by: *DGAC*

We do not understand the rationale for mentioning R 216/2008 in the scope of part OPS subparts GEN, CAT & COM and not mentioning it in the scope of both part OR subpart OPS and part OPS subpart SPA?

If, as explained by EASA, the mere application of those subparts is not enough to ensure compliance with the BR, then mentioning the BR in the scope should be avoided as it is confusing and misleading.

"OPS.SPA.005.GEN Scope

This part establishes the requirements to be met by an operator to qualify for the issue or continuation of specific operational approvals."

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.001.GEN Competent authority p. 88

comment *349* comment by: *ECA - European Cockpit Association*

Comment: change text as follows:

Notwithstanding **OPS.GEN.001** ~~**OPS.GEN.005**~~, for the purpose of this Subpart, the competent authority for non-commercial operators conducting operations in PBN/MNPS and RVSM airspace shall be the State of registry.

comment *1638* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the wording, including reference to OPS.GEN 005, describing the scope. In our view, the reference should be OPS.GEN 001 Competent Aurthoiry. In addition, in OPS.SPA.001.GEN, only RVSM, MNPS, PBN are addressed. In our view, AWO, DG and all other disciplines need to be addressed, or even replaced or removed in order to avoid confusion.

comment *3396* comment by: *UK CAA*

Page No: 88

Paragraph No:

OPS.SPA.001.GEN

Comment:

The reference to OPS.GEN.005 is not understood. It may be that OPS.GEN.001 is meant but, if so, there is no distinction between non-commercial operators of complex and those of non-complex aircraft as in that requirement. Moreover, by referring only to the State of Registry there can be no Member State competent authority for cases of the operation of aircraft covered by Article 4(1)(c) of Regulation 216/2008. Finally, the terms "PBN/MNPS" and "RVSM" do not seem to be defined anywhere in these requirements.

Justification:

The Agency needs to make its intentions clear. See also UK CAA comments on OPS.GEN.001 and OPS.GEN.005.

comment *5213* comment by: *DGAC*

The wording « PBN/MNPS and RVSM » is confusing

SPN is not an ICAO definition but an EASA invention. Domestic terminology should be avoided because it does not help understanding and can create confusion.

comment *6057* comment by: *DGAC*

Proposal:

Replace OPS.GEN.005 by OPS.GEN.001

Justification:

OPS.GEN.005 deals with scope, not competent authority

comment *6394* comment by: *Konrad Polreich*

OPS.SPA.001.GEN

The reference should probably be OPS.GEN.001 instead of the mentioned .005.

comment *6426* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

"Competent authority" is not consistently defined. "Competent authority" is defined in OPS-SPA.001.GEN, but the definition is restricted to "the purpose of this sub part (Operations requiring specific approvals).

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.005.GEN Scope p. 88

comment *3975* comment by: *HDM Luftrettung gGmbH*

OPS SPA 005 SFL

Ops without safe force landing. En route with max 6 pax / no more 119/B4

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome. Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like

AW119, EC130B4.

comment *4960* comment by: *easyjet safety*

Alternative Training & Qualification Program (ATQP)

The NPA 2009-02b omits any reference to the above, as currently outlined in EU-OPS 1.978 Appendix 1 to OPS 1.978 and TGL 44, which requires specific approval by the Competent Authority.

The availability of such progressive flight training regimes based on performance data and organisational learning are core elements of Safety Management and are now being used effectively at easyJet to ensure that recurrent training is focussed on identifiable safety and performance issues.

An ATQP ensures a higher level of civil aviation safety by utilising improved training and evaluation over the current system. An ATQP is a company specific alternative to traditional training. Ongoing data collection can be developed into a responsive program that can adapt to an operator's changing requirements such as new equipment, new technology or a differing route structure. Focusing on specific needs of fleets and groups of pilots, targeted training can enhance performance while reducing costs.

This approach also reflects the principles identified in the Implementing Rules (Article 8) that they should:

- take into account worldwide aircraft experience in service, and scientific and technical progress

- be based on a risk assessment and shall be proportional to the scale and scope of the operation

It is essential that this omission in the NPA proposals is rectified in the pursuit of overall safety improvements in the industry

comment *5138* comment by: *Tim Glasspool*

There should be a specific approval for Offshore Helicopter Operations. This will allow the current high standards in the North Sea to be maintained.

This should include the fitting IHUMS on all aircraft, large company SMS (regardless of the actual size of the company), Flight Data Monitoring and specific offshore pilot training programmes (night approach and landing recency etc.)

In addition, the use of offshore helideck certification and turbulent sector mapping could be mandated.

This would allow simplification of the safe forced landing SPA and possibly be a better place to put items such as Airborne Radar Approaches, and Coastal Heliport alleviations.

comment *5215* comment by: *DGAC*

« This **sub**part establishes » : subpart SPA, not part OPS

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.020.GEN Application for a specific approval p. 88

comment *1339* comment by: *Southern Cross International*

OPS.SPA.020.GEN (b)

Due to the type of operations of our company (test and ferry flights) and taking into consideration the wide variety of aircraft operated by our company, the different equipment fits for each of those aircraft, the extreme short period of time those aircraft are operated, and the fact that the majority of our crews are employed on a contract per flight basis, requiring an operator training program is not practicable as these crew members will be compliant with the training programme established by their regular employer for the subject type of aircraft. See also OR.OPS.060.FC

comment *2685* comment by: *AOPA-Sweden*

(a) (1): It has to be open for a private pilot/owner to apply too.

comment *2686* comment by: *AOPA-Sweden*

(b): A GA pilot can be flying several aircraft from different owners, and the owner shall not be responsible if a pilot is violating his/hers privileges.

comment *2688* comment by: *Pietro Barbagallo ENAC*

General Comment: some special authorisations allowed according to JAR-OPS 3005 (f) i.e. "Operations for small helicopters; (g) "Local area operations; (i) "Pubblic interest sites", have not be included in OPS SPA.

Justification: See App.1 to JAR-OPS 3.175, Contents and conditions of the Air Operator Certificate, para. (h) Special authorisations /approvals e.g.: CAT II/CAT III; Offshore Operations;HEMS, etc,etc.

comment *3417* comment by: *EHOC*

Paragraph (b)

It is not clear what the reference to OR.GEN.015 is intended to achieve.

Paragraph (c)

There is no specific text in OR.OPS.220.MLR that is applicable to the documentation of this application. Referring back to OR.GEN.220 or OR.GEN.200 produces no specific period for which the records must be retained.

comment *5073* comment by: *IAOPA Europe*

There should be no requirement to specify a business name. A private operator should be able to apply for a specific approval as well.

comment *5224* comment by: *DGAC*

- (b)(2) : "requirements/approvals » is confusiong. Avoid "/" and specify clearly if it is "and" or "or". Rewrite : "comply with the applicable airworthiness requirements **and are approved when required by the relevant section** ~~/approvals~~
- (b)(4) : "the applicable ~~subpart~~ **section** »
- (b)(4) : the case of operators who are not required to have an Ops Manual should be adressed in the IR, not in the AMC. Therefore the content of AMC OPS.SPA.020.GEN (b)(4) should be transfered to this paragraphe : Add at the end of (b)(4) : "**when required by Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations), or in a procedures manual**".
- OR.OPS.220.MLR is not the good reference :
- 1/ OR OPS is not applicable to non commercial with non complex powered aircraft
- 2/ OR.OPS.220.MLR deals with management system & information used for the preparation of flights & crew records. It is preferable to write directly the requirement : "(c) Records relating to the requirements of (a) and (b) above shall be retained by the operator ~~in accordance with OR.OPS.220.MLR~~ **at least for the duration of the SPA operation**.

comment *5735* comment by: *Ryanair*

To avoid ambiguity the "competent authority" must be further defined

Proposal

the competent authority *designated by the Member State where the operator has its principle place of business*

Proposal

(b)(3) a training programme *if required* has been established.....

comment *7059* comment by: *Virgin Atlantic Airways*

Proposed Text

OPS.SPA.020.GEN (C)

'in accordance with OR.OPS.220.MLR' [5 years]

Comment: Why is this 5 years. - Why not 3 - or for the duration of the approval?

comment *7596* comment by: *AOPA UK*

(a)(1)It has to be open for a private pilot/owner to apply too.

comment *7597* comment by: *AOPA UK*

(b) A GA pilot can be flying several aircraft from different owners, and the owner shall not be responsible if a pilot is violating his/hers privileges.

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.025.GEN Privileges of an operator holding a specific approval p. 88

comment *5227* comment by: *DGAC*

Add after "operations manual": "**when required by Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations), or in a procedures manual**".

Clarify the wording to make it clear that the scope shall be in the ops manual in all cases and that the alternative is only between (approval certificate) and (air operator certificate), whether the operator is not certified or certified.

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.030.GEN Changes to operations subject to a specific approval p. 88

comment *2770* comment by: *Pietro Barbagallo ENAC*

Comment: The text needs wording improvement

Justiifcation : It is not clear the logical link between the "change proposed by the operator on the items listed in OPS.SPA.020.GEN (a) and (b)" and "the requirements in the applicable section".

Proposal amend OPS.SPA.030.GEN (a) as follows: The operator shall notify the competent authority of any change on the items listed in OPS.SPA.020.GEN (a) and (b) and any other change affecting of the requirements in the applicable section of this subpart, before such changes takes place.

comment *3075* comment by: *AEA*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *3656* comment by: *AUSTRIAN Airlines*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *4317* comment by: *KLM*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *4537* comment by: *TAP Portugal*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *4919* comment by: *Deutsche Lufthansa AG*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *5193* comment by: *Virgin Atlantic Airways*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *5490* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *5891* comment by: *ERA*

European Regions Airline Association Comment

(a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

The reference in (a) above to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Therefore, amend a) to read as follows:

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *6612* comment by: *KLM Cityhopper*

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *6831* comment by: *Icelandair*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *7262* comment by: *AIR FRANCE*

Relevant Text:

a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

Comment:

The reference to 'any change' is far too wide. It should only refer to those changes that affect the conditions of the approval

Proposal:

Amend a) to read as

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

comment *7287* comment by: *ANE (Air Nostrum) OPS QM*

(a) The operator shall notify the competent Authority of any change on the items listed in OPS.SPA.020.GEN a) and b) and any of the requirements in the applicable section before such changes take place.

The reference in (a) above to 'any change' is far too wide.

It should only refer to those changes that affect the conditions of the approval

Therefore, amend a) to read as follows:

'The operator shall notify the competent Authority of any change that affects the conditions of the approval'

B. I. Draft Opinion - Part-OPS - Subpart D - Section I - OPS.SPA.035.GEN Continued validity of a specific approval p. 89

comment *3397* comment by: *UK CAA*

Page No: 89

Paragraph No:

OPS.SPA.035.GEN

Comment:

This states that, "Specific approvals shall be issued for an unlimited duration. " They shall remain valid subject to the operator remaining in compliance with this subpart, etc.

Current UK policy being implemented is that all special approvals are currently time limited: 5 years for an AOC and 3 Years for non-AOC (CAT) operators who have less routine oversight. Routine changes to AOC (CAT) fleets provide a means for this oversight of special approvals. In the case of non-CAT special approvals oversight is provided by a requirement for a 3-year check. Making the specific approvals open-ended for both CAT and non-CAT would result in a drop in oversight of non-CAT complex aircraft operating in areas requiring special approvals. If this amendment to current policy is adopted an oversight mechanism needs to be built in.

Justification:

Special approvals require regular oversight as the equipment requirements, procedures and areas are dynamically developing world-wide particularly in

Performance Based Navigation areas. Oversight is built-in for AOC operators (CAT), but this is not the case for other non-AOC operators and leaving approvals open ended could reduce safety margins.

Proposed Text (if applicable):

CAT operators ~~S~~specific approvals shall be issued for an unlimited duration**,** ***subject to periodic review by the competent authority. Non-CAT operators specific approvals shall be renewed at least every 3-years by the competent authority.*** They shall remain valid subject to the operator remaining in compliance with this subpart, OR.GEN.030, OR.GEN.035 (a)(1),(b) and (c).

comment *3416* comment by: *EHOC*

General

Editorial - there is no OR.GEN.035(a)(1).

The referencing of OR.GEN.030 and 035 does not make too much sense, perhaps a clear statement about 'changes to the organisation' or 'continued validity' would be better.

comment *3681* comment by: *Civil Aviation Authority of Norway*

Comment:

This states that, "Specific approvals shall be issued for an unlimited duration. " They shall remain valid subject to the operator remaining in compliance with this subpart, etc.

Current policy being implemented is that all special approvals are currently time limited 5 years for an AOC and 3 Years for non-AOC (CAT) operators who have less routine oversight. Routine changes to AOC (COM) fleets provide a means for this oversight of special approvals. In the case of non-commercial (COM) special approvals oversight is provided by a requirement for a 3-year check. A light touch. Making the specific approvals open-ended for both CAT and COM may well result in a drop in oversight of COM complex aircraft operating in areas requiring special approvals. If this change in current implemented policy is to be changed an oversight mechanism needs to be built in.

Justification:

Special approvals require regular oversight as the equipment requirements, procedures and areas are dynamically developing world-wide particularly in Performance Based Navigation areas. Oversight is built- in for AOC operators, but this is not the case for other non-AOC operators and leaving approvals open ended could reduce safety margins.

Proposed Text

(if applicable):

"Commercial operators specific approvals shall be issued for an unlimited duration, subject to review by the competent authority. Non-commercial operators specific approvals shall be renewed at least every 3-years by the competent authority. They shall …..".

comment *5229* comment by: *DGAC*

OR.GEN.035 (a) ~~(1)~~ ,(b) and (c)

There is no (1) in paragraph (a) of OR.GEN.035

comment *6248* comment by: *Irish Aviation Authority*

Comment:

Existing text gives an open ended approval.

Justification:

Approvals require a specific time frame

Proposed text:

Recommend inclusion of the following text - A specific approval will be issued for a specified time frame to include a commencement and expiry date.

comment *6674* comment by: *AIR FRANCE*

Editorial: in OR GEN 035 there is no (a)(1)

B. I. Draft Opinion - Part-OPS - Subpart D - Section II p. 90

comment *2687* comment by: *AOPA-Sweden*

How is this coordinated with EASA NPA 2008-14? Why about the same regulation in two different documents?

comment *3398* comment by: *UK CAA*

Page No: 90

Paragraph No:

Subpart D, Section II

Comment:

Under current regulations Offshore Operations (helicopter operations in support of the oil and gas industry and other over water specific operations) are conducted under an approval contained within the Operations Specification of the Air Operators Certificate documentation. This procedure was covered by JAR-OPS Joint Implementation Procedures (JIPS) but has not been reflected in NPA 2008-22b at Appendix I to Annex 1 Part Authority Requirements - EASA Standard Organisation Approval Certificate or NPA OPS 2009-02b.

It is considered that a special authorisation for an 'Offshore Operations' specific approval (SPA) be developed and included in Part OPS.SPA with direct inclusion in the Operations Specifications section of the AOC at Part AR.

It is recommended that the SPA framework be modelled and developed from the HEMS SPA and limited to helicopter commercial operators.

An amendment to the definition of 'Offshore Operations' has been made separately

Justification:

To retain the equivalent level of helicopter aviation safety and control achieved under current JAR-OPS procedures. The specific procedure contained within JIPS has not been transferred into the proposed IRs. The extension to cover Commercial (former 'aerial work') activity is considered appropriate.

comment *7598* comment by: *AOPA UK*

How is this coordinated with EASA NPA 2008-14? Why about the same regulation in two different documents?

B. I. Draft Opinion - Part-OPS - Subpart D - Section II - OPS.SPA.001.SPN Operations in areas with specified performance based navigation (SPN) p. 90

comment *1354* comment by: *EUROCOPTER*

§ (b):

The sentence is not understandable: it seems that some words are missing when introducing the part "minimum navigation performance specifications are established" .

Moreover the acronym "MNPS" should be introduced just after "minimum navigation performance specifications" in order to understand the use of this

acronym further in the text.

comment *1536* comment by: *AIRBUS*

Paragraph (b): The correct wording should be:

" (b) An aircraft shall only be operated in designated airspace, based on ICAO Regional Air Navigation Agreement, when minimum navigation performance specifications are established, […]"

comment *2689* comment by: *AOPA-Sweden*

(c) (2) and (3): If the definition of an "operator" is the same as a single private non-commercial aircraft-owner or a small air-club, AOPA-S thinks these requirements are unfeasible impracticable to achieve. It has to be the single pilot's responsibility to keep currency.

comment *3077* comment by: *AEA*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *3084* comment by: *AEA*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *3086* comment by: *AEA*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *3087* comment by: *AEA*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *3399* comment by: *UK CAA*

Page: 90

Paragraph No: OPS.SPA.001.SPN

Comment:

This mixes up two different types of airspace: that which comes under "Performance Based Navigation" (PBN) as defined in ICAO DOC 9613 and "Minimum Navigation Performance Specification Airspace" (MNPS), which is not PBN and applies just to the North Atlantic. The requirements are different and each requires its own AMC.

In addition, within PBN there are multiple approval type requirements to support en-route continental, en-route oceanic and remote, arrivals and departures, and approaches that will each need their own AMCs. It is necessary to break out the approval requirement for PBN into paragraph A, and MNPS into paragraph B.

Change Title to read: ***Operations in Areas with Specified Navigation Performance.***

Para (a). Replace "navigation specifications" with "***Performance Based Navigation specifications"***

Para (b). Is not clear as written. Change to read, "An aircraft shall only be operated in designated Minimum Navigation Performance Specification (MNPS) airspace, based on ICAO Regional Air Navigation Agreement, if the

operator has been approved by the competent authority."

Para (c). Standardise with OPS.SPA.001.RVSM

Include: Flight Planning, Pre-flight procedures, Procedures prior to entry, post flight procedures, Maintenance and training requirements.

Existing para (c)3(vi) Change to read just "specific regional operating procedures." (*It applies to MNPS and a range of RNAV/RNP areas of operation).*

Existing para (c)(3)(vii) Amend to read " navigation database integrity, as applicable." (*It does not apply to all PBN just some aspects*).

Justification:

MNPS airspace is not PBN airspace. Using the words Performance Based Navigation in the title is misleading as it has a definitive meaning, and does not apply to MNPS airspace.

Proposed Text (if applicable):

OPS.SPA.001.SPN Operations in areas with ***Specified Navigation Performance.***

(a) An aircraft shall only be operated in designated airspace, on routes or in accordance with procedures where ***Performance Based Navigation (PBN) specifications*** are established, if the operator has been approved by the competent authority.

(b) An aircraft shall only be operated in designated ***Minimum Navigation Performance Specification (MNPS) airspace***, ***based on ICAO Regional Air Navigation Agreement***, if the operator has been approved by the competent authority.

(c) To obtain such approval by the competent authority, the operator shall:

(1) demonstrate that the navigation equipment meets the required performance in terms of navigation functionality, accuracy, integrity, availability and continuity;

(2) establish and maintain a training programme for the flight crew involved in these operations; and

(3) establish operating procedures specifying:

(i) the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);

(ii) flight crew composition and experience requirements;

(iii) ***flight planning;***

(iv) ***pre-flight procedures;***

(v) ***procedures prior to entry;***

(vi) normal procedures;

(vii) contingency procedures;

(viii) incident reporting;

(ix) ***specific regional operating procedures,***

(x) ***navigation database integrity, as applicable;***

(xi) ***post flight procedures; and***

maintenance and training requirements.

comment *3605* comment by: *PPL/IR Europe*

The wording of this section (and related AMCs) does not permit, where appropriate, self-declared compliance for private operations based on meeting installation, database, operational and pilot training criteria. We believe it should. This has been the case successfully for B-RNAV in Europe and RNP-1 in the USA.

The example of JAA TGL 10 for P-RNAV is that it causes unnecessary complexity for private operators by leaving National Authorities highly unclear about how to implement regulations for private operators which were, in reality, only worded for commercial air transport.

It is essential the GA in Europe continues to have full access to the IFR system with proportionate and reasonable requirements. Europe has some of the lowest standards currently in GA IFR, because the complexity of RNAV regulation overall means that many operations at smaller airports depend on obsolete radio-based non-precision approaches, rather than modern RNAV methods.

In IFR historically, Commerical operators have needed specific approval for procedures, equipment, crew training programmes etc, whilst private operators have needed only to carry the required equipment and hold appropriate pilot qualifications and currency. There is no reason to move away from this principle in the realm of RNP/RNAV, and such a move should not be dictated by the inevitable nature of RNP/RNAV regulations being written, in the early stages of drafting, primarily for jet transport applications. There should be no misunderstanding that the 3rd party risk is any greater in, for example, P-RNAV operations than traditional radio-based IFR. In fact, we believe that modern avionics and RNAV methods make single-pilot private IFR safer than traditional radio IFR, and the regulations should encourage, rather than hinder, the transition to RNAV/RNP for light aircraft and private operators.

comment *3657* comment by: *AUSTRIAN Airlines*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing

legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *3846* comment by: *AUSTRIAN Airlines*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *3847* comment by: *AUSTRIAN Airlines*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *3848* comment by: *AUSTRIAN Airlines*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *3884* comment by: *M Wilson-NetJets*

Original text:

(c) To obtain such approval by the competent authority, the operator shall:

(1) demonstrate that the navigation equipment meets the required performance in terms of navigation functionality, accuracy, integrity, availability and continuity;

(2) establish and maintain a training programme for the flight crew involved in these operations; and

(3) establish operating procedures specifying:

(i) the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);

(ii) flight crew composition and experience requirements;

(iii) normal procedures;

(iv) contingency procedures;

(v) incident reporting;

(vi) specific regional operating procedures, in case

Suggested new text:

(c) To obtain such approval by the competent authority, the operator shall **(where required):**

(1) demonstrate that the navigation equipment meets the required performance in terms of navigation functionality, accuracy, integrity, availability and continuity;

(2) establish and maintain a training programme for the flight crew involved in these operations; and

(3) establish operating procedures specifying:

(i) the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);

(ii) flight crew composition and experience requirements;

(iii) normal procedures;

(iv) contingency procedures;

(v) incident reporting

(vi) specific regional operating procedures, in case

Comment/suggestion:

Not all operations in areas where special navigation performance is applicable requires all the items listed under (c). Therefore, it is suggested to add (where required) to item (c)

comment *4324* comment by: *KLM*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *4325* comment by: *KLM*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *4326* comment by: *KLM*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *4327* comment by: *KLM*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *4540* comment by: *TAP Portugal*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *4543* comment by: *TAP Portugal*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *4546* comment by: *TAP Portugal*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *4548* comment by: *TAP Portugal*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but

will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *4738* comment by: *British Airways Flight Operations*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared with existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of 'experience requirements' is not clear

Proposal:

Delete the reference to '**experience requirements**'

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4921* comment by: *Deutsche Lufthansa AG*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *4922* comment by: *Deutsche Lufthansa AG*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *4927* comment by: *Deutsche Lufthansa AG*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *4928* comment by: *Deutsche Lufthansa AG*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *5195* comment by: *Virgin Atlantic Airways*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'flight crew composition and experience requirements' is superfluous as the subject of training is covered in (c)(2) and flight crew composition is not relevant.

Proposal:

Delete para (c) (3) (ii)

comment *5197* comment by: *Virgin Atlantic Airways*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *5231* comment by: *DGAC*

SPN = MNPS + RVSM (+ PBN) ?

- MNPS and PBN should not be mixed, and new definitions like SPN should be avoided. MNPS and PBN are not at the same level.
- Purpose of PBN is to define different NAV specs at ICAO level and avoid new definitions and special nav specs proliferation. MNPS could be in the future replaced by a Nav specs defined in PBN. It would be better to put PBN and MNPS in separate requirements.

(a) « where a reduced vertical separation minimum of 300 m (1 000 ft) applies above flight level (FL) 290 » should be specified in airspace requirements (ex. Future NPA ATM, in the meantime in appropriate national airspace requirements), not in ops requirements. Replace by "in RVSM airspace"

(a) and (b) : specify "**(PBN)"** in (a) and "(**MNPS)"** in (b)

replace "if the operator has been approved by the competent authority "… by the following :

"**if :**

(1) the aircraft has been issued with the relevant airworthiness approval by the Agency in accordance with Part-21; and

(2) the operator has been approved by the competent authority.

Justification : In the case of PBN, not only the operator has to be approved but the aircraft and its equipment must be certified.

(c)(3) : operating procedures should be as detailed as in OPS.SPA.001.RVSM (b)(2)

comment *5491* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing

legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *5492* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *5493* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *5494* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *6415* comment by: *Konrad Polreich*

OPS.SPA.001.SPN

Since IFR-operations with at least B-RNAV and RNAV-Approach capability is virtually standard today as P-RNAV (RNP 1) probably is at least tomorrow, it should be treated as it is -a standard. A kind of operation, which needs accordingly capable and certified equipment, which must be operated correctly, just like basic navigation via VOR or NDB and has to be trained thoroughly, like it is done in any flight school or operator training nowadays. An RNAV (GPS) approach and enroute navigation with LNAV (BRNAV) is less complex/critical compared to flying a VOR/NDB approach and navigating along an airway established by VOR/NDB's. It does not justifiy the additional administrative burden for a special approval?

In today/tomorrows airspace with more and more disappearing radio nav facilities and routes increasingly based soley on RNAV intersections, it would not be possible to operate IFR at all, without a SPA!

Suggestion:

Limit the requirement for a SPA for more specified and complex operations, like MNPS, Advanced-RNP 1 and RNP AR APCH (RNP SAAAR) and transfer special requirements for the less demanding operations into the general ops subpart. With the required certification for commercial and the declaration for non-commercial operators (of complex-motor-powered aircraft) there is sufficient possibility for the competent authorities to oversee the standards.

Alternatively define, which navigation specifications and type of approaches are possible without any SPA.

comment *6577* comment by: *Southern Cross International*

Due to the type of operations of our company (test and ferry flights) and taking into consideration the wide variety of aircraft operated by our company, the different equipment fits for each of those aircraft, the extreme short period of time those aircraft are operated, and the fact that the majority of our crews are employed on a contract per flight basis, requiring an operator training program is not practicable as these crew members will be compliant with the training programme established by their regular employer for the subject type of aircraft.

comment *6677* comment by: *AIR FRANCE*

(a) In EU OPS 1.243 the Authority approval is " if required". We think that this flexibility should remain.

comment *6678* comment by: *AIR FRANCE*

(b) An aircraft shall only be operated in designated airspace, based on ICAO Regional Air Navigation Agreement, minimum navigation performance

specifications are established, if the operator has been approved by the competent authority.

There is an editorial mistake in the sentence ("where" is probably missing). But more important it really looks like a duplication of (a) and should be deleted.

comment *6832* comment by: *Icelandair*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to '**experience requirements**'

comment *6834* comment by: *Icelandair*

Relevant Text:

c) 3) (vi) specific regional operating procedures in case of MNPS

Comment:

The requirement does not only apply to MNPS.

Proposal:

Delete the reference to MNPS.

comment *6835* comment by: *Icelandair*

Relevant Text:

(c) 3) Establish operating procedures specifying:

Comment:

The content of operating procedures should be defined in the corresponding AMC 20 material.

Proposal:

Define the content of the operating procedures in the AMC20 material

comment *6836* comment by: *Icelandair*

Relevant Text:

C 3 (vii) navigation database integrity, in case of PBN

Comment:

Navigation Database Integrity is not a matter of operating procedures but will be defined (where required) in the corresponding AMC 20 material

Proposal:

Delete the reference to navigation database integrity

comment *7264* comment by: *AIR FRANCE*

Relevant Text:

c) 3) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear.

Proposal:

Delete the reference to '**experience requirements**'

comment *7599* comment by: *AOPA UK*

If the definition of an "operator" is the same as a (2) and (3) single private non-commercial aircraft-owner or a small aero-c1ub, these requirements are not feasible and impracticable to achieve. It has to be the pilot's responsibility to keep currency.

B. I. Draft Opinion - Part-OPS - Subpart D - Section II - OPS.SPA.010.SPN Equipment requirements for operations in MNPS areas p. 90

comment *3249* comment by: *Eurocontrol CND*

OPS.SPA.010.SPN Equipment requirements for operations in MNPS areas

Reference is made to "ICAO Regional Air Navigation agreement" but should rather be made to the ICAO Regional Supplementary Procedures (SUPPs, Doc 7030) for the European Region (EUR).

comment *3889* comment by: *M Wilson-NetJets*

Original text:

(b) Navigation equipment shall be visible and operable by either pilot seated at his/her duty station.

Suggested new text:

(b) **Navigation display, indicators and flight crew controls** shall be visible and operable by either **flight crew member** seated at his/her duty station.

Comment/suggestion:

Navigation equipment would indicate the whole equipment of which many parts are not visible to the flight crew.

comment *6679* comment by: *AIR FRANCE*

Redundant with SPA 001 (c) 3. Delete the whole paragraph

B. I. Draft Opinion - Part-OPS - Subpart D - Section II - OPS.SPA.030.SPN Flight crew requirements for operations in PBN or MNPS areas p. 90

comment *921* comment by: *CAA-NL*

Comment regarding:

For commercial air transport operations the minimum flight crew shall consist of at least two pilots.

Comment CAa-NL:

This way Single Pilot aircraft are excluded. This is not correct.

comment *3540* comment by: *Boeing*

NPA 2009-02b, Part Ops

Section II and III

Paragraphs OPS.SPA.030.SPN and OPS.SPA.030.RVSM

Page 90 and 91 of 464

BOEING COMMENT:

Flight crew requirements for these special operations should all include the requirements that appear in paragraph OPS.SPA.030.LVO(b), as shown on page 93, which state that the flight crew members shall be "*properly*

qualified prior to commencing" special operations.

JUSTIFICATION: Our suggested change will ensure consistency of rulemaking requirements/standards.

comment *5236* comment by: *DGAC*

In contradiction with OR.OPS.115.FC "Composition of Flight Crew" which enables reduction of flight crew from 2 to 1 providing certain conditions are met.

Where does this requirement come from? Not addressed in NPA 2009-02(a)

RNAV (GNSS) approaches (also known as RNP(APCH) with PBN terminology) are authorized even with single pilot. Single pilot operations will just introduce some limitations in RVR as it is mentioned in point 10 of AMC6 OPS GEN 150.A.

comment *5729* comment by: *Peter Moeller*

What if a HEMS helicopter is certified for SP IFR? This rule would stop the introduction of IFR in HEMS operation.

comment *5787* comment by: *Norsk Luftambulanse*

This does not support the fact that HEMS operators in Europe and elsewhere consider and perform IFR as an integrated part of their HEMS operations and has done so for many years. It also hinder further introduction of IFR to increase safety in HEMS operations

We suggest that for single pilot HEMS IFR operations, when the Aircraft is certificated for Single Pilot IFR, the technical crew member shall be qualified to perform the duties requiring two pilots. This qualification then replaces the requirement for two pilots described in OPS.SPA.030 SPN and LVO.

comment *6681* comment by: *AIR FRANCE*

What is a "PBN area" ? OPS.SPA.001.SPN Operations in areas with specified performance based navigation (SPN) speaks about "SPN". A world wide harmonized phraseology is a basic requirement in matters of Navigation. We suggest to avoid any new wording that is not used in the PBN Manual. (PBN Area is not defined in the PBN manual)

B. I. Draft Opinion - Part-OPS - Subpart D - Section III p. 91

comment *4550* comment by: *TAP Portugal*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

B. I. Draft Opinion - Part-OPS - Subpart D - Section III - OPS.SPA.001.RVSM Operations in airspace with reduced vertical separation minima (RVSM) p. 91

comment *1537* comment by: *AIRBUS*

Paragraph (b) (2): Even if the maintenance programme should be a required document, it should not be part of the operating procedures. The maintenance programme should be deleted from the list of the operating procedures items.

comment *2690* comment by: *AOPA-Sweden*

If the definition of an "operator" is the same as a single private non-commercial aircraft-owner or a small air-club, AOPA-S thinks these requirements are unfeasible impracticable to achieve. It has to be the single pilot's responsibility to keep currency.

comment *3088* comment by: *AEA*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *3250* comment by: *Eurocontrol CND*

OPS.SPA.001.RVSM Operations in airspace with reduced vertical separation minimum

It is stated that RVSM is applied "above FL290" which is incorrect. RVSM can be applied between FL290 and FL410 inclusive in accordance with ICAO. Why not use the ICAO wordings instead of paraphrasing?

comment *3400* comment by: *UK CAA*

Page No: 91

Paragraph No: OPS.SPA.001.RVSM (a) and (b)(2)

Comment:

Para (a). RVSM airspace applies to aircraft flying at Flight Levels between FL290 and FL410 inclusive, not above FL290. TGL 6, in places, does mention above FL290, but it should read at and above FL290. RVSM airspace itself exists from FL285 to FL420 and utilises FL290 through to FL410.

In Para (b)(2). The list of operating procedures to be specified omits importantly Contingency Procedures together with TCAS/ACAS Alerts, R/T phraseology and Height Monitoring requirements.

Justification:

Definition of RVSM airspace as applied to aircraft operation is incorrect.

Complete list of operating procedures required.

Proposed Text (if applicable):

(a) An aircraft shall only be operated in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies ~~above~~ ***between*** flight level (FL) 290 ***and FL 410 inclusive,*** if:

(1) the aircraft has been issued with an RVSM airworthiness approval by the Agency in accordance with Part-21; and

(2) the operator has been approved by the competent authority.

(b) To obtain such approval by the competent authority, the operator shall:

(1) establish and maintain a training programme for the flight crew involved in these operations; and

(2) establish operating procedures specifying:

(i) the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);

(ii) flight crew composition and experience requirements;

(iii) flight planning;

(iV) pre-flight procedures;

(v) procedures prior to RVSM airspace entry;

(vi) in-flight procedures;

(vii) post flight procedures;

(viii) maintenance programme;

(ix) incident reporting;

(x) specific regional operating procedures;

(xi) contingency procedures;

(xii) TCAS/ACAS alerts;

(xiii) R/T phraseology; and

height monitoring requirements.

comment *3658* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *4328* comment by: *KLM*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *4742* comment by: *British Airways Flight Operations*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared with existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of 'experience requirements' is not clear

Proposal:

Delete the reference to '**experience requirements**'

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4929* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *5199* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'flight crew composition and experience requirements' is superfluous as the subject of training is covered in (B)(1) and flight crew composition is not relevant.

Proposal:

Delete para (B) (2) (ii)

comment *5495* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *6578* comment by: *Southern Cross International*

Our operations may involve flights that remain outside EU airspace, and are with aircraft registered in non-EASA member states. To obtain RVSM airworthiness approvals in accordance with Part 21 for each of those individual aircraft is not practicable.

comment *6837* comment by: *Icelandair*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *7266* comment by: *AIR FRANCE*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear.

Proposal:

Delete the reference to 'experience requirements'

comment *7600* comment by: *AOPA UK*

If the definition of an "operator" is the same as a single private non-commercial aircraft-owner or a small aero-club, these requirements are not feasible and impracticable to achieve. It has to be the individual pilot's responsibility to keep current.

B. I. Draft Opinion - Part-OPS - Subpart D - Section III - OPS.SPA.030.RVSM Flight crew requirements for operations in RVSM airspace p. 91

comment *3541* comment by: *Boeing*

NPA 2009-02b, Part Ops

Section II and III

Paragraphs OPS.SPA.030.SPN and OPS.SPA.030.RVSM

Page 90 and 91 of 464

BOEING COMMENT:

Flight crew requirements for these special operations should all include the requirements that appear in paragraph OPS.SPA.030.LVO(b), as shown on page 93, which state that the flight crew members shall be "*properly qualified prior to commencing*" special operations.

JUSTIFICATION: Our suggested change will ensure consistency of rulemaking requirements/standards.

comment *5237* comment by: *DGAC*

In contradiction with OR.OPS.115.FC "Composition of Flight Crew" which enables reduction of flight crew from 2 to 1 providing certain conditions are met.

Where does this requirement come from. Not addressed in NPA 2009-02(a)

B. I. Draft Opinion - Part-OPS - Subpart D - Section IV p. 92

comment *5239* comment by: *DGAC*

The definitions of "Category I operations", "Lower than Standard Category I", "Other than Standard Category II", "Category II operations" and "Category III operations" should be somewhere in the IR (not just in the

AMC) for instance in OPS.GEN.010 Definitions (where you already find the definition of LVO and LVP)

The purpose of NPA OPS 41 was to have harmonized minima between EU-OPS/JAR-OPS and FAA rules (TERPS). There is no rationale for transferring those minima to AMC. The result could be deharmonization.

Huge contradiction between what is stated in NPA 2009-02(a) when explaining the approach for SPA.SPN ("As an AMC does not create any obligation on an operator, the provisions in this section have been included to address the obligation for an operational approval to conduct these type of operations."). Why is the approach totally different with LVO, transferring almost everything in AMC ? Does not answer the international demand for harmonization of LVO requirements!!!

Through EU OPS, European states agreed on a common regulation for minima determination, there is no benefit to introduce them now as an AMC. Minima in US are introduced in TERPS which is a not an AC. Furthermore, FAA publishes its minima whereas in Europe, most of the states do not publish their minima so that European operator can determine themselves their minima.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IV - OPS.SPA.001.LVO Low visibility operations (LVO) p. 92

comment *1693* comment by: *Dassault Aviation*

Technical comment.

Page 92 OPS.SPA.001.LVO Low Visibility Operations: §OPS.SPA.001.LVO(a) and §GM1 OPS.SPA.001.LVO(c) defines EFVS operations as "Low Visibility Operations LVO". Furthermore, §OPS.SPA.010.LVO requires, for LVO operations, the two following points:

- - one radio-altimeter, and
- - an "aircraft" certification for DH < 200 feet (strictly).

As far as the radio altimeter is concerned for EVS operations, §3.1 to GM OPS.SPA.001.LVO(b)(2) comes in contradiction with the requirement to have a radio-altimeter on board - see above. Indeed, this GM says "*if the aircraft is equipped with a radio altimeter, it should be used only as enhanced terrain awareness during approach using EVS and should not be taken into account for the operational procedure development.*"

As far as the "aircraft" certification for DH < 200 feet is concerned, §2 to AMC OPS.SPA.001.LVO(b)(2) clearly states that an EFVS approach is an approach where DH is ≥ 200 feet. There is therefore a contradiction.

We understand therefore, from the AMC and GM quoted above, that an EFVS approach is classified as a Cat1 approach, which does not require a radio-altimeter to determine the DH, nor to determine the 100 feet EVS.

We therefore propose to not classify EFVS operations as Low Visibility Operations (LVO) since these are Cat1 operations which are not themselves classified as LVO.

comment *2512* comment by: *Royal Aeronautical Society*

Paragraph (b)(3) needs the insertion of 'so as' between 'failure' and 'to monitor' if it is to be read correctly. **It is suggested that paragraph (b)(3) be amended to read, 'establish a system for recording approach and/or automatic landing success and failure so as to monitor the overall safety of the operation'.**

comment *2691* comment by: *AOPA-Sweden*

If the definition of an "operator" is the same as a single private non-commercial aircraft-owner or a small air-club, AOPA-S thinks these requirements are unfeasible impracticable to achieve. It has to be the single pilot's responsibility to keep currency.

comment *3090* comment by: *AEA*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *3091* comment by: *AEA*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative

requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *3254* comment by: *Eurocontrol CND*

Section IV - Low visibility Operations:

LTS and OTS are not ICAO procedures

GM1 OPS.SPA.001.LVO - Terminology:

This section introduces LTS and OTS, but there is no mentioning of CAT I, CAT II, or CAT III.

Not clear why the terminology does not encompass all LVO terms.

GM2 OPS.SPA.001.LVO – Low visibility operations

As this document is a European standard and refers to LVPs we would recommend adding the ICAO EUR Doc 013: EUROPEAN GUIDANCE MATERIAL ON AERODROME OPERATIONS UNDER LIMITED VISIBILITY CONDITIONS which provides detailed information about low visibility procedures.

comment *3659* comment by: *AUSTRIAN Airlines*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *3849* comment by: *AUSTRIAN Airlines*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between

200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *4329* comment by: *KLM*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *4330* comment by: *KLM*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *4650* comment by: *TAP Portugal*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment.

Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *4651* comment by: *TAP Portugal*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *4744* comment by: *British Airways Flight Operations*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared with existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of 'experience requirements' is not clear

Proposal:

Delete the reference to '**experience requirements**'

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4930* comment by: *Deutsche Lufthansa AG*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing

legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *4931* comment by: *Deutsche Lufthansa AG*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *5201* comment by: *Virgin Atlantic Airways*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *5241* comment by: *DGAC*

(a) : Replace "~~in conditions lower than standard Category I~~" by "**with minima lower than those used for standard Category I**" to avoid confusion with the "Lower than Standard Category I" which is only one kind of LVO.

(b)(2) : operating procedures should be as detailed as in OPS.SPA.001.RVSM

(b)(2)

comment *5496* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *5497* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *6838* comment by: *Icelandair*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'experience requirements' is a change compared to existing legislation. It has not been highlighted in the Regulatory Impact Assessment. Moreover, the meaning of experience is not clear

Proposal:

Delete the reference to 'experience requirements'

comment *6840* comment by: *Icelandair*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR (between 200/150/125m and 400m) is new and does not seem to be driven by safety considerations. The EASA proposal seems to be driven by administrative requirements rather than safety without having assessed the impact.

Proposal:

Realign with EU-OPS

comment *7005* comment by: *Virgin Atlantic Airways*

Relevant Text:

b) 2) (ii) flight crew composition and experience requirements

Comment:

The reference to 'flight crew composition' is superfluous as flight crew composition is not relevant.

Proposal:

Delete para (c) (3) (ii)

comment *7228* comment by: *Managing Editor / Pilot & Flugzeug*

OPS.SPA.001.LVO and OPS.SPA.010.LVO would essentially prohibit t/o operations of CAT-I a/c below 400m RVR. However, especially in multiengine aircraft, takeoffs with less RVR or corresponding visibility have been safely and regulary performed in the past (under JAR and LuftVO (germany)) and are an essential option in private IFR-operations.

These aircraft (e.g. PA34, C340, C414, BE90 etc) are not capable of CAT II ops or higher and the crews in private operations can not be certified to the prescribes standards. As a result, the wording as given here will prohibit them from RVR<400 takeoffs and severely reduce the usablility of these aircraft.

comment *7269* comment by: *AIR FRANCE*

Relevant Text:

a) An aircraft shall only be operated in conditions lower than standard Category I, take off in less than 400 m RVR or with the aid of EVS, if the operator has been approved by the Competent Authority.

Comment:

The requirement for approval for take-off in less than 400m RVR is new.

EU-OPS appendix 1. to OPS 1.430 requires approval for reduced RVR 125 or 150m.

Proposal:

Realign with EU-OPS.

comment *7601* comment by: *AOPA UK*

If the definition of an "operator" is the same as a private non-commercial aircraft-owner or a small aero-c1ub, these requirements are not feasible impracticable to achieve. It has to be the pilot's responsibility to keep currency.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IV -OPS.SPA.010.LVO Aircraft requirements for LVO p. 92

comment *84* comment by: *Air Southwest*

OPS.SPA.010.LVO (b) reads as if it is mandatory for all aircraft to be certificated for operations with decision heights below 200ft or no decision height. Suggest that this paragraph is re-written: "Only aircraft certificated for operations with decision heights below 200ft or no decision height, are to be used in such operations."

comment *590* comment by: *ECA - European Cockpit Association*

Comment on OPS.SPA.010.LVO(b): change as follows:

(b) **Each aircraft** ~~**Aircraft**~~ shall be certificated for operations with decision heights below 200 ft or no decision height.

comment *922* comment by: *CAA-NL*

Comment regarding:

(a) In addition to the equipment required by OPS.GEN, aircraft involved in LVO shall be equipped with a radio altimeter. (b) Aircraft shall be certificated

for operations with decision heights below 200 ft or no decision height.

Suggestion CAA-NL:

For Low vis. Take-off there is no need for a Radio Altimeter.

Text should be changed, to excluded ta Radio Alt. For Low Vis. Take-off

comment *2301* comment by: *Austro Control GmbH*

Recommendation:

The requirement should mention that for a LVO take-off a radio altimeter is not necessary.

comment *3886* comment by: *M Wilson-NetJets*

Original text:

OPS.SPA.010.LVO Aircraft requirements for LVO

(a) In addition to the equipment required by OPS.GEN, aircraft involved in LVO shall be equipped with a radio altimeter.

(b) Aircraft shall be certificated for operations with decision heights below 200 ft or no decision height.

Suggested new text:

OPS.SPA.010.LVO Aircraft requirements for LVO **(Except LVTO)**

(a) In addition to the equipment required by OPS.GEN, aircraft involved in LVO shall be equipped with a radio altimeter.

(b) Aircraft shall be certificated for operations with decision heights below 200 ft or no decision height.

Comment/suggestion:

This paragraph should only be applicable to LVO landing operations. LVO also contains LVTO, which does not need these requirements.

comment *5244* comment by: *DGAC*

OPS.SPA.010.LVO may not be consistent with CS AWO which determines the airworthiness level for Cat II or Cat III operations. Delete (a) or make reference to CS-AWO if needed at this level.

comment *5752* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) In addition to the equipment required by OPS.GEN, aircraft involved in LVO shall be equipped with a radio altimeter.

Comment:

The requirement for a radio altimeter should be restricted to landing or approach but not for take-off.

Proposal (including ***new text***):

(a) In addition to the equipment required by OPS.GEN, aircraft involved in LVO ***approach and landing*** shall be equipped with a radio altimeter.

comment *6420* comment by: *Konrad Polreich*

OPS.SPA.010.LVO (b) and OPS.SPA.001.LVO

This sentence together with the statement in OPS.SPA.001.LVO excludes aircraft from doing LVTO, which are not certified and approved for CAT II or III approaches. I doubt the justification for this, since presently it can be done, even without the extensive training and checking required by this NPA. My experience on helicopters is, that take-offs can safely be done down to at least 150 m visibility, when the crew has a good operational concept (multi-pilot only) and is trained to do this. Our helicopter is not certified for DH < 200 ft.

I don't doubt there is safety data justifying this cancelling of present possibilities. There are a lot of operators safely doing LVTO with RVR > 150m without CAT II or III approvals for years. Anyway special training for LVTO would be beneficial, but this could be regulated in the OR. Only LVTO with RVR < 150/200m should require an SPA.

Suggestion:

Delete part (b) of OPS.SPA.010.LVO and alter OPS.SPA.001.LVO to exclude take-offs down to a minimum of 150 m visibility from the requirement of a special approval (SPA) at all (delete 400m and set 150 m).

OPS.SPA.030.LVO (b) does already demand properly trained FCM's.

Training and checking requirements could be detailed in an AMC to the OR.

comment *6511* comment by: *IATA*

b)(3)establish a system for recording approach and/or automatic landing success and failure to monitor the overall safety of the operation and

This is a new requirement and totally

impractical for a day to day operation.

Proposal: Delete

B. I. Draft Opinion - Part-OPS - Subpart D - Section IV -OPS.SPA.020.LVO LVO operating minima p. 92

comment *6* comment by: *KLM*

In (c) the pilot in commend shall ensure etc, while the aerodrome is authorised by the State and has established low vis procedures.

It is the responsibility of the aerodrome operator and ANSP that the correct procedures are followed. To put another burden onto a pilot is too much and may create confusion.

Moreover a simple airport with one taxiway and one apron may use normal procedures in low vis because there is no need to have special procedures with low vis. This is an unneccesary requirement and shall be deleted.

It is the pilots responsibility to complete the flight and the responsibility of the aerodrome operator to take care of the ground procedures.

The requirement is obsolete.

comment *631* comment by: *ECA - European Cockpit Association*

Comment on OPS.SPA.020.LVO(b): change as follows:

(a) The radio altimeter shall be used to determine the decision height.

(b) An operator shall not use an aerodrome for operations in accordance with this section, unless:

(1) the aerodrome has been approved for such operations by the State in which it is located;

(2) low visibility procedures (LVP) have been established at ~~**that**~~ **the** aerodrome ~~**where LVO are to be conducted.;**~~

add new text:

(3) the operator has been authorised by the State where the aerodrome is located.

Justification:

We consider that it has to be clear that the operator has to be authorised by the State of the aerodrome to perform LVO on its soil.

comment *646* comment by: *ECA - European Cockpit Association*

Comment on OPS.SPA.020.LVO(c): add the following proposed text:

(c) The pilot-in-command shall ensure that:

(1) appropriate LVPs are in force according to information received from Air

Traffic Services, before commencing a Low Visibility Take-off, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach, and

(2) the status of the visual and non-visual facilities are sufficient prior to commencing a Low Visibility Take-Off, an Approach utilising EVS, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach.

(3) that the status of the aeroplane and of the relevant airborne systems is appropriate for the specific operation to be conducted.

Justification:

The requirement of equipment "installed" for this kind of operations does not necessarily mean the equipment shall be in a full operational status.

comment *3093* comment by: *AEA*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *3660* comment by: *AUSTRIAN Airlines*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *3888* comment by: *M Wilson-NetJets*

Original text:

(b) An operator shall not use an aerodrome for operations in accordance

with this section, unless:

(1) the aerodrome has been approved for such operations by the State in which it is located;

(2) low visibility procedures (LVP) have been established at that aerodrome where LVO are to be conducted.

(c) The pilot-in-command shall ensure that:

(1) appropriate LVPs are in force according to information received from Air Traffic Services, before commencing a Low Visibility Take-off, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach, and

(2) the status of the visual and non-visual facilities are sufficient prior to commencing a Low Visibility Take-Off, an Approach utilizing EVS, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach.

Suggested new text:

(b) An operator shall not use an aerodrome for operations in accordance with this section, unless:

(1) the aerodrome has been approved for such operations by the State in which it is located;

(2) low visibility procedures (LVP) have been established at that aerodrome where LVO are to be conducted.

(c) The pilot-in-command shall ensure that:

(1) appropriate LVPs are in force according to information received from Air Traffic Services, before commencing a Low Visibility Take-off, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach, and

(2) the status of the visual and non-visual facilities are sufficient prior to commencing a Low Visibility Take-Off, an Approach utilizing EVS, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach.

Note: at aerodromes where the term LVP or LVO are not used the operator shall ensure that equivelant procedures adhere to the requirements of LVP at the aerodrome. This situation shall be clearly noted in the appropriate route manual including guidance to he flight crew on how to determine equivelant LVP is in effect.

Comment/suggestion:

Many airports outside the European region do not (yet) use the terminology of LVP or LVO but do have procedures and equipment in place that adhere to the requirements of LVP. Operators should be allowed to ascertain that these procedures and equipments adhere to the LVP requirements and after properly documenting this, use LVO/LVTO at that particular aerodrome.

comment *4331* comment by: *KLM*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *4653* comment by: *TAP Portugal*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *4932* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *5203* comment by: *Virgin Atlantic Airways*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *5246* comment by: *DGAC*

(a) "The radio altimeter shall be used to determine the decision height for operations other than Lower than standard Cat I operations or Approaches utilising EVS".

Lower than standard Cat I operations and Approaches utilising EVS are considered as LVO operations. A radio altimeter is not necessary to determine the decision height for such approaches.

(b) Does it (A/D approval + LVP in force) apply to EVS as well ?

comment *5499* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *6841* comment by: *Icelandair*

Relevant Text:

*a) The radio altimeter shall be used **to determine** the decision height*

Comment:

This should not apply to the determination of minima which is subject to a calculation method.

Proposal:

Amend to read as ***'The radio altimeter shall be used during low visibility operations'***

comment *7350* comment by: *FAA*

1. OPS.SPA.020.LVO LVO operating minima para a.

Comment:

This regulation will require the use of a radio altimeter to determine DH. Depending on the underlying terrain, the radio altimeter may not represent the correct operational decision height. Radio altimeters are typically not used for decision heights of 200 ft or higher.

The radio altimeter should only be used for identifying the DH if the underlying terrain has been evaluated and a radio altimeter height adjusted for terrain irregularities is made available to the operator. A barometric altimeter can be used at 200 ft or higher.

Recommendation:

Modify the regulation and the guidance material to clarify and amplify the usage.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IV -OPS.SPA.030.LVO Flight crew requirements for LVO p. 93

comment *818* comment by: *Lukas KISTLER*

(a) ... LVTO (low visibility take offs) with helicopters may be conducted in single pilot operation if the pilot is qualified to do so.

comment *924* comment by: *REGA*

LVTO (low visibility take offs) with helicopters may be conducted in single pilot operation <u>if the pilot is qualified and helicopter is certified to do so</u>. Helicop... Minimum IFR Approach Speed, e.g. AW109 55kts.

Proposal (a)

<u>Except for helicopters</u> the minimum flight crew for operations in meteorological conditions lower than standard Category I or with the aid of enhanced vision systems (EVS) shall consist of at least two pilots.

comment *2302* comment by: *Austro Control GmbH*

This requirement is linked to qualification of the pilots;it does not completely correspond with the Part- FCL requirements and therefore should be rechecked and adapted.

comment *2692* comment by: *AOPA-Sweden*

(a): AOPA-S does not see a need for two pilots using an EVS system in non-commercial operations.

comment *5247* comment by: *DGAC*

(a) : Replace "in meteorological conditions lower than ~~standard Category I~~" by "in meteorological conditions lower than **the minima used for standard Category I**" to avoid confusion with the "Lower than Standard Category I".

(a) Delete "or with the aid of enhanced vision systems (EVS)" as paragraph 4 of GM.OPS.SPA.001.LVO(b)(2) requires two pilots in EVS operations only for RVR below 550m, which is the Cat I Lowest RVR.

(b) add after "shall be properly qualified" the following : "**according to OPS.SPA.001.LVO (b)(1)"**

comment *5788* comment by: *Norsk Luftambulanse*

(a) This does not support the fact that HEMS operators in Europe and elsewhere consider and perform IFR as an integrated part of their HEMS operations and has done so for many years. It also hinder further introduction of IFR to increase safety in HEMS operations

We suggest that for single pilot HEMS IFR operations, when the Aircraft is certificated for Single Pilot IFR, the technical crew member shall be qualified to perform the duties requiring two pilots. This qualification then replaces the requirement for two pilots described in OPS.SPA.030 SPN and LVO.

comment *7602* comment by: *AOPA UK*

AOPA UK does not see a need for two pilots using an EVS system in non-commercial operations.

B. I. Draft Opinion - Part-OPS - Subpart D - Section V p. 94

comment *2693* comment by: *AOPA-Sweden*

It should be elucidated that this Section V is only for commercial operations, AOPA-S can not comprehend this is for a private pilot bring his hunting-rifle with ammunition or fuel for his cottage on a flight to a remote place without

any land communication.

comment *5248* comment by: *DGAC*

(a) delete "2007-2008 Edition of the" as the current edition of the Technical Instructions is already the 2009-2010 (since 01 jan 2009)". The reference to the edition should be made in the AMC rather than in the IR to keep some flexibility (easier to keep up to date).

comment *7603* comment by: *AOPA UK*

It should be made clear that Section V is only for commercial operations, AOPA UK cannot understand why a private pilot cannot bring his hunting-rifle with ammunition or fuel for his cottage on a flight to a remote place without any external communication.

B. I. Draft Opinion - Part-OPS - Subpart D - Section V - OPS.SPA.001.DG Approval to transport dangerous goods p. 94

comment *1180* comment by: *CAA-NL*

OPS.SPA.001.DG

Comment 1: Reference to OPS.GEN.035(b) is incorrect.

Justification: OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b)

Proposed Text:

Amend OPS.SPA.001.DG as follows:

"Except as provided for in OPS.GEN.030~~5~~(b), an operator….."

OPS.SPA.001.DG(b)(2)(ii)

Comment 2: OPS.SPA.001. DG(b)(2)(ii) states that an operator shall establish operating procedures containing information and instructions on the requirements for acceptance, *packing, marking*, handling, loading, stowage and segregation of dangerous goods.

Justification: Packing and marking are the responsibility of the shipper and so it is inappropriate to require an operator to have such procedures in place. An awareness of the packing, marking (and labelling which is equally relevant to a shipper but not stated in the text) requirements would be addressed by the requirement for procedures relating to acceptance.

Proposed Text:

"(ii) the requirements for acceptance, ~~packing, marking,~~ handling,

loading, stowage and segregation of dangerous goods."

OPS.SPA.001DG(b)(2)

Comment 3: No mention is made of the requirement for the operator to provide information in the event of a serious incident involving dangerous goods or an accident.

Justification: NPA 2009-02f suggests this is covered by OPS.SPA.001.DG(b)(2)(viii) but this relates to "incident reporting" which is quite different.

Proposed Text

Add a new (ix) to OPS.SPA.001DG(b)(2) as follows:

"(ix) provision of information in the event of an incident or accident as required by the Technical Instructions."

OPS.SPA.001.DG(c)

Comment 4: A dangerous goods approval is granted to enable an operator to carry any dangerous goods which are permitted in normal circumstances as provided for by the Technical Instructions and would not refer to specific classes.

Justification: It is impractical for an operator to specify what classes of dangerous goods he intends to carry because at the time of application he simply will not know what he will be asked to carry. Alternatively, an operator could state "all 9 classes" on his application, to cover any future eventuality, but this would be of no value.

Proposed Text:

Delete OPS.SPA.001.DG(c)

comment *1425* comment by: *International Air Transport Association*

OPS.SPA.001.DG(a).

The reference to OPS.GEN.035(b) is incorrect, there is no such reference, rather the reference should read OPS.GEN.030(b).

OPS.SPA.001.DG(b)(2)(ii).

The text of this subparagraph requires that operators have procedures for acceptance, **packing, marking**,... Packing and marking of packages containing dangerous goods is the responsibility of the shipper. The operator is required to validate, to the extent possible by way of an acceptance check list that the shipper has complied, but the operator should not be held accountable for the compliance.

The reference to "packing, marking" should be deleted.

OPS.SPA.001.DG(c).

It is not clear just what is expected that an operator wishing to carry all classes of dangerous goods should state in the approval to comply with this requirement. Would it be sufficient for the statement to be "all dangerous

goods in Classes 1 - 9", which really doesn't provide any information. The opinion of the commenter is that instead of the operator having to include information about the classes of dangerous goods intended to be carried, that instead the operator should at this point make a statement about any exclusions to the classes of dangerous goods that will not be carried.

comment *1657* comment by: *British Parachute Association*

We suggest that at the end of (a) the following words are added.

"Except in the case of parachute flights where smoke trail devices may be carried by display parachutists who are intending to exit the aircraft."

This would ensure consistency with our comments no. 1412, 1604 and 1632.

comment *1736* comment by: *Luftfahrt-Bundesamt*

- The reference „OPS.GEN.035(b)" mentioned under character (a) does not exist. The right reference would be „OPS.GEN.**030**(b)".

- Reference (b)(2)(ii): The packing and marking of Dangerous Goods has to be done by the shipper and is not a task of the operator. Therefore those two words should be deleted, leaving the bullet as follows:

(ii) the requirements for acceptance, handling, loading, stowage and segregation of dangerous goods;

- as further information, the announcement of a serious accident or incident involving Dangerous Goods should be required, as already specified in the ICAO Technical Instructions. Under (b)(2) should therefore be added:

„(ix) provision of information in the event of an incident or accident as required by the ICAO Technical Instructions"

- Paragraph (c): Operator get an approval for the transport of Dangerous Goods and commit theirselves to stick to the regulations of the ICAO Technical Instructions. Dividing the approval and, more precisely, the AOC would complicate the AOC unnecessarily.

Therefore paragraph (c) should be deleted.

comment *1988* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Reference to OPS.GEN.035(b) is incorrect.

Comment:

OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b).

Proposal:

Amend OPS.SPA.001.DG as follows:

"Except as provided for in OPS.GEN.030(b), an operator….."

comment *1989* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

OPS.SPA.001. DG(b)(2)(ii) states that an operator shall establish operating procedures containing information and instructions on the requirements for acceptance, packing, marking, handling, loading, stowage and segregation of dangerous goods.

Comment:

Packing and marking are the responsibility of the shipper and so it is inappropriate to require an operator to have such procedures in place. An awareness of the packing, marking (and labelling which is equally relevant to a shipper but not stated in the text) requirements would be addressed by the requirement for procedures relating to acceptance.

Proposal:

"(ii) the requirements for acceptance, ~~packing, marking,~~ handling, loading, stowage and segregation of dangerous goods."

comment *1990* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

A dangerous goods approval is granted to enable an operator to carry any dangerous goods which are permitted in normal circumstances as provided for by the Technical Instructions and would not refer to specific classes.

Comment:

It is impractical for an operator to specify what classes of dangerous goods he intends to carry because at the time of application he simply will not know what he will be asked to carry. Alternatively, an operator could state "all 9 classes" on his application, to cover any future eventuality, but this would be of no value.

Proposal:

Delete OPS.SPA.001.DG(c).

comment *1994* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

No mention is made of the requirement for the operator to provide information in the event of a serious incident involving dangerous goods or

an accident.

Comment:

NPA 2009-02f suggests this is covered by OPS.SPA.001.DG(b)(2)(viii) but this relates to "incident reporting" which is quite different.

Proposal:

Add a new (ix) to OPS.SPA.001DG(b)(2) as follows:

"(ix) provision of information in the event of an incident or accident as required by the Technical Instructions.

comment *2513* comment by: *Royal Aeronautical Society*

The reference in paragraph (a) to OPS.GEN.035(b) does not exist. **It is thought that the reference should be to OPS.GEN.030(b).**

comment *2771* comment by: *Pietro Barbagallo ENAC*

Comment: Reference to OPS.GEN.035(b) is incorrect.

Justification:OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b)

Proposal :Amend OPS.SPA.001.DG as follows: "Except as provided for in OPS.GEN.030(b), an operator..."

comment *2772* comment by: *Pietro Barbagallo ENAC*

Comment:OPS.SPA.001.DG (b) (2) (ii) states that an operator shall establish operating procedures containing information and instructions on the requirements for acceptance, packing, marking, handling, loading, stowage and segregation of dangerous goods.

Justification: Packing and marking are the responsibility of the shipper and so it is inappropriate to require an operator to have such procedures in place. An awareness of the packing, marking (and labelling which is equally relevant to a shipper but not stated in the text) requirements would be addressed by the requirement for procedures relating to acceptance.

Proposal: Amend OPS.SPA.001.DG (b) (2) (ii) as follows: "the requirements for acceptance, handling, loading, stowage and segregation of dangerous goods."

comment *2773* comment by: *Pietro Barbagallo ENAC*

OPS.SPA.001.DG(2)(iii)

Comment: The meaning of the statement "special notification requirements", in the event of an accident or occurrences when dangerous goods are carried, is not clearly defined.

Justification: The ICAO Technical Instructions, include specific provisions for the notification of accidents and incidents related to the transport of dangerous goods by air, including all the necessary information for the proper management of such occurrences.

Proposal: Amend OPS.SPA.001.DG (b) (2) (iii) as follows: "provision of information in the event of an incident or accident as required by the Technical Instructions."

comment *2774* comment by: *Pietro Barbagallo ENAC*

OPS.SPA.001.DG (c)

Comment: A dangerous goods approval is granted to enable an operator to carry any dangerous goods which are permitted in normal circumstances as provided for by the Technical Instructions and would not refer to specific classes.

Justification: It is impractical for an operator to specify what classes of dangerous goods he intends to carry because at the time of application he simply will not know what he will be asked to carry. Alternatively, an operator could state "all 9 classes" on his application, to cover any future eventuality, but this would be of no value.

Proposal:Delete OPS.SPA.001.DG (c)

comment *3401* comment by: *UK CAA*

Page No: 94

Paragraph No:

OPS.SPA.001.DG

Comment:

Reference to OPS.GEN.035(b) is incorrect.

Justification:

OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b).

Proposed Text (if applicable):

Amend OPS.SPA.001.DG as follows:

"Except as provided for in OPS.GEN.03<u>0</u>~~5~~(b), an operator….."

comment *3402* comment by: *UK CAA*

Page No: 94

Paragraph No:

OPS.SPA.001DG(b)(2)

Comment:

No mention is made of the requirement for the operator to provide information in the event of a serious incident involving dangerous goods or an accident.

Justification:

NPA 2009-02f suggests this is covered by OPS.SPA.001.DG(b)(2)(viii) but this relates to "incident reporting" which is quite different.

Proposed Text (if applicable):

Add a new (ix) to OPS.SPA.001DG(b)(2) as follows:

"(ix) provision of information in the event of an incident or accident as required by the Technical Instructions."

comment *3425* comment by: *UK CAA*

Page No: 94

Paragraph No: OPS.SPA.001.DG(c)

Comment:

A dangerous goods approval is granted to enable an operator to carry any dangerous goods that are permitted in normal circumstances as provided for by the Technical Instructions and would not refer to specific classes.

Justification:

It is impractical for an operator to specify what classes of dangerous goods he intends to carry because at the time of application he simply will not know what he will be asked to carry. Alternatively, an operator could state "all 9 classes" on his application, to cover any future eventuality, but this would be of no value.

Proposed Text (if applicable):

Delete OPS.SPA.001.DG(c)

comment *3901* comment by: *FOM ANWB MAA*

OPS.SPA.001.DG Approval to transport dangerous goods

(a) Except as provided for in OPS.GEN.~~035~~030(b), an operator shall only transport dangerous goods by air, if the operator has been approved by the

competent authority.

WRONG reference, must be OPS GEN 030 (b)

comment *3970* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(a) WRONG reference, must be OPS GEN 030 (b)

comment *4708* comment by: *Virgin Atlantic Airways*

Relevant Text:

(a) Except as provided for in OPS.GEN.035(b)

Comment:

OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b)

Proposed Text:

Change text to:

(a) Except as provided for in OPS.GEN.030~~5~~(b), an operator…..."

comment *4712* comment by: *Virgin Atlantic Airways*

Relevant Text:

(ii) the requirements for acceptance, packing, marking, handling, loading, stowage and segregation of dangerous goods.

Comment:

Packing and marking are not the responsibility of the operator they are the responsibility of the shipper. It is therefore inappropriate to require an operator to have such procedures in place.

Proposed Text:

Change text to:

(ii) the requirements for acceptance,~~ packing, marking~~, handling, loading, stowage and segregation of dangerous goods."

comment *4717* comment by: *Virgin Atlantic Airways*

Relevant Text:

(c) An application for an approval to carry dangerous goods shall include information on the classes of dangerous goods intended to be carried.

Comment:

It is impossible for an operator to know what classes they will be carrying, so they will just apply for all nine classes on every application; therefore there is no value to specifying dangerous goods classes.

Proposal:

Delete OPS.SPA.001.DG (c)

comment *5250* comment by: *DGAC*

Check the adequacy of the reference to OPS.GEN.035(b) as the relevant paragraph in OPS.GEN is OPS.GEN.030

comment *5392* comment by: *ADAC Luftrettung GmbH*

WRONG reference, must be OPS GEN 030 (b) not OPS GEN 035(b).

comment *5482* comment by: *ALFA-HELICOPTER*

(a) WRONG reference, must be OPS GEN 030 (b)

comment *5789* comment by: *Norsk Luftambulanse*

(a) WRONG reference, must be OPS GEN 030 (b)

comment *6011* comment by: *HSD Hubschrauber Sonder Dienst*

001.DG.(a): the reference to OPS.GEN.035 seems to be wrong, supposed to be OPS.GEN.030.

comment *6239* comment by: *Finnish CAA*

Paragraph: OPS.SPA.001.DG(a)

Comment: Reference to OPS.GEN.035(b) is incorrect.

Justification: OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b).

Proposed text (if applicable):

Amend OPS.SPA.001.DG(a) as follows:

"Except as provided for in OPS.GEN.030~~5~~(b), an operator….."

comment *6246* comment by: *Finnish CAA*

Paragraph: OPS.SPA.001.DG(b)(2)(ii)

Comment:

OPS.SPA.001. DG(b)(2)(ii) states that an operator shall establish operating procedures containing information and instructions on the requirements for acceptance, *packing, marking*, handling, loading, stowage and segregation of dangerous goods.

Justification:

Packing and marking are the responsibility of the shipper and so it is inappropriate to require an operator to have such procedures in place. An awareness of the packing, marking (and labelling which is equally relevant to a shipper but not stated in the text) requirements would be addressed by the requirement for procedures relating to acceptance.

Proposed text (if applicable):

"(ii) the requirements for acceptance, ~~packing, marking,~~ handling, loading, stowage and segregation of dangerous goods;"

comment *6253* comment by: *Finnish CAA*

Paragraph: OPS.SPA.001.DG(c)

Comment:

A dangerous goods approval is granted to enable an operator to carry any dangerous goods which are permitted in normal circumstances as provided for by the Technical Instructions and would not refer to specific classes.

Justification:

It is impractical for an operator to specify what classes of dangerous goods he intends to carry because at the time of application he simply will not know what he will be asked to carry. Alternatively, an operator could state "all 9 classes" on his application, to cover any future eventuality, but this would be of no value.

Proposed text (if applicable):

Delete OPS.SPA.001.DG(c)

comment *6281* comment by: *Finnish CAA*

Paragraph: OPS.SPA.001.DG(b)(2)

Comment: No mention is made of the requirement (ref.: Technical Instructions, para. 7;4.6) for the operator to provide information in the

event of a serious incident involving dangerous goods or an accident.

Justification: NPA 2009-02f suggests this is covered by OPS.SPA.001.DG(b)(2)(viii) but this relates to "incident reporting" which is quite different (ref. Technical Instructions, paras. 7;4.4 and 7;4.6).

Proposed text (if applicable):

Add a new (ix) to OPS.SPA.001DG(b)(2) as follows:

"(ix) provision of information in the event of an incident or accident as required by the Technical Instructions."

comment *6505* comment by: *UK CAA*

Page No: 94

Paragraph No:

OPS.SPA.001.DG(b)(2)(ii)

Comment:

OPS.SPA.001. DG(b)(2)(ii) states that an operator shall establish operating procedures containing information and instructions on the requirements for acceptance, *packing, marking*, handling, loading, stowage and segregation of dangerous goods.

Justification:

Packing and marking are the responsibility of the shipper and so it is inappropriate to require an operator to have such procedures in place. An awareness of the packing, marking (and labelling which is equally relevant to a shipper but not stated in the text) requirements would be addressed by the requirement for procedures relating to acceptance.

Proposed Text (if applicable):

"(ii) the requirements for acceptance, ~~packing, marking,~~ handling, loading, stowage and segregation of dangerous goods."

comment *6518* comment by: *IATA*

(a) Except as provided for in OPS.GEN.035(b), an operator shall only transport dangerous

goods by air, if the operator has been approved by the competent authority.

The reference mentioned is missing

Proposal:

Change reference to OPS.GEN.030(b)

(b) To obtain such approval by the competent authority, the operator shall in accordance with the Technical Instructions:

(1) establish and maintain a training programme for all personnel involved and demonstrate to

the competent authority that adequate training has been given to all personnel;

(2) establish operating procedures to ensure the safe handling of dangerous goods at all stages

of air transport containing information and instructions on:

(ii) the requirements for acceptance, packing, marking, handling, loading, stowage and segregation of dangerous goods

Packing and marking is the responsibility of

the sender not the airline

Proposal:

Delete packing and markingOPS.SPA.001.DG

(c) An application for an approval to carry dangerous goods shall include information on

the classes of dangerous goods intended to be carried

It is an unnecessary complication to split an approval to carry dangerous goods in different classes

Proposal:

Delete (c)

(g) ensure that a copy of the information to the pilot-in-command is available at the intended destination aerodrome;

A copy is not required by ICAO T.I.

Proposal: add "or the information contained in it"

comment

6634 comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.SPA.001.DG Approval to transport dangerous goods

(a) Except as provided for in OPS.GEN.~~035~~030(b), an operator shall only transport dangerous goods by air, if the operator has been approved by the competent authority.

WRONG reference, must be OPS GEN 030 (b)

B. I. Draft Opinion - Part-OPS - Subpart D - Section V - OPS.SPA.040.DG Dangerous goods information and documentation p. 94-95

comment *1067* comment by: *Aero-Club of Switzerland*

Definition of "dangerous goods"? (ICAO SARP?)

comment *1182* comment by: *CAA-NL*

OPS.SPA.040.DG(g)

Comment: OPS.SPA.040.DG(g) is overly restrictive in that it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome.

Justification: Part 7;4.1.7of the Technical Instructions states:

"This copy (of the information to pilot in command), *or the information contained in it*, must be readily accessible to the aerodromes of last departure and next scheduled arrival point, until after the flight to which the information refers."

Proposed Text (if applicable):

"g) ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *1426* comment by: *International Air Transport Association*

OPS.SPA.040.DG(e).

As commented in OPS.GEN.605(a)(8), the ICAO Technical Instructions provides for operators to have available the information contained on the dangerous goods transport document(s) in electronic form in in lieu of physically transporting the documents with the dangerous goods on board the aircraft. The text of OPS.SPA.040.DG(e) should reflect that ability.

Suggested re-word of (e) as follows:

(e) unless the operator has been provided with the information applicable to a consignment(s) of dangerous goods in electronic form, the operator shall ensure that the dangerous goods are accompanied by the required dangerous goods transport document(s);"

OPS.SPA.040.DG(f) & (g).

The provisions in these two subparagraphs do not reflect the requirements of the ICAO TI Part 7;4.1.7, which provides that either a copy provided to the pilot-in-command or the "information" contained on it must be available at the points of departure and scheduled arrival until after the arrival of the flight.

It is proposed that the two subparagraphs be combined into a single subparagraph (e) in accoradnce with the wording of ICAO TI Part 7;4.1.7. Note, this requirement does not include that the copies of the dangerous

goods transport document(s) be retained for the duration of the flight. The dangerous goods transport document(s) or the information contained in them must be retained for a minimum of 3 moths or such longer period as specified by the States concerned.

comment *1556* comment by: *Luftfahrt-Bundesamt*

In order to comply with the ICAO requirements (Technical Instructions, Part 7, 4.1.7), which do not necessarily demand an exact copy of the information, character (g) should be adjusted as follows:

(g) ensure that a copy of the information to the pilot-in-command ort he information contained in it, is available at the intended destination aerodrome;

comment *1992* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

OPS.SPA.040.DG(g) is overly restrictive in that it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome.

Comment:

Compare with the following statement of Part 7;4.1.7 of the Technical Instructions:

"This copy (of the information to pilot in command), or the information contained in it, must be readily accessible to the aerodromes of last departure and next scheduled arrival point, until after the flight to which the information refers."

Proposal:

"g) ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *2514* comment by: *Royal Aeronautical Society*

Paragraph (g) requires only that the operator shall ensure that a copy of the information to the pilot-in-command is available at the intended destination aerodrome. This does not make clear that, as is prescribed in EU-OPS (Ops 1.1215 (c) 3), the information must be made available to the 'next scheduled arrival point' which may not be the intended (final) destination where the goods are to be unloaded. **For the avoidance of doubt, it is suggested that paragraph (g) should be amended to read, 'ensure that a copy of the information to the pilot-in-command is available at**

the next scheduled arrival point'.

comment *2775* comment by: *Pietro Barbagallo ENAC*

OPS.SPA.040.DG (b)

Comment:This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents.

Justification:The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposal:1. Delete OPS.SPA.040.DG (b) and consequentially renumber subsequent paragraphs; 2. Delete AMC.OPS.SPA.040.DG (b) and move its content in OPS.GEN.030 adding the following: "(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft. (f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

comment *2777* comment by: *Pietro Barbagallo ENAC*

Comment:OPS.SPA.040.DG(g) is overly restrictive in that it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome.

Justification: Part 7;4.1.7 of the ICAO Technical Instructions states: "This copy (of the information to pilot in command), or the information contained in it, must be readily accessible to the aerodromes of last departure and next scheduled arrival point, until after the flight to which the information refers."

Proposal: Amend OPS.SPA.040.DG (g) as follows: "ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *3426* comment by: *UK CAA*

Page No: 94

Paragraph No: OPS.SPA.040.DG(g)

Comment:

OPS.SPA.040.DG(g) is overly restrictive in that it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome.

Justification:

Part 7;4.1.7of the Technical Instructions states:

"This copy (of the information to pilot in command), *or the information contained in it,* must be readily accessible to the aerodromes of last departure and next scheduled arrival point, until after the flight to which the information refers."

Proposed Text (if applicable):

"g) ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *4719* comment by: *Virgin Atlantic Airways*

Relevant Text:

(g) ensure that a copy of the information to the pilot-in-command is available at the intended destination aerodrome;

Comment:

This requirement is very restrictive, as it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome. Also this does not match the requirements in the Technical Instructions.

Proposed Text:

Change text to:

g) ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *6270* comment by: *Finnish CAA*

Paragraph: OPS.SPA.040.DG(g)

Comment: OPS.SPA.040.DG(g) is overly restrictive in that it requires an operator to ensure a copy of the information to the pilot in command is available (as opposed to the information contained in the form as an alternative) at the intended destination aerodrome.

Justification:

Part 7;4.1.7of the Technical Instructions states:

"This copy (of the information to pilot in command), *or the information contained in it*, must be readily accessible to the aerodromes of last departure and next scheduled arrival point, until after the flight to which the information refers."

Proposed text (if applcable):

"g) ensure that a copy of the information to the pilot-in-command, or the information contained in it, is available at the intended destination aerodrome;"

comment *6599* comment by: *Finnish CAA*

Paragraph: OPS.SPA.040.DG(b)

Comment: This should be reflected in OPS.GEN (see also our comment on AMC OPS.SPA.040.DG(b)).

Justification: The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo.

Proposed Text (if applicable):

1. Delete OPS.SPA.040.DG(b) and consequentially renumber subsequent paragraphs;
2. Add the following to OPS.GEN.030:

"(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

comment *7227* comment by: *AIR FRANCE*

suggest:

(g) ensure that a copy of the information to the PIC **or the information contained in it**, is ~~available~~ at the intendeddestination aerodrome.

B. I. Draft Opinion - Part-OPS - Subpart D - Section V I p. 96

comment *2459* comment by: *Catherine Nussbaumer*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *5251* comment by: *DGAC*

OPS SPA 001 SFL should be allowed only for operators holding a commercial certificate.

Firstly because we do not require private pilot to ensure a safe forced landing when above a non congested hostile environment.

Moreover, it is based on specific procedures, specific training, on the analysis of usage monitoring system and enhanced maintenance. It would be nonsense to require it for private pilot and will make the whole system fails**.**

We suggest transferring it into CAT. It has to be consistent with ETOPS

comment *6945* comment by: *Christian Hölzle*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *7032* comment by: *Christian Hölzle*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

B. I. Draft Opinion - Part-OPS - Subpart D - Section V I - OPS.SPA.001.SFL Operations without an assured safe forced landing capability p. 96

comment *832* comment by: *Reto Ruesch*

Ops without safe force landing. En route with max 6 pax / no more 119/B4.

This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.A grandfather right shall apply to older aircrafts like EC130B4-AW119.

comment *1104* comment by: *EUROCOPTER*

Wording modification proposal:

*(a) **For operations in accordance with OPS.CAT.355.H,** a helicopter shall only be operated without an assured safe forced landing capability if the operator has been approved by the competent authority, specifying the type of helicopter and operation.*

Reason: consistency with OPS.CAT.355.H (e) and new proposed (f) where it is mentioned that operations without an assured SFL capability have to be conducted under the conditions contained in Subpart D Section VI.

comment *1252* comment by: *Air Zermatt*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1598* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

Proposed text modifications:

"**For operations in accordance with OPS.CAT.355.H**, a helicopter shall only be operated without an assured safe forced landing capability if the operator has been approved by the competent authority, specifying the type of helicopter and operation."

comment *2028* comment by: *Heliswiss AG, Belp*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2149* comment by: *Heliswiss*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2275* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Operations without an assured safe forced landing capability

Comment / Proposal:

Modify text:

(b)(1): the manufacturer provides [...].

comment *2796* comment by: *REGA*

Operators often are not able to provide power unitreliability statistics.

Proposal (b) (1)

… the manufacture provide (…)

comment *2847* comment by: *Philipp Peterhans*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *3427* comment by: *UK CAA*

Page No: 96

Paragraph No:

OPS.SPA.001.SFL

Comment:

The operation of helicopters with accountability for engine failure and without an assured safe forced landing capability is only appropriate for all Commercial Operations. As drafted, the SPA.SFL would imply that it is suitable for other than commercial operations, which is not correct.

The applicability of this SPA should be restricted to helicopter commercial operations only.

Justification:

Engine failure accountability and the use operations without an assured safe landing is only applicable to helicopter commercial operations. All "Commercial Operations" is understood to include CAT.

Proposed Text (if applicable):

Section VI – Helicopter *Commercial* operations without an assured safe forced landing capability

OPS.SPA.001.SFL Operations without an assured safe forced landing capability

(a) A helicopter shall only be operated ***commercially*** without an assured safe forced landing capability if the operator has been approved by the competent authority, specifying the type of helicopter and operation.

comment *3431* comment by: *UK CAA*

Page No: 96

Paragraph No:

OPS.SPA.001.SFL

Comment:

Neither JAR OPS 3.005(i) [operations to a Public Interest Site] nor JAR OPS 3.005(e) [operations over hostile terrain] require operators to comply with the full requirements of Appendix 1 to 3.517(a): JAR OPS 3 required compliance with only sub para (a)(2)(i) & (ii).

The EASA rule requires full compliance with OPS.SPA.001.SFL See para (b)(1).

Justification:

This rule impacts disproportionately on smaller operators.

Proposed Text (if applicable):

OPS.SPA.001.SFL(b)(1) "except for operations to a public interest site or operations in Performance Class 3 when operating outside congested hostile environment, provide appropriate power unit....

OPS.SPA.001.SFL(b)(2) ") "except for operations for a HEMS operating site, a public interest site or operations in Performance Class 3 when operating outside a congested hostile environment, assess the risk involved for:"

comment *3902* comment by: *FOM ANWB MAA*

OPS.SPA.001.SFL Operations without an assured safe forced landing capability

(b) To obtain such approval the operator shall:

~~(1) provide appropriate power unit reliability statistics for the helicopter type and engine type~~;

This should be a requirement for the manufacturer and should be deleted here.

comment *3968* comment by: *SNEH Organisation representing all french commercial helicopters operators*

Proposed text modifications :

"**For operations in accordance with OPS.CAT.335.H,** a helicopter shall only be operated without an assured safe forced landing capabilité if the operator has been approved by the competent authority, specifying the type of helicopter and operation".

comment

3972 comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(b)(1) This a requirement for the manufacturer and should be deleted here

comment

4411 comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

An UMS only make sense if the helicopter is "on condition" maintenance. As long there are "hard times" as TBO it makes no sense. OEM´s also do not issue any limits for CS-27 helicopters.

comment

4433 comment by: *Benedikt SCHLEGEL*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment

4642 comment by: *Bristow Helicopters*

To obtain such an approval the operator shall:

(b) provide appropriate power unit reliability statistics for the helicopter type and engine type.

This should be for the combination of helicopter and engine installed.

Due to commercial sensitivity, manufacturers are not prepared to issue primary reliability data to operators. It is proposed that the procedure used for JAR OPS 3.517(a) compliance is adopted. NPA OPS 38 to JAR OPS 3 states that the manufacturer must provide the State of Design, or State of First Certification in the case on non EU manufacturers, with the engine reliability data. When this data is verified by the competent authority, the manufacturer issues a Service Letter to all operators stating that the helicopter meets the reliability requirements. The operators then utilise this letter when seeking this approval.

comment *4964* comment by: *Benedikt SCHLEGEL*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *5143* comment by: *ADAC Luftrettung GmbH*

2009-02b:

Subpart D, Section VI, OPS.SPA.001.SFL Operations without an assured safe forced landing capability (Seite 96):

unter (b)(3) wird verlangt *„ establish operating procedures specifying: (i) the take-off and landing techniques to be applied at the*

aerodrome/operating site; and (ii) site specific procedures in the case of public interest sites. ". Dies ist zumindest für HEMS vollkommen utopisch und praktisch nicht umsetzbar: Es liegt in der Natur des HEMS-Flugbetriebs, dass nicht vorher bestimmt werden kann, in welches Krankenhaus der Patient geflogen wird. Dies entscheidet sich je nach Art der Verletzung und Verfügbarkeit der medizinischen Leistungen erst während des konkreten Einsatzes. Um gewährleisten zu können, dass jeder transportierte Patient die entsprechende notwendige medizinische Indikation erhält, muss sichergestellt sein, dass jeder einzelne Hubschrauber unserer Flotte im konkreten Bedarfsfall auch jedes Krankenhaus anfliegen kann. Dazu müssten aber für alle vorhandenen Hubschrauberflugplätze an Krankenhäusern, an denen keine Möglichkeit zur Durchführung einer sicheren Notlandung während der Start- und Landephase besteht landeplatz-spezifische Verfahren entwickelt werden. Dies ist bereits allein aufgrund der Vielzahl der existierenden (häufig nicht zertifizierten) Krankenhauslandesstellen (allein in Deutschland insgesamt über **1.000**) praktisch nicht umsetzbar. Außerdem kann dies generell nicht Aufgabe jedes einzelnen Operators sein, sondern ist vielmehr originäre Aufgabe des jeweiligen Landeplatzbetreibers.

Denkbar und auch umsetzbar ist dagegen die Entwicklung und Beschreibung von einigen grundsätzlichen Standardverfahren für den An-/Abflug ohne Möglichkeit zur Durchführung einer sicheren Notlandung. Dies wäre unserer Erfahrung nach auch aus dem Gesichtspunkt der Sicherheit vollkommen ausreichend: die (mehrmotorigen) Hubschrauber der ADAC-Luftrettung GmbH haben seit 1970 bis Ende 2008 über 500.000 Rettungseinsätze durchgeführt. In der Regel sind pro Rettungseinsatz drei Starts und drei Landungen anzusetzen, die bedingt durch die orographischen Vorgaben und des Einsatzauftrages regelmäßig nicht auf einem flugplatzähnlichen Gelände durchgeführt werden können.

In der Summe der genannten Rettungseinsätze und der daraus resultierenden knapp **3 Millionen** Starts und Landungen hat innerhalb der ADAC Luftrettung GmbH nicht ein einziger Triebwerkausfall zu einem Flugunfall geführt. Insofern sind die derzeit gemäß JAR-OPS 3 deutsch (in der bis zum 31.12.2009 geltenden Fassung) geregelten Anforderungen zur Erreichung eines angemessenen Sicherheitsniveaus vollkommen ausreichend. Eine weitere Verschärfung ist nicht erforderlich. Mit Einführung der JAR-OPS 3 hat die ADAC Luftrettung GmbH mehr als **100.000.000,00 €** in die Modernisierung der Hubschrauberflotte investiert. Alle eingesetzten Hubschrauber sind gemäß Kategorie A zugelassen und nach JAR/CS 27/29 zertifiziert.

Wir beantragen daher, HEMS-Flüge auch zukünftig generell mit Hubschrauber zertifiziert nach Kategorie A in Übereinstimmung mit Flugleistungsklasse 2 (ohne Exposure Time und UMS) durchführen zu können und von den Anforderungen des Subpart D, Section VI auszunehmen.

Daneben beantragen wir höchstvorsorglich, OPS.SPA.001.SFL (b)(3) auf jeden Fall wie folgt zu ändern: *„establish standard operating procedures specifying general take-off and landing techniques to be applied at the aerodrome/operating/public interest sites"* .

comment *5399* comment by: *ADAC Luftrettung GmbH*

OPS.SPA.001.SFL(b)(1)

Isn't this a requirement for the manufacturer?

This a requirement for the manufacturer and should be deleted here!!

comment *5487* comment by: *ALFA-HELICOPTER*

(b)(1) This is a requirement for the manufacturer and should be deleted here

comment *5790* comment by: *Norsk Luftambulanse*

(b)(1) This a requirement for the manufacturer and should be deleted here

comment *6005* comment by: *Peter Moeller*

OPS.SPA.001 SFL

(b)(4) alternate sources like IIDS or FADEC downloads should be approved too

comment *6014* comment by: *HSD Hubschrauber Sonder Dienst*

001.SFL(b)(1): that can not be a requirement for an operator, it should be one for the manufacturer.

comment *6638* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.SPA.001.SFL Operations without an assured safe forced landing capability

(b) To obtain such approval the operator shall:

~~(1) provide appropriate power unit reliability statistics for the helicopter type and engine type~~;

This should be a requirement for the manufacturer and should be deleted here.

comment *6935* comment by: *Swiss Helicopter Group*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6946* comment by: *Christian Hölzle*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VI - OPS.SPA.005.SFL Applicability p. 96-97

comment *465* comment by: *EHOC*

Paragraph (d)(3)

This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing.

It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3). The JAR guidance was as follows:

"IEM to Appendix 1 to JAR-OPS 3.005(e)

Helicopter operations over a hostile environment located outside a congested area

See Appendix 1 to JAR-OPS 3.005(e)

1 The subject Appendix has been produced to allow a number of existing operations to continue. It is expected that the alleviation will be used only in the following circumstances:

1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude.

1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters;

2 The State issuing the AOC and the State in which operations will be

conducted should give prior approval.

3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State.

4 Such approvals should only be given after both States have considered the technical and economic justification for the operation."

comment *546* comment by: *EUROCOPTER*

Wording modification proposal on OPS.SPA.005.SFL §(b):

(b) operations to/from helidecks ***~~with helicopters which have a MPSC of more than 19~~***;

Rationale:

Operations to/from helidecks without an assured safe forced landing capability must not be reserved to helicopters which have a MPSC of more than 19:

- the fact that OPS.CAT.355.H, §(a)(3) states that *'operations to/from a helideck conducted with a helicopter having a MPSC of more than 19, may be operated in performance class 2*' does not mean that these operations are only eligible for these types of helicopters

- JAR-OPS 3 allows operations to/from helidecks without an assured safe forced landing capability with helicopters having a MPSC of 19 or less (see Suppart H Performance Class 2; and particularly JAR-OPS 3.520(a)(3)(ii)(B) where it is mentionned 'any helicopter')

- most of the operations from/to helidecks in the North Sea are conducted with helicopters having a MPSC of 19 or less.

comment *833* comment by: *Reto Ruesch*

Applicability

This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue. It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it

should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.

comment *1105* comment by: *EUROCOPTER*

Wording modification proposal on § (d)(3):

(3) en-route in a specified, remote or mountain, area with turbine powered helicopters with a MPSC of ~~***6***~~ ***7*** *or less****.***

Reason: JAR-OPS 3 introduced the requirement of "MPSC of 6 or less' without real substantiation of the number 6; the number 7 is proposed instead in order to allow the EC130B4 in its full seating capacity.

comment *1106* comment by: *EUROCOPTER*

Proposal to introduce the new (d)(4) condition:

(d)(4) en-route in a specified, other than remote or mountain, area with helicopters other than complex motor-powered, provided the flight time over hostile areas does not exceed 5-minutes periods and 50 % of the overall flight time.

Rationale**:**

- Reason for this proposal is that the current JAR-OPS 3 alleviation, which is only valid for remote or mountains areas, is too restrictive for single-engine helicopters, and would result, if maintained, in excluding single-engine helicopters from a lot of CAT operations in non-mountain areas, as soon as there is for example a small forest to cross. Maintaining unchanged the JAR-OPS 3 text would very likely condamn CAT with single-engine helicopters in countries filled with forests like Sweden of Finland.

- The proposal consists in transferring in Part OPS the French '5 minutes-50 %' condition which has been part of the French CAT Operational Regulation 'OPS 3' since April 2004, and used up to now by operators without any safety problem.

- It is also based on an Eurocopter analysis on the Ecureuil twin/single helicopters family which has shown that single-engine helicopters do not cause more accidents than twin-engine helicopters.

comment *1108* comment by: *EUROCOPTER*

Wording modification proposal on § (e)(2):

(2) established as public interest site ~~***before 1 July 2002***~~ ***at the date of entry into force of this Regulation.***

Reason: limiting the benefit of operating without a SFL capability to public interest sites (hospitals, lighthouses) established as such before 1 July 2002

is too restrictive.

comment *1131* comment by: *Heli Gotthard*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *1186* comment by: *Stefan Huber*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1187* comment by: *Stefan Huber*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter

operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *1189* comment by: *Stefan Huber*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *1253* comment by: *Air Zermatt*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *1303* comment by: *Air-Glaciers (pf)*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to

the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1304* comment by: *Air-Glaciers (pf)*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *1599* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

Proposed text modifications:

"Operations **in accordance with OPS.CAT.355.H**, without an assured safe forced landing capability shall only be conducted in the following situations :"

comment *1606* comment by: *EUROCOPTER*

Wording modification proposal:

*"Operations **in accordance with OPS.CAT.355.H** without an assured safe forced landing capability shall only be conducted in the following situations:"*

Reason: consistency with the modification which we propose for OPS.SPA.001.SFL (a) (see our comment n° 1104).

comment *1719* comment by: *Air-Glaciers (pf)*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *1799* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 005 SFL Ops without safe force landing. En route with max 6 pax / no more 119/B4.

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

Ops SPA 005 SFL Applicability

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not

provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *1867* comment by: *SHA (AS)*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1868* comment by: *SHA (AS)*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *1900* comment by: *SHA (AS)*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air

transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *1944* comment by: *Berner Oberländer Helikopter AG BOHAG*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1945* comment by: *Berner Oberländer Helikopter AG BOHAG*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

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comment *1978* comment by: *Berner Oberländer Helikopter AG BOHAG*

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination

comment *2027* comment by: *Heliswiss AG, Belp*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

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comment *2104* comment by: *Dirk Hatebur*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2106* comment by: *Dirk Hatebur*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1

The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances:

1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude.

1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2148* comment by: *Heliswiss*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

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comment *2150* comment by: *Heliswiss NV*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2151* comment by: *Heliswiss NV*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *2152* comment by: *Heliswiss NV*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2235* comment by: *Heliswiss*

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The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2245* comment by: *Valair AG Switzerland*

Page 96

OPS.SPA.005.SFL specifies that Performance Class 3 operations, outside a congested hostile environment, en-route in a specified, remote or mountain, area, is restricted to turbine powered helicopters with a MPSC of 6 or less, thereby excluding all piston powered helicopters.

As long as power unit reliability statistics demonstrate that piston powered helicopters meet the same minimum requirements applied to turbine engines, there is no change to operational safety by eliminating the turbine powered helicopter restriction. Furthermore, it is in the public interest to allow the use of piston powered helicopters for these types of operations as piston powered helicopters typically offer lower operating costs and reduced environmental impact compared to turbine powered helicopters.

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.

(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

Thereof the NPA 2009-02B Section VI OPS.SPA.005.SFL Applicability, page 96 must be changed.

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.
2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.
3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2247* comment by: *Dirk Hatebur*

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The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2427* comment by: *Jan Brühlmann*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2428* comment by: *Jan Brühlmann*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *2429* comment by: *Jan Brühlmann*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at

altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2492* comment by: *Jan Brühlmann*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

comment *2495* comment by: *Jan Brühlmann*

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted. Reasons: A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft. 2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters. 3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2559* comment by: *Walter Mayer, Heliswiss*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2560* comment by: *Walter Mayer, Heliswiss*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most

of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *2561* comment by: *Walter Mayer, Heliswiss*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2596* comment by: *Walter Mayer, Heliswiss*

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The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2603* comment by: *Catherine Nussbaumer*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted. Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *2699* comment by: *Pietro Barbagallo ENAC*

Comment: OPS.SPA.005.SFL (e) The OPS.SPA.005.SFL, para (e) (see also the AMC OPS.SPA.005.SFL (e)), does not take into account the operations in a "non congested hostile environment" at a pubblic interest site, with multi-turbime powered helicopters with a MPSC of 6 or less.

Justification: See Appendix 1 to JAR-OPS 3.005 (i). Helicopter operations at a public interest site, para (2) (i) for operations in a "non congested hostile environment"(omissis).

comment *2848* comment by: *Philipp Peterhans*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State

issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2934* comment by: *Pascal DREER*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

Applicability Section VI Single pistons

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *3061* comment by: *AgustaWestland*

OPS.SPA.005.SFL(b) Operations to from helideck with helicopters which have a MSPC of more than 19 should not be allowed without an assured safe forced landing capability. See discussion on OPS.CAT.355.H

comment *3174* comment by: *Heli Gotthard AG Erstfeld*

comment *3434* comment by: *UK CAA*

Page No: 97

Paragraph No:

OPS.SPA.005.SFL

Comment:

The rule introduces a subtle change to the equivalent JAR OPS 3 code concerning Public Interest sites. At OPS.SPA.005.SFL para (e)(2) the text uses the term ""Public Interest Site", which changes the intent of the JAR that, for the same purpose, used the term "Heliport".

A hospital landing site may have been established for many years as a heliport, but may not necessarily have been established as a Public Interest site. Such a heliport might need to become a Public Interest site with the introduction of new aircraft with a helipad profile that can no longer achieve a Class 1 profile, for example. The rule now prevents categorisation of existing Heliports as Public Interest sites.

Justification:

Overly-restrictive rule.

Proposed Text (if applicable):

OPS.SPA.005.SFL(2)

"Established as ~~public interest site~~ *a heliport* before 1 July 2002; and"

comment *3435* comment by: *UK CAA*

Page No: 96

Paragraph No:

AMC OPS.SPA.005.SFL(b) and (c)

Comment:

Minor editorial change to correct text to align with sense of the context of take-off conditions in 1(b) and landing conditions in 2(b).

Justification: Editorial.

Proposed Text (if applicable):

1b. for operations ~~to/~~from a helideck in a hostile environment …

2b. for operations to~~/from~~ a helideck in a hostile environment …

comment *3593* comment by: *Aero-Club of Switzerland*

(e) Please remove "with multi-turbine helicopters"!

Justification: There is no reason for such a restriction. Think of the catastrophic gear box failure of the recent brand new Bond Helicopters Super Puma, where the rotor separated. Leave the decision on the helicopter to be used to the operators.

comment *3607* comment by: *Austro Control GmbH*

UMS or HUMS are only regulated for turbine (d) (3).

It should be also regulated for reciprocating engines in the case of approval.

comment *3971* comment by: *SNEH Organisation representing all french commercial helicopters operators*

Proposed text modifications :

"operations **in accordance with OPS .CAT.355.H**, without an assured safe forced landing capability shall only be conducted in the following situations :"

comment *3976* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(d) (3)

The aim is :

- to delete te '6 or less' limitation and to replace it by 'other than complex motor-powered'

-to partially allow CAT operations in PC3 without an assured SFL en-route above hostile areas different from mountains and remote area such a forest, by proposing to introduce the French DGAC specificity "50% - 5 minutes" (operations allowed by short periods, not exceeding 5 minutes, and provided that the total flight time above hostile areas does not exceed 50 % of the

total flight time.

Modification proposal :

(d) for PC3 operations, when operating outside a congested hostile environement :

(3) en-route in a specified, remote or mountain, area with turbine powered helicopters with a MPSC of 6 or less. Other than complex-motor-powered.

(4) en-route in a specified, other than remote or mountain, area with helicopters other than complex motor-powered, provided the flight time over hostile areas does not exceed 5-minutes periods and 50% of the overall flight time.

comment *3977* comment by: *HDM Luftrettung gGmbH*

OPS SPA 005 SFL

Ops without safe force landing. En route with max 6 pax / no more 119/B4.

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4

comment *3978* comment by: *HDM Luftrettung gGmbH*

OPS SPA 005 SFL:

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment

3980 comment by: *SNEH Organisation representing all french commercial helicopters operators*

(e)

Proposed modification :

at a public interest site with multi turbine powered helicopters with a MPSC of 6 or less other than 'complex motor-powered'.

Consistency with the 'complex motor-powered helicopter' definition.

comment

3981 comment by: *SNEH Organisation representing all french commercial helicopters operators*

(b) Should be rewriten as following : For helicopters which have a maximum passengers seating configuration (MPSC) of more than 19, operations to/from helidecks ;

comment

4117 comment by: *Benedikt SCHLEGEL*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment

4118 comment by: *Benedikt SCHLEGEL*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it

should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *4547* comment by: *Christophe Baumann*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *4549* comment by: *Christophe Baumann*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *4621* comment by: *Christophe Baumann*

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reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *4646* comment by: *Bristow Helicopters*

This should say maximum passenger seating configuration (MPSC) of less than 19

comment *5189* comment by: *Philipp Peterhans*

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comment *5191* comment by: *Philipp Peterhans*

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this

discrimination.

comment *5254* comment by: *DGAC*

(b) :

Proposal: change the wording

"(b) ~~operations to/from helidecks~~ with helicopters which have a maximum passenger seating configuration (MPSC) of more than 19 **when operating to/from helidecks**;"

Justification : gain in clarity

(d) :

Proposal: add a fourth item as follows:

"(4) **en-route with turbine powered helicopters with a MPSC of 6 or less, provided the flight time over hostile areas does not exceed 5 minute periods and 50% of the overall flight time**"

Justification : It is very theoretical to operate in CAT single engine helicopters with an exposure time limited to take-off and landing.

Member States have to take their responsibilities: either CAT is forbidden with single or it is allowed but in this case we have to make it possible and their part of the responsibility that lays on the shoulder of the pilot and of the operator.

For example there is always a small forest to fly over.

Moreover, EHEST preliminary report does not show that the engine failure is a common cause of accident. Twin engine should be the standard over congested areas but small portions of flight over non congested hostile area should be allowed for single engine helicopters under certain conditions.

comment *5695* comment by: *Robinson Helicopter Company*

OPS.SPA.005.SFL specifies that Performance Class 3 operations, outside a congested hostile environment, en-route in a specified, remote or mountain, area, is restricted to turbine powered helicopters with a MPSC of 6 or less, thereby excluding all piston powered helicopters.

As long as power unit reliability statistics demonstrate that piston powered helicopters meet the same minimum requirements applied to turbine engines, there is no change to operational safety by eliminating the turbine powered helicopter restriction. Furthermore, it is in the public interest to allow the use of piston powered helicopters for these types of operations as piston powered helicopters typically offer lower operating costs and reduced environmental impact compared to turbine powered helicopters.

See also comments for AMC OPS.SPA.001.SFL(b)(4) and (b)(5).

comment *5808* comment by: *Ph.Walker*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4

comment *5809* comment by: *Ph.Walker*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *5844* comment by: *Ph.Walker*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar

in reliability or even better than turbine powered aircraft

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *5851* comment by: *Ph.Walker*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *5854* comment by: *Ph.Walker*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: **"en-route in a specified, remote or mountain area with turbine powered helicopter"** must be amended. The phrase "turbine powered" has to be deleted.

Reasons

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *5909* comment by: *Dirk Hatebur*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

comment *5910* comment by: *Dirk Hatebur*

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *5977* comment by: *Irish Aviation Authority*

Comment:

Subparagraph (d) (1) requires amending as detailed below.

Justification:

JAR-OPS 3.540 b) 1 includes the additional proviso “before reaching Vy”

Proposed text:

(d) for Performance Class 3 operations, when operating outside a congested

hostile environment: (1) during the take-off phase, before reaching **Vy or** 200 ft above the take-off surface;

comment *6147* comment by: *Hans MESSERLI*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6148* comment by: *Hans MESSERLI*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *6294* comment by: *Hans MESSERLI*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with

turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *6369* comment by: *Trans Héli (pf)*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6371* comment by: *Trans Héli (pf)*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *6411* comment by: *Trans Héli (pf)*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

comment *6422* comment by: *ADAC Luftrettung GmbH*

OPS.SPA.025.HEMS sieht unter (b)(1) vor, dass "Helicopters conducting operations to/from an aerodrome at a hospital which is located in a hostile environment shall be operated in accordance with performance class 1; **except as provided for in OPS.SPA.005.SFL.**

Dieser Verweis **"except as provided for in OPS.SPA.005.SFL"** findet sich jedoch unter OPS.SPA.SFL - Applicability **nicht**.!!

Wie schon mehrfach geschrieben können in Deutschland über 1000 Krankenhauslandeplätze nicht in Übereinstimmung mit Leistungsklasse 1 angeflogen werden. Zum einen, weil unter ungünstigen Umgebungsbedingungen der Hubschrauber nicht in der Lage ist Leisungsklasse 1 zu erfüllen, zum anderen weil der angeflogene Landeplatz die Bedingungen für Leistungsklasse 1 nicht erfüllt.

So wie die OPS.SPA.SFL - Applicability jetzt geschrieben ist dürfen Krankenhauslandeplätze die innerhalb eines dichtbesiedelten Gebietes mit schwierigen Umgebungsbedingungen liegen auch unter HEMS nicht in Leistungsklasse 2 angeflogen werden. Das führt im Zusammenhang mit oben erwähnter Situation zu einer dramatischen Einschränkung der Luftrettung in ganz Europa!!

Vorschlag:

HEMS-Flüge auch zukünftig generell mit Hubschrauber, zertifiziert nach Kategorie A, in Übereinstimmung mit Flugleistungsklasse 2 (ohne Exposure Time und UMS) durchführen zu können und von den Anforderungen des Subpart D, Section VI auszunehmen.

Höchstvorsorglich, sollte diesem Antrag nicht entsprochen werden ist unter OPS.SPA.005.SFL unserer Ansicht folgendes mit aufzunehmen

(a) at a HEMS operating site or for operations to/from an aerodrome at a hospital which is located in a hostile environment

an, when operating under an approval in accordance with OPS.SPA.001.HEMS

additional:

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity.

comment *6689* comment by: *Heliswiss International*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

comment *6700* comment by: *Heliswiss International*

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered has to be deleted.

Reasons:

1, A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2, Over 80 % of Switzerland is Hostile Areas, where no commercial air transport (CAT) would be alowed for piston helicopter?

3, The existence of Helicopter operations and helicopter service center focused on piston helicopters will be risked the due of this discrimination.

comment *6725* comment by: *Heliswiss International*

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made **27066 flight hours**. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

comment *6789* comment by: *Air Lloyd Deutsche Helicopter Service GmbH*

Dear Sirs,

AIR LLOYD established in 1963 operates a large fleet of single-engine and multi-engine helicopters and during the years we counted more than 250.000 flight hours. Over these 46 years we didn’t see any reliability differences between piston and turbine engines.

10 years ago we changed from Bell47 to R22 and R44. According our own reliability statistic we flew an average of 5.500 hours per year and didn’t have any engine trouble. If needed we can provide your with our statistic. But there are no reliability statistics from the TCH of the helicopter and engine available. And this will be the problem to get an approval for operations without an assured safe forced landing capability.

The definition of “Performance Class3 helicopters” doesn’t distinguish piston and turbine powered helicopters. From our point of view is this consideration correct and a distinction between piston and turbine powered helicopters later in this NPA is the wrong way to assure a safe air transport. We don’t see the need to use a turbine helicopter if a piston helicopter can do the task as well from the point of reliability. Only performance, seat, internal or

external load capacity will be the limiting factor and not the type of engine.

Yours faithfully

Helmut Appelfeller

Flight Operation Manager

AIR LLOYD GmbH

comment *6937* comment by: *Swiss Helicopter Group*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

Valair Maintenance AG is by EASA Part 145 authorized helicopter service centre. In the period of 1.11.2001 – 31.12.08 Valair Maintenance AG did the recurrent maintenance. of 50 piston helicopters. In this time frame of slightly more than 7 years these 50 piston helicopters made 27066 flight hours. Not one of the 50 helicopters had an engine failure or a sign of an engine malfunction. These figures show that a piston helicopter is an extremely reliable aircraft.(On request the mentioned figures may be reviewed anytime at Valair Maintenance AG)

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service

Centres focused on piston helicopters will be risked the due to this discrimination.

comment *6947* comment by: *Christian Hölzle*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *7007* comment by: *Eliticino SA*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *7217* comment by: *Eliticino SA*

The statement: "en-route in a specified, remote or mountain area with turbine powered helicopter" must be amended. The phrase "turbine powered" has to be deleted.

Reasons:

1. A discrimination of piston helicopters is not acceptable as they are similar in reliability or even better than turbine powered aircraft.

2. Over 80 % of Switzerland is Hostile Areas where no commercial air transport (CAT) would be allowed for piston helicopters.

3. The existence of commercial Helicopter Operations and Helicopter Service Centres focused on piston helicopters will be risked the due to this discrimination.

comment *7345* comment by: *new European Helicopter Association*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engine aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engine helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VI - OPS.SPA.035.SFL Helicopter Flight Manual Limitations p. 97

comment *467* comment by: *EHOC*

General

Whilst this derogation is welcome, it only applies to those operators who have applied for a received an approval under Section VI of Subpart D of Part OPS.

Unless this derogation is applicable to all operations, all Part 29 helicopters (the position is unclear for those helicopters which have been approved under Appendix C to Part 27) will have to apply the limitation of the HV diagram. This will restrict the operations of complex helicopters to fly for Aerial Work.

comment *1016* comment by: *Michael Kroell*

Problem for CS-29 certified helicopters as H/V is in limitations section;

If H/V diagram is in the limitiation section this would be against the basic regulation.

Solution: H/V diagrams of the affected helicopter - into the performance section

comment *1388* comment by: *EUROCOPTER*

Wording modification proposal:

*"For helicopters certificated in Category A **or B**, a momentary flight through the height velocity (HV) diagram is allowed during the take-off and landing phases...*

Justification: consistency with GM OPS.SPA.OO5.SFL (d), § 4.c., which is recalled here after:

*'An elevated FATO or helideck: when operating to an elevated heliport/helideck in Performance Class 3, exposure is considered to be twofold: firstly, to a deck-edge strike if the engine fails after the decision to transition has been taken; **and secondly, to operations in the HV diagram due to the height of the heliport/helideck**. Once the take-off surface has been cleared and the helicopter has reached the knee of the HV diagram, the helicopter should be capable of making a safe forced landing.'*

comment *2312* comment by: *Austro Control GmbH*

This rule is no problem for CS 27 certified helicopters as the diagramm is in the performance section, but for CS 29 certified helicopters H/V it is in limitations sections and therefore a problem (see Basic Regulation).

It is suggested that this problem, which is obviously known by a EASA, is solved by a new formulation of this rule.

comment *2515* comment by: *Royal Aeronautical Society*

The text does not describe where, in the height velocity diagram, flight should not be permitted. It is suggested that the relevant text be amended to read, **'… a momentary flight through the unsafe area of the height velocity (HV) diagram …'**.

comment *3076* comment by: *AgustaWestland*

This rule is conceptually wrong. All the Cat A procedures must satisfy the requirements to allow a the safe OEI Rejected Take off or OEI landing. The

only way in which these conditions can be met is that Take-off and Landing path remain clear of the H-V diagram because this diagram define the H-V envelope inside which a safe landing can not be executed.

Additionally the Weight-Altitude-Temperature charts, that limit the maximum Take off and Landing weight for the various Cat A procedures, guarantee that, at WAT weight, the helicopter can be safely landed following an engine failure.But if an engine fail while crossing the H-V envelope the safe landing can not be executed by definition of the H-V. See also CS29.87 Height -Velocity envelope and CS29.59(a)(1) Take-off path: Category A.

comment *3436* comment by: *UK CAA*

Page No: 97

Paragraph No:

OPS.SPA.035.SFL

Comment:

The derogation to allow helicopters certificated in Category A to conduct momentary flight through the height velocity (HV) curve is welcomed, and the explanation for this at NPA 2009-2A page 42 is noted. However as it stands, it only applies to those operators who have applied for and received an approval under applicability of OPS.SPA.005.SFL. This derogation derives from the requirement in Appendix 1 to JAR-OPS 3.005(c).

The intention to initiate a rulemaking task on CS 29 is also noted but this will not assist current operations beyond OPS.SPA.001.SFL such as many Commercial (aerial work) activities. It is not clear how other operations under Commercial (aerial work), requiring similar clearance, will be able to do so in the future.

Unless this derogation is made applicable to all operations, all Part 29 helicopters (the position is unclear for those helicopters which have been approved under Appendix C to Part 27) will have to apply the limitation of the HV diagram in accordance with Annex IV 4.a of the Basic Regulation. This will severely restrict the operations of complex helicopters flying for Commercial (aerial work).

Justification:

Clarification of approval for momentary flight through the HV curve for operations other than in accordance with OPS.SPA.001.SFL.

comment *3747* comment by: *Civil Aviation Authority of Norway*

Comment:

The derogation to allow helicopters certificated in Category A to conduct momentary flight through the HV curve is welcomed, and the explanation for this at NPA 2009-2A page 42 is noted. However as it stands, it only applies

to those operators who have applied for a received an approval under applicability of OPS.SPA.005.SFL.

This derogation derives from the requirement in Appendix 1 to JAR-OPS 3.005(c) that required a specific approval for this type of operation. As JAR-OPS 3 was only applicable to CAT operations it is not clear how other operations under Com (aerial work), requiring similar clearance, will be able to do so in the future.

Unless this derogation is applicable to all operations, all Part 29 helicopters (the position is unclear for those helicopters which have been approved under Appendix C to Part 27) will have to apply the limitation of the HV diagram in accordance with Annex IV 4.a of the Basic Regulation. This will severely restrict the operations of complex helicopters flying for Com (aerial work).

comment *5255* comment by: *DGAC*

The alleviation on the H/V diagram limitation is also required for helicopters certificated in category A used for aerial work operations operated under OPS.COM.

Proposed Text:

Amend text as follows:

"For helicopters certificated in Category A, a momentary flight through the height velocity (HV) diagram is allowed during the take-off and landing phases, when the helicopter is operated under the approval in accordance with this section **or according to OPS.COM.005**"

However, this alleviation should also be written in OPS.COM as an aerial work operator does need to comply with SPA if there are no persons in the helicopter apart from the crew.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VII p. 98

comment *6179* comment by: *DGAC*

We consider that NVG are very efficient and can provide an important safety benefit. However it is quite expensive to fly with NVIS (retrofit of the aircraft, NVG, crew training…) and there is no alleviation in IR OPS for the operators when flying NVIS. We think that no operators will fly NVIS if there is no advantage for them (reduction of minima?).

We suggest EASA to follow the work done by the new ICAO group regarding to HEMS flight to establish a policy for the use of NVIS for HEMS flight at night.

We consider that HEMS flights between two heliports (compliant with annex

14) could be done with NVIS (only for the cruise) with only one pilot

B. I. Draft Opinion - Part-OPS - Subpart D - Section VII - OPS.SPA.001.NVIS Night Vision Imaging System (NVIS) operations p. 98

comment *6870* comment by: *Luftfahrt-Bundesamt*

Why are NVIS requirements limited to helicopter operations only?

The foreword of the leaflet 34 says, that the content of TGL could be used for all aircraft for VFR Night flights.

"It has been suggested that it would be in the interest of safety if all night VFR operations were able to take advantage of a common NVIS regulation leading to harmonised qualification, procedures and equipment."

"1.3 NVIS, when first considered by the JAA, was felt suitable only for helicopters operating in Commercial Air Transport (CAT). Following consideration of the work of RTCA and EUROCAE, the proposed regulation (originally produced only for JAR-OPS 3) has been amended so that it could be used for 'aircraft' undertaking CAT and operations other than CAT. It has also been enhanced with text taken from the EUROCAE WG57 (and RTCA SC 196) recommendations.

In Subpart D Operations requiring specific approvals, regulations for **offshore operations** are missing.

Such approval is required in relation to Annex 1 to JAR-OPS 3.175 (h)

B. I. Draft Opinion - Part-OPS - Subpart D - Section VII - OPS.SPA.010.NVIS Equipment requirements for NVIS operations p. 98

comment *1111* comment by: *EUROCOPTER*

Wording modification proposal:

"In addition to the equipment required by OPS.GEN and, ***when applicable,*** *OPS.CAT or OPS.COM, …"*

Reason: the aim is to avoid that equipment required by OPS CAT or OPS COM, become mandatory as a basis for NVIS operations.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VII - OPS.SPA.020.NVIS NVIS operating minima p. 98

comment *5498* comment by: *ADAC Luftrettung GmbH*

OPS.SPA.020.NVIS NVIS operating minima in Verbindung mit Table 1 OPS.SPA.020 - HEMS operating minima.

Unter OPS.SPA.020.NVIS NVIS operating minima wird verlangt: „**Operations shall not be conducted below the VFR weather minima for the type of night operations being conducted.**". Dies ist grundsätzlich richtig, um auch in den konventionellen Nachtflug wechseln zu können. Für das sichere Fliegen unter BIV ist jeodch eine gesonderte BIV-Flugwetterberatung notwendig, da hier andere Minima gelten.

Für den konventionellen Nachtflug wird die so genannte „Feuersicht", durch das Erkennen von Lampen, durch einen Beobachter ermittelt.

Für den BIV-Nachtflug wird die so genannte „BIV-Sichtweite" errechnet. In die Berechnung der „BIV-Sichtweite" fließen die Nachthelligkeit mit allen Korrekturen und die Normsichtweite ein. Die „BIV-Sichtweite" muss mindestens 1,5 km betragen und hat nichts mit der herkömmlichen „Feuersicht" gemeinsam. So können z.B. die Wetterminima, mit 2500m Sicht und 1200´ Wolkenuntergrenze, für den konventionellen Nachtflug ausreichend sein, bei gleichen Werten und einer Nachthelligkeit unter 25 mlx werden die 1,5 km BIV-Sichtweite nicht erreicht und somit ist ein BIV-Nachtflug nicht möglich.

Es ist durchaus auch möglich, dass die Wetterminima unterhalb der geforderten Werte für den konventionellen Nachtflug liegen und ein Fliegen unter BIV möglich ist, da der Wert 1,5 km „BIV-Sichtweite" erreicht wird.

Hier muss die „**Table 1 OPS.SPA.020 - HEMS operating minima**" um die Wetterminima für den BIV-Nachtflug ergänzt werden. NVIS visual range 1500 m, Ceiling 1200´

"OPS.SPA.020.NVIS NVIS operating minima" sollte folgenden Wortlaut haben.

Operations shall not be conducted below the VFR weather minima for the type of night operations being conducted. The NVIS visual range, of at least 1500m, must be reached.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VII - OPS.SPA.030.NVIS Crew requirements for NVIS operations p. 98

comment *3080* comment by: *AgustaWestland*

This rule should be expanded considering the scenario in which the NVG operations are conducted.

When take-off and Landing are conducted from/to known site without using the NVG and the remaining portion of the flight is conducted above 300ft AGL or at a height proposed in the Operation Manual by the operator and accepted as safe by the competent authority, one pilot, qualified for NVG

ops, could be accepted provided the Helicopter Flight Manual allows Single Pilot Night VFR ops.

The second step, based on increased mission difficulties i.e using NVG also for take off and landing , could be one NVG qualified pilot and one NVG qualified crew member that can assist the pilot in obstacle identification during take off and Landing.

And, at the end, two NVG qualified pilots for the most difficult missions specified by the Operator in the Ops Manual.

comment *7340* comment by: *FAA*

1. OPS.SPA.030.NVIS

Comment:

The requirement for NVIS technical crewmember may not be applicable to all operations. The requirement would prevent single-crew helicopter operators from using NVIS, even if use would reduce overall risk. This may reduce widespread use of NVIS by single-crew operators, where having a technical crewmember is not necessary due to the type of operation being conducted.

Recommendation:

Justify the requirement for 'NVIS technical crew member' on ALL flights.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII p. 99

comment *4451* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

There is no Section for HEC operation:

Section XXXXXXX – Human external cargo

OPS.SPA.001.HEC – Human external cargo (HEC)

(a) A helicopter shall only be operated for the purpose of human external cargo operations, if the operator has been approved by the competent authority.

(b) To obtain such approval by the competent authority, the operator shall:

(1) comply with the applicable requirements contained in OPS.GEN, OPS.CAT, OPS.COM and Part-OR, except for the variations contained in this Section;

(2) establish and maintain in addition to the requirements contained in Part OR.OPS a specific training and checking programme for the crew involved in these operations; and

(3) establish operating procedures specifying:

(i) performance criteria;

(ii) if applicable, the conditions under which offshore human external cargo transfer may be conducted including the relevant limitations on vessel movement and wind speed;

(iii) weather limitations for HEC;

(iv) criteria for determining the minimum size of the HEC site, appropriate to the task;

(v) crew composition and experience requirements.

OPS.SPA.010.HEC Equipment requirements for HEC

(a) The installation of helicopter double cargo hook with independend dual release function, mirrors for vissual contact to the HEC and an radio equipment to comply with OPS.SPA.015.HEC and any subsequent modifications and, where applicable, its operation shall have an airworthiness approval appropriate to the intended function.

Ancillary equipment must be designed and tested to the appropriate standard as required by the competent authority.

(b) Maintenance instructions for HEC equipment and systems shall be established by the operator, in liaison with the manufacturer and included in the operator's helicopter maintenance programme as required in Part-M.

OPS.SPA.015.HEC HEC communication

Two-way radio communication shall be established between the flight crew and a trained and from the operator nomminated person hanging on the HEC device and, where possible and applicable, communication with ground personnel for day and night onshore and offshore operations.

OPS.SPA.025.HEC Performance requirements for HEC operations

Except for HEC operations at a HEMS Operating Site, HEC operations shall be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the suspended

person(s)/cargo, third parties, or property.

OPS.SPA.030.HEC Crew requirements for HEC operations

The minimum crew shall consist of at least one pilot and one HEC technical crew member hanging on the HEC device.

Section XXXXX – Human external cargo

AMC OPS.SPA.001.HEC(b)(3) Human external cargo (HEC)

TRAINING PROGRAMME

1. Flight Crew Members.

1.1 The specific HEC training programme for flight crew members should include the following subjects:

a. Fitting and use of the equipment;

b. Preparing the helicopter and equipment for HEC;

c. Normal and emergency procedures by day and, when required, by night;

d. Crew co-ordination concept specific to HEC;

e. Practice of HEC procedures; and

f. The dangers of static electricity discharge; and

g. HEC radio communication and defined standardized HEC commands between HEC and flight crew

h. HEC departures, landings and all procedures related to;

1.2 Flight crew member proficiency checks should include procedures likely to be used at HEC sites with special emphasis on:

a. Local area meteorology;

b. HEC flight planning;

c. HEC radio communication and defined standardized HEC commands between HEC and flight crew

d. HEC departures, landings and all procedures related to;

e. A transition to and from the hover at the HEC site;

f. Normal and simulated emergency HEC procedures; and

g. Crew co-ordination.

These checks should also be conducted by night if night HEC operations are undertaken by the operator.

2. HEC Technical Crew Member.

The specific HEC training programme for technical crew members who perform assigned duties relating to the operation should include the following additional items:

a. Duties in the HEC role;

b. Fitting and use of the equipment;

c. Operation of equipment;

d. Preparing specialist equipment for HEC;

e. Normal and emergency procedures;

f. Crew co-ordination concepts specific to HEC;

g. Operation of inter-communications and radio equipment;

h. Knowledge of emergency equipment;

i. Techniques for handling HEC passengers;

j. Effect of the movement of personnel on the centre of gravity and mass during HEC;

k. Effect of the movement of personnel on performance during normal and emergency flight conditions;

l. Techniques for guiding pilots over HEC sites;

m. Awareness of specific dangers relating to the operating environment; and

n. The dangers of static electricity discharge.

o. HEC radio communication and defined standardized HEC commands between HEC and flight crew

p. HEC departures, landings and all procedures related to;

AMC OPS.SPA.001.HEC(b)(4) Human external cargo (HEC)

OPERATING PROCEDURES

1. The Helicopter.

During HEC, the helicopter should be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the suspended person(s)/cargo, third parties, or property.

2. The Crew.

2.1 Selection.

The operations manual should contain criteria for the selection of flight crew members for the HEC task, taking previous experience into account.

2.2 Experience.

2.2.1 The experience considered should take into account the geographical characteristics (sea, mountain, big cities with heavy traffic, etc.).

2.2.2 The minimum experience level for a pilot-in-command conducting HEC flights should not be less than:

a. Offshore:

i. 1 000 hours pilot-in-command of helicopters or 1 000 hours as co-pilot in HEC operations of which 200 hours is as pilot-in-command under supervision; and

ii. 50 HEC flights conducted offshore, of which 20 flights should be at night if night operations are being conducted.

b. Onshore:

i.500 hours pilot-in-command of helicopters or 500 hours as co-pilot in HEC operations of which 100 hours is as pilot-in-command under supervision;

ii. 100 hours operating experience in helicopters gained in an operational environment similar to the intended operation; and

iii. 30 HEC flights, of which 10 HEC flights should be at night if night operations are being conducted.

c. Successful completion of training in accordance with the procedures contained in the operations manual and relevant experience in the role and environment under which HEC is conducted.

2.3 Recency. All pilots and technical crew members conducting HEC should, in addition to the recency requirements in Part OR.OPS, have completed in one year periode:

a. When operating by day: Any combination of 6 day or night HEC flights, each of which should include a transition to and from the hover.

b. When operating by night: 6 night HEC flights, each of which should include a transition to and from the hover.

2.4 Crew Composition

2.4.1 The minimum crew for day or night operations should be as stated in the operations manual and will be dependent on the type of helicopter, the weather conditions, the type of task, and, in addition for offshore operations, the HEC site environment, the sea state and the movement of the vessel.

2.4.2 A crew of two pilots should be used during offshore operation when:

a. The weather conditions are below Visual Flight Rules (VFR) minima at the offshore vessel or structure.

b. There are adverse weather conditions at the HEC site (i.e. turbulence, vessel movement, visibility).

c. The type of helicopter requires a second pilot to be carried because of:

i. cockpit visibility;

ii. handling characteristics; or

iii lack of automatic flight control systems.

3. The Manual

When required in the interest of safety, relevant extracts from the operations manual should be made available to the organisation for which the HEC is being provided.

4. Passenger briefing

Passenger briefing prior to any HEC flight, or series of flights, except for HEMS operation, HEC passengers should be briefed and made aware of the dangers of static electricity discharge and other HEC considerations.

AMC OPS.SPA.010.HEC(a) Equipment requirements for HEC

AIRWORTHINESS APPROVAL FOR HUMAN EXTERNAL CARGO

1. Helicopter double cargo hook with independend dual release function and mirrors installations which have been certificated according to any of the following standards should be considered to satisfy the airworthiness criteria for Human External Cargo (HEC) operations:

a. CS 27 or CS 29;

b. JAR 27 Amendment 2 or JAR 29 Amendment 2 or later;

c. FAR 27 Amendment 36 or later - including compliance with CS 27;

d. FAR 29 Amendment 43 or later.

2. Helicopter double cargo hook with independend dual release function and mirrors installations which have been certificated prior to the issuance of the airworthiness criteria for HEC as defined in paragraph 1 may be considered as eligible for HEC operations provided that following a risk assessment either:

a. The service history of the double cargo hook with independend dual release function installation is found satisfactory to the competent authority; or

b. For hoist installations with an unsatisfactory service history, additional substantiation to allow acceptance by the competent authority should be provided by the Installation Certificate Holder (TC or STC) on the basis of the following requirements:

i. The double cargo hook with independend dual release function installation should withstand a force equal to a limit static load factor of 3.5, or some lower load factor, not less than 2.5, demonstrated to be the maximum load factor expected during hoist operations, multiplied by the maximum authorised external load.

ii. The reliability of the primary and back-up release systems at aircraft level should be established and Failure Mode and Effect Analysis at equipment level should be available. The assessment of the design of the primary and back-up quick release systems should consider any failure that could be induced by a failure mode of any other electrical or mechanical rotorcraft system.

iii. The operations or flight manual contains one-engine-inoperative hover performance data and procedures for the weights, altitudes, and temperatures throughout the flight envelope for which HEC operations are accepted.

iv. Information concerning the inspection intervals and retirement life of the HEC rope should be provided in the instructions for continued airworthiness.

v. Any airworthiness issue reported from incidents or accidents and not addressed by i., ii., iii. and iv. should be addressed.

comment *6949* comment by: *Christian Hölzle*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *6951* comment by: *Christian Hölzle*

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6952* comment by: *Christian Hölzle*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII - OPS.SPA.001.HHO Helicopter hoist operations (HHO) p. 99

comment *468* comment by: *EHOC*

Paragraph (b)(3)

The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be:

"the Operations Manual includes an HHO supplement specifying:"

comment *834* comment by: *Reto Ruesch*

CAT = HHO class 1

In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *835* comment by: *Reto Ruesch*

Helicopter Hoist Operations

The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying:

comment *1133* comment by: *Heli Gotthard*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1194* comment by: *Stefan Huber*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1255* comment by: *Air Zermatt*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1306* comment by: *Air-Glaciers (pf)*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1801* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 001 HHO Helicopter Hoist Operations

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1877* comment by: *SHA (AS)*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *1947* comment by: *Berner Oberländer Helikopter AG BOHAG*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2032* comment by: *Heliswiss AG, Belp*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2109* comment by: *Dirk Hatebur*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2155* comment by: *Heliswiss*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2159* comment by: *Heliswiss NV*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2432* comment by: *Jan Brühlmann*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2463* comment by: *Catherine Nussbaumer*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class

choice shall be left to the operator, provided he obtain the National Authority AOC required.

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2563* comment by: *Walter Mayer, Heliswiss*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2851* comment by: *Philipp Peterhans*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2936* comment by: *Pascal DREER*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *2974* comment by: *REGA*

no comment, comment on certification issues of rescue equipment seperately

comment *3986* comment by: *HDM Luftrettung gGmbH*

OPS SPA 001 HHO:

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *3989* comment by: *HDM Luftrettung gGmbH*

OPS SPA 001 HEMS:

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying

comment *4119* comment by: *Benedikt SCHLEGEL*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *4120* comment by: *Benedikt SCHLEGEL*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *4554* comment by: *Christophe Baumann*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *5144* comment by: *ADAC Luftrettung GmbH*

Section VIII – HHO

OPS.SPA.001.(HHO)

(Page 99)

(b) (3) establish operating procedures specifying:

(iii) weather limitations for HHO:

Das macht keinen Sinn, es müssen vielmehr die jeweiligen Wetterminima für die Art des Einsatzes (z.B. HEMS) gelten. Beim Start zu einem Gebirgsrettungsflug kann z.B. oft noch nicht entschieden werden, ob es tatsächlich ein HHO Einsatz wird.

Im Gebirge sind ganz unterschiedliche lokale Wettersituationen möglich, eine Vorhersage für ein bestimmtes Einsatzgebiet daher oft unmöglich. Die Durchführbarkeit eines Einsatzes wird vor Ort entschieden. Hier können nur Ausbildungs- und Erfahrungstand der fliegerischen Crew die maßgebliche Rolle

spielen. Wir beantragen daher für HEMS-Einsätze eine entsprechende Ausnahme („...except for HEMS").

(iv) criteria for determining the minimum size…..

Das würde eine maßgebliche Einschränkung der Operationalität des HHO-Einsatzes bedeuten. Im Rahmen von HEMS-Einsätzen kommt es durchaus vor, dass z.B. auch in Waldgebieten (zwischen Bäumen) gewincht werden muss, um verletzte Personen retten zu können. Eine Bergung aus einer Bergwand lässt eine solche Definition per se nicht zu. Hier können nur Ausbildungs- und Erfahrungstand der fliegerischen Crew die maßgebliche Rolle spielen. Wir beantragen für HEMS-Einsätze daher eine entsprechende Ausnahme („...except for HEMS").

comment *5811* comment by: *Ph.Walker*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *6152* comment by: *Hans MESSERLI*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *6241* comment by: *Irish Aviation Authority*

Comment:

OPS.SPA.001.HHO & OPS.SPA.015 HHO Comms -

SPA.001 (b) (3) "Establish operating procedures specifying" no explanation give as how is to be acheieved

SPA.015 ref the term "organisation" this term needs to be replaced.

Justification:

SPA.001 (b)(3) operating procedures to be established by means of an OM supplement

SPA 015 replace organisation with operating site or ground personnel

Proposed text:

SPA 001 (b) (3) establish a HHO operations manual supplement specifying:

SPA 015 comms shall be established with the operating site.

comment *6373* comment by: *Trans Héli (pf)*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations

Manual includes an HHO supplement specifying the SOP's.v

comment *6940* comment by: *Swiss Helicopter Group*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *7019* comment by: *Eliticino SA*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *7020* comment by: *Eliticino SA*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII - OPS.SPA.010.HHO Equipment requirements for HHO p. 99

comment *5145* comment by: *ADAC Luftrettung GmbH*

OPS.SPA.010.HHO

Equipment requirements

for HHO

(Page 99)

(b) maintance instructions……, in liasion with the manufacturer…..

Praktisch nicht umsetzbar. Die Hersteller (z.B. Goodrich) geben oft nur sehr allgemeingültige und eingeschränkte Überprüfungen von Winde und Seil vor, die teilweise nicht praxisgerecht auf den speziellen Einsatzzweck abzielen.

Hier muss dem Operator die Möglichkeit gegeben werden, adäquate alternative Überprüfungen

durchführen zu können, z.B. mittels eines zertifizierten Seilprüf- und Reckgeräts (Zephir). Diese Überprüfung muss dann nach entsprechender Einweisung nur vom HHO technical crew member durchgeführt werden können. Wir beantragen insofern eine entsprechende Erleichterung.

comment *6008* comment by: *Peter Moeller*

needs to be more precise. Only the hoist equipment mounted to the helicopter should need an airworthiness approval. All equipment below the hook (harness, vests, special tools) should not be EASA`s concern.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII - OPS.SPA.015.HHO HHO communication p. 99

comment *469* comment by: *EHOC*

General

The intent of this was to require communication with ground personnel at the operating site (it is unclear who's organisation). Perhaps this should be stated in the requirement:

"Two-way communication...with ground personnel at the HHO Site for:"

comment *984* comment by: *REGA*

During HEMS HHO missions often/usually two-way radio communication with the organization or personnel on ground is not possible.

Proposal (c)

HEMS missions, where is not possible to establish two-way radio communication, are alleviated.

comment *2279* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

HHO Communication

Comment / Proposal:

Modify text:

Except for HEMS flights and for operations where ground assistance is not necessary, two-way radio [...].

comment *6013* comment by: *Peter Moeller*

Add: (c) For HHO operations at HEMS Operating Site two-way radio communication shall be establihed with the rescuer and/or medical personal beeing hoisted.

There may no other organisation or ground personne be involved.

comment *6242* comment by: *Irish Aviation Authority*

Comment:

OPS.SPA.001.HHO & OPS.SPA.015 HHO Comms -

SPA.001 (b) (3) "Establish operating procedures specifying" no explanation give as how is to be acheieved

SPA.015 ref the term "organisation" this term needs to be replaced.

Justification:

SPA.001 (b)(3) operating procedures to be established by means of an OM supplement

SPA 015 replace organisation with operating site or ground personnel

Proposed text:

SPA 001 (b) (3) establish a HHO operations manual supplement specifying:

SPA 015 comms shall be established with the operating site.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII - OPS.SPA.025.HHO Performance requirements for HHO operations p. 99

comment *470* comment by: *EHOC*

General

Because this has been added to the requirements, it will be necessary to make a similar change to the operating procedures contained in AMC SPA.001.HHO(b)(4) 1. The Helicopter (see also the comment in the AMC).

comment *982* comment by: *REGA*

Lack of Performance: Quite no moderne twin helicopter is able to sustain a critical power unit failure during an hover flight out of ground effect. Otherwise a realistic training (e.g. in the mountains, over forest) won't be possible.

Proposal

Except for HHO operations and HEMS operational training at a HEMS…

comment *1132* comment by: *Heli Gotthard*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational

reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1191* comment by: *Stefan Huber*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1254* comment by: *Air Zermatt*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents **0,0068%**. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1305* comment by: *Air-Glaciers (pf)*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1800* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 025 HHO CAT = HHO class 1

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1946* comment by: *Berner Oberländer Helikopter AG BOHAG*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for

HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1979* comment by: *SHA (AS)*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2031* comment by: *Heliswiss AG, Belp*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2108* comment by: *Dirk Hatebur*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS

operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2153* comment by: *Heliswiss*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2154* comment by: *Heliswiss NV*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2156* comment by: *Heliswiss NV*

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and

fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2280* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Performance requirements for HHO operations

Comment / Proposal:

Modify text:

Except for HHO operations at a HEMS Operating Site and for mountain operations, HHO operations performed as Commercial Air Transport (CAT) shall be (delete: capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting,) executed without an unacceptable hazard to the suspended person(s)/cargo, third parties, or property.

comment *2430* comment by: *Jan Brühlmann*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *2431* comment by: *Jan Brühlmann*

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2562* comment by: *Walter Mayer, Heliswiss*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National

Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2850* comment by: *Philipp Peterhans*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2935* comment by: *Pascal DREER*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be

left to the operator, provided he obtain the National Authority AOC required.

comment *3182* comment by: *Peter SCHMAUTZER*

In OPS.SPA.025 "Hems performance requirements for hems operation", is regulated, which performance class the helicopters should have to perform this operations. At the moment, BO 105 CBS 4 Helicopters perform HEMS operations in Carinthia, Austria.

HEMS Operation in Austria is under heavy cost pressure, because the transportations are mainly paid by the social security system. The social security system is trying to minimize the costs. The social security assurances decide after the transportation was performed about the necessity of the flight and pay the costs for the transport or not. The decision is made on the allegation, that the injury was not so serious, that the transportation with the helicopter was necessary. This was the reason, why all HEMS operators had financial losses.

According to AMC OPS Gen 010 it is not possible to decide in advance if the BO 105 CBS 4 can be used for HEMS operations in future. Therefore it is necessary to find a solution that HEMS operations to hospitals, which are considered, as hostile environment are possible in future. Therefore I find it necessary, that the criteria's are so, that HEMS operations with multi engine helicopters, so as BO 105 CBS 4, can be performed in future. In case this is not possible, it would be necessary to acquire new helicopters, which no operator can effort, because the higher costs will not be covered by the insurance companies and mainly by the state social security.

comment *3985* comment by: *HDM Luftrettung gGmbH*

OPS SPA 025 HHO:

CAT = HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *4551* comment by: *Christophe Baumann*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *5137* comment by: *Aero-Club of Switzerland*

The Agency obviously wants to have a perfect system, however, no-one will be able to pay for it. As a consequence, no system at all will exist in the future.

So please leave all about HEMS to the NAA.

Justification: C.N. Parkinson wrote, years ago already, that perfect systems will only be available when no-one will be in position to make use of it.

Decision-making MUST be left to the operators AND to the PiC, they have the necessary experience.

Justification: Offshore operations and Alpine flying are very different from each other.

comment *5810* comment by: *Ph.Walker*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6016* comment by: *Peter Moeller*

add:

Except for HHO operations at a HEMS Operating Site including training, HHO operations.....

comment *6151* comment by: *Hans MESSERLI*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6317* comment by: *SHA (AS)*

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6372* comment by: *Trans Héli (pf)*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator

obtain the AOC validated by the National Authority.

comment *6939* comment by: *Swiss Helicopter Group*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *7015* comment by: *Eliticino SA*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *7346* comment by: *ADAC Luftrettung GmbH*

Für HHO in HEMS gilt festzustellen, dass auch mit den modernsten, nach CAT A zugelassenen und gemäß CS 27/29 zertifizierten, HEMS-Hubschraubern, bei ungünstigen Umgebungsbedingungen (große Höhe, hohe Temperaturen) nicht immer Leistungsklasse 2 eingehalten werden kann. Solche Bedingungen sind des öfteren bei HEMS-Windeneinsätzen in großen Höhen gegeben. Um den

Piloten auch zukünftig die Chance zu geben, HEMS-Windeneinsätze innerhalb der Legalität durchführen zu können, muss hier eine Vorschrift geschaffen werden, die es erlaubt, in Ausnahmefällen HHO in PC 3 durchzuführen.

B. I. Draft Opinion - Part-OPS - Subpart D - Section VIII - OPS.SPA.030.HHO Crew requirements for HHO operations p. 100

comment *5509* comment by: *ADAC Luftrettung GmbH*

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX p. 101

comment *1408* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

HEMS is part of the public health and police tasks of the state and, thus, not to be regulated by commercial civil aviation rules.

comment *2314* comment by: *Austro Control GmbH*

In conjunction with NPA 2009-02a (Page 43, Point 111) following **general commen**t is given:

The note to HEMS in Appendix 1 to JAR-OPS 3.005(d) states that the Authority is empowered to decide which operation is a HEMS operation in the sense of this Appendix.

This generates differences between the Member States as HEMS could be not the same in the sense of this regulation.

There is a problem for "Mountain HEMS and Primary HEMS missions" as well as performance requirements with altitude where for example Austria is seeking a higher standard due to the nature in HEMS operations (hot, high, humid) and where the AMC material p.104 generates problems, as some helicopter types can not maintain Performance Class 2 at the HEMS Operations site due to the lack of single engine performance. These helicopters may well show compliance at lower altitues e.g. example: operations in the Netherlands;

Just to transfer the responsibility to the pilot is not feasable as by the nature of HEMS he can not decide at the HEMS site if he is in Performance Class 2 or already operating in Performance Class 3. Performance Class 2 at the HEMS site must be assured. This can only be achieved by the use of Category A certified helicopters (fully compliance to JAR-27/FAR-27/CS27-Annex C/Cat A or JAR-29/FAR-29/CS29).

Human External Cargo Operations especially in the mountainous area are standard.

A further Problem in HEMS which generates unacceptable risks is if there is no authorization from the Member State in which the operations take place is

required. The rule should state: *Approval from the Agency issuing the AOC as well as an authorization from the Agency responsible for the operations area.*

The common playing ground is not influenced as this will be the same regulation for all memberstates.

Background: There ist a high accident rate in HEMS operations which is higher than in other helicopter operations and therefore provisions to reduce this risk for safety reasons are necessary.

According to the request in **NPA 02a, Page 43 (OPS.SPA.HEMS, post NPA38)** Austro Control pleads for Option 2(b), notwithstanding that only full **CAT A certificated helicopters** (JAR-27/FAR-27/CS27-Annex C/Cat A or JAR-29/FAR-29/CS29) shall be **used for HEMS** operations.

comment *5257* comment by: *DGAC*

HEMS is only CAT. This section should be transferred to CAT (as is ETOPS)

comment *6955* comment by: *Christian Hölzle*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *7034* comment by: *Christian Hölzle*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX - OPS.SPA.001.HEMS Helicopter emergency medical service operations (HEMS) p. 101

comment *471* comment by: *EHOC*

Paragraph (b)(4)

The original intent of the text was to require the operator to have a HEMS Supplement to the Operations Manual; the text might be:

"the Operations Manual includes an HEMS supplement specifying:"

comment *836* comment by: *Reto Ruesch*

Point iv: esatblish operating procedure for all recommended routes

This again is not applicable to mountain operations as the sites are always different and due to the weather change, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and an approval of the National authority.See TGL 43 HEMS

comment *837* comment by: *Reto Ruesch*

Helicopter Emergency medical service operations

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1134* comment by: *Heli Gotthard*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority. See TGL 43 HEMS

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1196* comment by: *Stefan Huber*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *1198* comment by: *Stefan Huber*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1256* comment by: *Air Zermatt*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *1257* comment by: *Air Zermatt*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1307* comment by: *Air-Glaciers (pf)*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *1308* comment by: *Air-Glaciers (pf)*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *1802* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 001 HEMS Point iv: establish operating procedure for all recommended routes

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

Ops SPA 001 HEMS Helicopter Emergency medical service operations

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1878* comment by: *SHA (AS)*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *1948* comment by: *Berner Oberländer Helikopter AG BOHAG*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *1949* comment by: *Berner Oberländer Helikopter AG BOHAG*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *1977* comment by: *Berner Oberländer Helikopter AG BOHAG*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2033* comment by: *Heliswiss AG, Belp*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2111* comment by: *Dirk Hatebur*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be

adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2114* comment by: *Dirk Hatebur*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *2158* comment by: *Heliswiss*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *2160* comment by: *Heliswiss NV*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2163* comment by: *Heliswiss NV*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *2231* comment by: *Heliswiss*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2248* comment by: *Dirk Hatebur*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2433* comment by: *Jan Brühlmann*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2467* comment by: *Catherine Nussbaumer*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2490* comment by: *Jan Brühlmann*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2564* comment by: *Walter Mayer, Heliswiss*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2565* comment by: *Walter Mayer, Heliswiss*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *2595* comment by: *Walter Mayer, Heliswiss*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2602* comment by: *Catherine Nussbaumer*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *2852* comment by: *Philipp Peterhans*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *2853* comment by: *Philipp Peterhans*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *2937* comment by: *Pascal DREER*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *3173* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 001 HEMS Helicopter Emergency medical service operations

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *3988* comment by: *HDM Luftrettung gGmbH*

OPS SPA 001 HEMS:

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority. See TGL 43 HEMS.

comment *4121* comment by: *Benedikt SCHLEGEL*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *4412* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

This again is not applicable to mountain operations as the sites are always different and due to the weather change, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and an approval of the National authority.See TGL 43 HEMS

comment *4432* comment by: *Benedikt SCHLEGEL*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *4556* comment by: *Christophe Baumann*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *4557* comment by: *Christophe Baumann*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *4618* comment by: *Christophe Baumann*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *4962* comment by: *Benedikt SCHLEGEL*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *5187* comment by: *Philipp Peterhans*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *5526* comment by: *Bristow Helicopters*

SAR operations are not described. Should SAR operations provided for a commercial customer be regulated as HEMS?

comment *5812* comment by: *Ph.Walker*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be

adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *5813* comment by: *Ph.Walker*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *5843* comment by: *Ph.Walker*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *5853* comment by: *Ph.Walker*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *5907* comment by: *Dirk Hatebur*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6019* comment by: *Peter Moeller*

(b)(1) this ecludes all state aircraft (Police, Military) from HEMS operations. Is this the intention?

comment *6153* comment by: *Hans MESSERLI*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43

HEMS.

comment *6154* comment by: *Hans MESSERLI*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *6243* comment by: *Irish Aviation Authority*

Comment:

OPS.SPA.001.HEMS & OPS.SPA.020 HEMS Operating Minima -

001. (4) refers to establishing operating procedures

020. (a) States " HEMS flights in PC1 & PC" operations

(b) Text is missing.

Justification:

001. (4) but does not state how.

020. (a) does not read well

(b) JAR-OPS App 1 3.005(d) (4) (ii) PC3 ops WX minima is different to EASA text

Proposed text:

001. insert - establish a HEMS Operations Manual Supplement specifying…..

020. (a) insert – Flights operating to PC1 & PC2 …..

(b) cut and paste text from App 1 3.005(d)(4)(ii) re visibility reduced to 800 m etc.

comment *6283* comment by: *Hans MESSERLI*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6332* comment by: *SHA (AS)*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6376* comment by: *Trans Héli (pf)*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *6410* comment by: *Trans Héli (pf)*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6618* comment by: *Heliswiss International*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *6620* comment by: *Heliswiss International*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *6687* comment by: *Heliswiss International*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6723* comment by: *Heliswiss International*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *6954* comment by: *Swiss Helicopter Group*

Point iv : This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.See TGL 43 HEMS.

comment *6974* comment by: *Swiss Helicopter Group*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement.

Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

comment *7025* comment by: *Eliticino SA*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *7215* comment by: *Eliticino SA*

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement. Due to complex and different types of operations and different types of environement, HEMS definition shall be left to National AUthorities.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX - OPS.SPA.010.HEMS Equipment requirements for HEMS operations p. 101

comment *983* comment by: *REGA*

(a) No possibility to approve the medical equipment itself…

Need to be clarifying that (a) describes only the mounting (means of installation) of the medical equipment.

Proposal (a)

The means/mounting of the installation of all helicopters (…)

comment *2281* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Equipment requirements for HEMS operations

Comment / Proposal:

Modify text:

(a) The means/mounting of the installation [...].

comment *3904* comment by: *FOM ANWB MAA*

OPS.SPA.010.HEMS Equipment requirements for HEMS operations

(a) The ~~installation~~ fixture and fittings of all helicopter dedicated medical equipment and any subsequent modifications and, where appropriate, its operation shall be approved in accordance with Part-21.

Improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself.

Medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *3974* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

(a) Improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself

comment *4414* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Medical devices must not comply with aviation requirements. The medical techchnical requirements are sufficient. medical equipmeny cannot be approved by part 21 organisations, change text to read that all fixtures and fittings for medical equipment must be part 21 approved

comment *5424* comment by: *ADAC Luftrettung GmbH*

OPS.SPA.010.HEMS (a)

Please improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself.

comment *5504* comment by: *ALFA-HELICOPTER*

Improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself.

comment *5791* comment by: *Norsk Luftambulanse*

(a) Improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself

comment *6018* comment by: *HSD Hubschrauber Sonder Dienst*

010.HEMS(a): improve text so as to make clear, that an approval from a PART-21 is only required for fixture and fittings for medical equipment, since PART-21 cannot approve medical equipment.

comment *6030* comment by: *Peter Moeller*

needs clarification:

only the provisions (fixations, connectors etc) for the medical equipment which are installed in a HEMS helicopter need an approval in accordance with Part-21 but not the medical instruments thenmselves like ventilators, pumps etc.

comment *6867* comment by: *ALFA-HELICOPTER, spol. s r.o.*

The agency should include rules or guidelines for the operation of non-certified medical equipment for voice and data transmission. This equipment should also be certified in accordance with PART-21 regulation as per the demands the agency.

comment *7187* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.SPA.010.HEMS Equipment requirements for HEMS operations

(a) The ~~installation~~ fixture and fittings of all helicopter dedicated medical equipment and any subsequent modifications and, where appropriate, its operation shall be approved in accordance with Part-21.

Improve text as to make clear that certification is only required for the fixture and fittings, not for the medical equipment (like ventilators) itself.

Medical equipmeny cannot be approved by part 21 organisations. Change text to read that all fixtures and fittings for medical equipment must be part 21 approved.

comment *7325* comment by: *new European Helicopter Association*

The requirements under (a) need clarification: The part 21 approval can apply to the fixture and fittings of the medical equipment only. Medical equipment itself is not part 21 accepted but must meet CEN 13718-1/2 approval requirements.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX - OPS.SPA.020.HEMS HEMS operating minima p. 101-102

comment *473* comment by: *EHOC*

Paragraph (a)

The text would flow much better if the preamble was changed to read:

"HEMS flights **operating** in performance class 1 and 2 ~~operations~~ shall comply..."

Paragraph (b)

The original text has not been reproduced and is missing the alleviation on visibility that is contained in Annex 2; the following text should be appended to the existing rule:

"Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision."

comment *838* comment by: *Reto Ruesch*

Helicopter Emergency medical service operations

The original intent of the text was to require the operator to have an HEMS Supplement to the Operations Manual; the text might be: the Operations Manual includes an HEMS supplement specifying:

comment *839* comment by: *Reto Ruesch*

HEMS Operating minima

Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *928* comment by: *REGA*

Rega / Swiss Air-Ambulance Ltd. is flying since 1988 with NVIS. We are flying single pilot NVIS OPS. The HCM also is NVIS trained and uses a hand held NVG.

Experience shows that even in single pilot HEMS NVIS operation with a NVIS trained HCM the night minima of 2500m visibility occurs no problem for safety.

Since the beginning of using NVIS designated experienced Rega pilots are allowed to fly down to 800m visibility ad night in well known regions and Rega never had problems in this low visibility conditions. Rega experience is based on more than 25’000 missions with almost around 100’000 landings with NVG since 1988.

There obviously is no reason to make a difference between 1 PILOT and 2 PILOTS (Table 1 OPS.SPA.020 - HEMS operating minima).

Proposal

*1 or 2 pilot/technical crew meber: *Visibility, ceiling and cloud base may be reduced for short periods within a specific area if the helicopter is equipment with RA, AP, TAWS, EVS and NVIS (night) when in sight of land and if the helicopter maneuvered at a speed that will give adequate opp… The procedure for hems missions below the minima according table 1 shall be described in the operation manual and be approved by the competent authority.*

comment *1135* comment by: *Heli Gotthard*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1200* comment by: *Stefan Huber*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1258* comment by: *Air Zermatt*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1309* comment by: *Air-Glaciers (pf)*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1803* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 020 HEMS HEMS Operating minima

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1880* comment by: *SHA (AS)*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *1950* comment by: *Berner Oberländer Helikopter AG BOHAG*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2034* comment by: *Heliswiss AG, Belp*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2115* comment by: *Dirk Hatebur*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2162* comment by: *Heliswiss*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2165* comment by: *Heliswiss NV*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2282* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

HEMS operating minima

Comment / Proposal:

Table 1 OPS.SPA.020 - HEMS operating minima

Modify text:

Delete "2 Pilots" and insert 1 Pilot and a HEMS crew member

* => modify text: Visibility may be reduced (delete: to 800m for short periods).

comment *2434* comment by: *Jan Brühlmann*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2566* comment by: *Walter Mayer, Heliswiss*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2854* comment by: *Philipp Peterhans*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *2938* comment by: *Pascal DREER*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *3404* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

FOCA statement regarding multi-engine helicopters / performance classes

It should be a requirement for a rulemaker to do a basic study on the requirement of multi-engine helicopters (required performance classes) before drafting rules that have a drastic impact on the industry. A very small percentage of all helicopter accidents are caused by engine failures. The operation of multi-engine helicopters causes a heavy increase of the costs for an operator and the customer or state, with a very minimal increase in safety. Most helicopter accidents are caused by human factors (pilot, see statistics). This is an issue which should be taken into consideration while drafting rules. Human aspects (e.g. decision making) and the training of pilots is the basic aspect for increasing the safety of helicopter operations. The FAA system shows that the requirement of multi-engine helicopters does not meet the needs of an increased safety (see text below).

A rulemaker should consider the basics of rulemaking. The principle of proportionality, public interest, economical and ecological feasibility should be the first priority. The need to operate multi-engine does not respect this

principles in most cases.

When JAR-OPS 3 introduced the requirement for operating multi-engine helicopters, it did not have to respect the above mentioned principles since it was not drafted by a recognized rulemaker. The countries that adopted the JAR-OPS 3 Regulations had the option to alleviate from the proposed rules. The EASA regulations now have a different impact on the whole aviation framework and should be tailored towards a safe operation in the public interest respecting the basic rulemaking principles.

FAA statement regarding the use of multi-engine helicopters for HEMS operations:

After a few email discussions regarding our experience in the helicopter emergency medical service (HEMS) industry, in your email of February 23, 2007, you asked us to summarize our findings in a letter regarding our experience with single versus multiengine helicopters in the HEMS industry.

We certainly welcome your inquiry and are pleased to provide that information. Also, we are very pleased to note that National Aviation Authority helicopter department in Switzerland uses our operational notices in the development of your policy, guidance, and rules.

You asked do we see any safety improvement "if there will be only twin engine helicopters for HEMS in the future." In response to your question, while preparing our efforts to reduce accidents in the HEMS industry, we examined 85 accidents of HEMS operators that occurred between the 1998 and 2004. The analysis of these accidents was the basis for our actions we took in the last 24 months regarding visual flight rules weather minimums, risk assessment, crew resource management, training, controlled flight into terrain, and operational control. Of the 85 HEMS accidents that occurred in that period, 49 were multiengine aircraft; 36 were singles. The ratio reflected here is the same as the ratio of single or multi-engine helicopters in the entire HEMS fleet.

In the United States, single engine helicopters make up approximately 42% of the operational HEMS fleet today; 58% are multi-engine. The operators make the business decision on the type of aircraft that best suits their operational requirements. Engine failure has not been a significant causal factor in HEMS accidents. Instead, the human factors causes of controlled flight into terrain, inadvertent flight into instrument meteorological conditions, and loss of control were the predominant causes. Thus, the FAA has no plans within the foreseeable future to mandate that HEMS operations be conducted in multiengine aircraft.

As you requested, we are enclosing a copy of the final draft report reflecting these statistics. It is the foundation of our specific efforts to decrease the accident numbers in HEMS. The total number of accidents mentioned in this report is 83; we included two additional in our analysis subsequent to the report.

This comment was written by the Helicopter Flight Operation Section of the Federal Office of Civil Aviation (FOCA) Switzerland

comment *3439* comment by: *UK CAA*

Page No: 101

Paragraph No:

OPS.SPA.020.HEMS (a)

Comment:

Editorial change.

Justification:

Clarification

Proposed Text (if applicable):

(a) HEMS flights **operating** in performance class 1 and 2 ~~operations~~ shall comply……

comment *3440* comment by: *UK CAA*

Page No: 101

Paragraph No:

OPS.SPA.020.HEMS (b)

Comment:

Editorial change and replacement of text missing from JAR-OPS 3 requirement.

Justification:

Standardisation

Proposed Text (if applicable):

(b) The weather minima for the dispatch and en-route phase of a HEMS flight ***operating*** in performance class 3 ~~operations~~ shall be a cloud ceiling of 600 ft and a visibility of 1 500 m. ***Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacles in time to avoid a collision***.

comment *3706* comment by: *Austro Control GmbH*

In the table to OPS.SPA.020 HEMS it is suggested to modifiy the first line:

*2 Pilots **or** 1 Pilot and 1 HEMS crew member if approved*

Justification:

Due to the fact that in HEMS there is practially only one pilot and one HEMS crew member it seems necessary to reflect this option.

comment *3993* comment by: *HDM Luftrettung gGmbH*

OPS SPA 020 HEMS:

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *4122* comment by: *Benedikt SCHLEGEL*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *4413* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Visibility may be reduced to 500 m independent from the ceiling and also for single pilot operation for short periods when navigation is conducted by reference to visual landmarks and the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

response *Noted*

Duplicate comment.

comment *4558* comment by: *Christophe Baumann*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *5258* comment by: *DGAC*

Proposal

Change "HEMS flights in performances class 1 and 2…" by "HEMS flights operated in performance class 1 and 2"

comment *5814* comment by: *Ph.Walker*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6023* comment by: *HSD Hubschrauber Sonder Dienst*

Table 1 OPS.SPA.020 HEMS operating minima:

Consider to change the differanciation between 1 PILOTor 2 PILOTS to:

SINGLE CREW or MULTI CREW.

comment *6156* comment by: *Hans MESSERLI*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6245* comment by: *Irish Aviation Authority*

Comment:

OPS.SPA.001.HEMS & OPS.SPA.020 HEMS Operating Minima -

001. (4) refers to establishing operating procedures

020. (a) States " HEMS flights in PC1 & PC" operations

(b) Text is missing.

Justification:

001. (4) but does not state how.

020. (a) does not read well

(b) JAR-OPS App 1 3.005(d) (4) (ii) PC3 ops WX minima is different to EASA text

Proposed text:

001. insert - establish a HEMS Operations Manual Supplement specifying…..

020. (a) insert – Flights operating to PC1 & PC2 …..

(b) cut and paste text from App 1 3.005(d)(4)(ii) re visibility reduced to 800 m etc.

comment *6379* comment by: *Trans Héli (pf)*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6625* comment by: *Heliswiss International*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *6994* comment by: *Swiss Helicopter Group*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment 7028 comment by: Eliticino SA

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX -OPS.SPA.025.HEMS Performance requirements for HEMS operations p. 102

comment 840 comment by: Reto Ruesch

Perf class 3 not over hostile / How can we operate in mountain

According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.

comment 905 comment by: CAA-NL

Comment regarding:

(a) Performance class 3 operations…

(b) The HEMS operating base shall not be located in a congested area or on a hospital roof if the HEMS operator provide a 24hour service and flights after UDP are expected.

(c) Take-off and landing

1. Helicopters conducting ……

CAA/NL Reasoning:

It is the opinion of the CAA/NL that helicopter night operations to and from locations in congested areas and / or hospital roofs results in unnecessary risks for the surroundings in case of an N-1 situation. Therefore the CAA/NL restricts their current HEMS operator from night operations to and from hospital roofs and / or congested areas and allows these flights only to pick up or deliver the medical passenger or emergency doctor. The HEMS operating base, in case of 24-hour operations, should therefore be located outside a congested areas and not being situated on a hospital roof.

comment 986 comment by: REGA

Attachment #12

(a) According the definition of Performance class 3, multi-engine helicopter may also be required to perform a forced landing. Even modern light twin helicopters, certified CAT A, may not be able to be operated according performance class 1 or 2 all the time. Especially when those missions are performed in confined areas like in the mountains (hostile environment) or at

operating sites within congested areas.

Proposal (a)

Performance class 3 operations with helicopters certified in CAT B shall not be conducted over a hostile environment.

HEMS-Operating Sites: Meeting the Performance Class 2 requirement at HEMS-operating sites is even with modern twin helicopters (e.g. EC145; EC135) not possible at all time: Due to the "character" of HEMS-missions and their operating sites (e.g. within a forest or a mountainous terrain; wind, temperature) twin helicopters (CAT A certified) are operating within all three performance classes; even for short period in Performance Class 3 without the assurance of a safe forced landing (see examples below).

Operations at hospitals

Throughout Europe HEMS operators used and use landingsites at hospitals that do not meet design criteria nor can be approached in the required PC. This issue was identified and adressed in JAR-OPS 3. A solution was provided by creating Public Interes Sites. Unfortunately many NAAs have neither implemented this regulation, nor have been willing to accept landingsites, existing prior to 1 July 2002, as Public Interes Sites as a consequence. Implementation of PIS regulation under present days conditions will result in a degradation of HEMS patient care because numerous Hospitals would no longer be available for doctor/patient pickup or delivery. Throughout Europe various National regulations exist. The common denominator in these regulations is the fact that unofficial landing sites at hospitals are treated as HEMS operating sites. This especially holds true for landing sites at smaller hospitals which are visited infrequently. In this respect reconsideration of the HEMS philosophy, and the related requirements, is necessary.

Proposal (b) (1)

Helicopters conducting…. To/from an aerodrome/hospital/operating base which is located…

On operating bases located in a hostile environment, CAT A certified helicopters shall be operated in accordance with performance class 1 or 2.

(3) In high altitudes/low density or confined areas, when CAT A certified helicopters is not able to sustain performance class 2 during,

Helicopters, certified CAT A, conducting operations to/from HEMS operating sites or hospital sites located in hostile environment where environmental conditions of altitude and high temperature - in excess of ISA – exists such that adequate reserves of performance are not available to meet the requirements for PC1 or PC2, provided AEO HOGE is available, the requirement for PC1 or PC2 may be disregarded (see. TGL No.43).

or

Proposal 2

(b) (1)/(2) HEMS-operations: If it is not possible to comply with the requirement of performance class 1 due to performance or operational reasons, HEMS operations may be carried out with multi-engine helicopters (Category A certified), in performance class 2 or 3 providing that these deviations are described in the operations manual and have been approved by the competent authority.

comment *1017* comment by: *Michael Kroell*

Performance requirements for HEMS operations should clearly state that the helicopter has to be a certified Category A helicopter to allow operations in accordance to Performance Class 1 where applicable.

Performance Class 3 operations should not be allowed at all in HEMS operations with one exemption - where high altitude rescue is necessary and the HEMS operation site is out of the altitude performance of the Category A certified helicopter. The operator has to determine these local areas based on the performance requirements and the operations need an approval by the competent authority.(OPS.SPA.001.SFL) Nevertheless - for the transport of the patient to the hospital a Category A certified helicopter to allow operations in Performance Class 1 shall be used. Designated mountainous areas could be established where these approvals could be effective.

comment *1136* comment by: *Heli Gotthard*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1201* comment by: *Stefan Huber*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority

AOC required.

comment *1259* comment by: *Air Zermatt*

Perf class 3 : Performance Class 3 not over hostile / How can we operate in the mountains? According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1310* comment by: *Air-Glaciers (pf)*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1715* comment by: *EUROCOPTER*

Modifications proposal:

~~(a) Performance class 3 operations shall not be conducted over a hostile environment.~~

(b) Take-off and landing

(1) Helicopters conducting operations to/from a ***heliport*** ***~~aerodrome~~*** *at a*

hospital which is located in a hostile environment shall be operated in accordance with performance class 1; except as provided for in OPS.SPA.005.SFL ***(e) if the hospital is located in a congested area; except as provided for in OPS.SPA.005.SFL (c) and (d) if the hospital is located in a non congested area.***

(2) Helicopters conducting operations to/from an HEMS operating site located in a hostile environment shall be operated in ~~***accordance with***~~ *performance class 2* ***or 3 in accordance with Subpart D Section VI (SFL).***

Justification:

- for (a) and (b)(1): taking into account the proposal to introduce the "50%-5 minutes" alleviation in OPS.SPA.005.SFL for CAT PC3 operations (comment n° 1106), it should be possible that a single-engine helicopter conducts a HEMS flight from a hospital heliport located in a hostile non congested area to another hospital heliport located in a hostile non congested area.

- for (b)(2): PC 3 operations being allowed for CAT in accordance with Subpart D Section VI (SFL), they should be also and a fortiori allowed for CAT HEMS.

comment *1804* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA 025 HEMS Perf class 3 not over hostile / How can we operate in mountain

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1881* comment by: *SHA (AS)*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1951* comment by: *Berner Oberländer Helikopter AG BOHAG*

erf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2035* comment by: *Heliswiss AG, Belp*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed two asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2122* comment by: *Dirk Hatebur*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to

reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2164* comment by: *Heliswiss*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2167* comment by: *Heliswiss NV*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *2168* comment by: *Heliswiss NV*

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2283* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern detail:

Performance requirements for HEMS operations

Comment / Proposal:

Modify text:

Performance Class 3 operations shall only be conducted over a hostile environment in mountain and remote areas and if there's is no multi-engine helicopter available within a reasonable time or due to operational reasons.

Remarks:

Mountain and remote areas as well as operational reasons (wind, altitude) justify the use of helicopters in Performance Class 3. Additional the lack of multi-engine helicopters justify the use of single engine helicopters operating in Performance Class 3 due to the need of an emergency case.

comment *2334* comment by: *Austro Control GmbH*

Performance requirements for HEMS operations should clearly state that the helicopter has to be a certificatedCategory A helicopter to allow operations in accordance to Performance Class 1 where applicable.

Suggested text: add a new point at the beginning of the parapraph:

(a 1) HEMS operations have to be conduced by helicopters certificated in category A.

(a) Performance Class 3 operations shall not be conducted in HEMS operations with the exemption that where high altitude rescue is necessary, the HEMS operation site is out of the altitude performance of the Category A certified helicopter and approval by the competent authority is granted.

Justification:

The operator must determine these local areas based on the performance requirements and the operations must need an approval by the competent authority.(OPS.SPA.001.SFL) Nevertheless - for the transport of the patient to the hospital a Category A certified helicopter to allow operations in Performance Class 1 shall be used for safety reasons.

comment *2435* comment by: *Jan Brühlmann*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to

reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *2436* comment by: *Jan Brühlmann*

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2468* comment by: *Catherine Nussbaumer*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2567* comment by: *Walter Mayer, Heliswiss*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2855* comment by: *Philipp Peterhans*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2939* comment by: *Pascal DREER*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *3994* comment by: *HDM Luftrettung gGmbH*

OPS SPA 025 HEMS:

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed to asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *4123* comment by: *Benedikt SCHLEGEL*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *4559* comment by: *Christophe Baumann*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a

total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *5259* comment by: *DGAC*

Justification:

Paragraph (a) could be removed once this section is moved back into subpart CAT, as it is general rule (cf OPS.CAT.180 allowing for an approval in accordance with Part OPS.SPA.001.SFL).

Besides we could have HEMS flights from one airport to another airport in Performance class 3. There is no reason for forbidding HEMS flights in Performance class 3. In general, it is not realistic but it could be possible.

The whole paragraph (b) has also to be reviewed.

Paragraph (2) is not true as a HEMS flight to/from a HEMS operating site located in a hostile environment could be operated in accordance with OPS.SPA.005.SFL (c).

Proposal:

Replace the entire text of OPS.SPA.025.HEMS by the following :

"~~(a) Performance class 3 operations shall not be conducted over a hostile environment.~~

~~(b)~~ Take-off and landing:

(1) Helicopters conducting operations to/from an ~~aerodrome~~ **heliport** at a hospital which is located in a hostile environment shall be operated in accordance with performance class 1; except as provided in OPS.SPA.005.SFL**(c) or (d) if it is not congested or in accordance with OPS.SPA.005.SFL(e) if it is congested**.

(2) Helicopters conducting operations to/from an operating site **which is** located in a hostile environment shall be operated in performance class ~~2~~ **1 except as provided in OPS.SPA.005.SFL(a) if it is congested or as provided in OPS.SPA.005.SFL(c) or (d) if it is not congested.**

(3) […] »

comment *5763* comment by: *Aero-Club of Switzerland*

(a) Why not? There are diffenent kinds of hostile environment: A town is not a glacier. We ask the Agency to take a look at all the different HEMS environment possible across Europe.

Justification: Sometimes performance class 3 helicopters perform better than species of the other performance classes.

comment *5815* comment by: *Ph.Walker*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required

comment *6033* comment by: *Peter Moeller*

(b)(1) delete aerodrome and replace it by helipad/heliport

comment *6059* comment by: *Irish Aviation Authority*

Comment:

HEMS Performance (a) -

The reference to use of Performance Class 3 helicopters for HEMS operations should be removed

Justification:

Standardisation with already accepted aviation normal practice.

comment *6158* comment by: *Hans MESSERLI*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance

(vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6380* comment by: *Trans Héli (pf)*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *6626* comment by: *Heliswiss International*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *6627* comment by: *Heliswiss International*

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6671* comment by: *HeliFlite Oy*

OPS.SPA.025.HEMS Performance requirements for HEMS operations

(a) Performance class 3 operations shall not be conducted over a hostile environment.

Text: "except as provided for in OPS.SPA.005.SFL." should be amended to OPS.SPA.025.HEMS (a) due **OPS.SPA.005 (d)**

comment *6875* comment by: *Luftfahrt-Bundesamt*

LBA feels that there is an inconsistency between the regulation of OPS.SPA.025. HEMS and OPS.SPA.005.SFL Applicability.

OPS.SPA.025. HEMS (b)(1) requires operation in accordance with performance class 1 for **aerodromes at hospitals**, exept as provided for in OPS.SPA.005.SFL. OPS.SPA.005.SFL (a) allows operations without an assured safe forced landing capability only for a **HEMS operating site**, not for an **aerodrome at an hospital**.

comment *6957* comment by: *Christian Hölzle*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *6959* comment by: *Christian Hölzle*

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6996* comment by: *Swiss Helicopter Group*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority

AOC required.

comment *7038* comment by: *Eliticino SA*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *7353* comment by: *ADAC Luftrettung GmbH*

Leistungsklasse 3 nicht über einem Gebiet mit schwierigen Umgebungsbedingungen. Wie sollen in zukünftig im Gebirge HEMS-Einsätze durchführen??

Für HHO in HEMS gilt festzustellen, dass auch mit den modernsten, nach CAT A zugelassenen und gemäß CS 27/29 zertifizierten, HEMS-Hubschraubern, bei ungünstigen Umgebungsbedingungen (große Höhe, hohe Temperaturen) nicht immer Leistungsklasse 2 eingehalten werden kann. Solche Bedingungen sind des öfteren bei HEMS-Windeneinsätzen in großen Höhen gegeben. Um den Piloten auch zukünftig die Chance zu geben, HEMS-Windeneinsätze innerhalb der Legalität durchführen zu können, muss hier eine Vorschrift geschaffen werden, die es erlaubt, in Ausnahmefällen HHO in PC 3 durchzuführen.

B. I. Draft Opinion - Part-OPS - Subpart D - Section IX - OPS.SPA.045.HEMS HEMS operating base facilities p. 102

comment *3603* comment by: *Austro Control GmbH*

For clarification reasons AMC to OPS.SPA.045 HEMS is requested to define HEMS operating base facilities:

Installations which allow each crew member to rest independently and undisturbed should be available.

Seperate lockable room for medical supply and desinfection as well as shelter for the aircraft are urgently recommended.

B. II. Draft Decision - Part-OPS p. 103

comment *3315* comment by: *AEA*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *3661* comment by: *AUSTRIAN Airlines*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *4332* comment by: *KLM*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *4656* comment by: *TAP Portugal*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *4749* comment by: *British Airways Flight Operations*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMCs. Furthermore, the revision process of GM is not defined and thus up to date GM could not be guaranteed.

Proposal:

JAR Ops 1 had rule material in Volume 1 and AMC and GM in Section 2; we suggest EASA sticks to that well-established practice.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4933* comment by: *Deutsche Lufthansa AG*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *5500* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

comment *6842* comment by: *Icelandair*

Relevant Text:

All GM chapters

Comment:

GM chapters make the whole NPA OPS unreadable and since they are not binding material just confuse the interpretation of Rules and AMC's

Revision process of GM's is not defined and thus up to date GM could not be guaranteed.

Proposal:

Remove and/or put all GM in a separate booklet

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.005(a) Scope p. 103

comment *7423* comment by: *Axel Schwarz*

Those requirements only applicable to CAT should be transferred to AMC/GM.OPS.CAT, while those requirements applicable only to other Commercial operations should be transferred to AMC/GM.OPS.COM.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.010 Definitions p. 103

comment *475* comment by: *EHOC*

<u>General</u>

There is no logical reason why all definition should not be contained in OPS.GEN.010

<u>Paragraph 10.</u>

It is not clear why this definition is contained in guidance material and not in

the rule.

comment 591 comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.010:

Definitions (1) circling, (2) CDFA and (10) visual approach should be deleted.

Justification:

These definitions origin from EU OPS 1.485 and should be in Implementing Rules (thus part of OPS.GEN.010) and not in GM.

comment 2516 comment by: *Royal Aeronautical Society*

Paragraph 4 refers to 'geometric altitude' but does not describe what this is. **It is suggested that a definition of 'geometric altitude' should be provided.**

comment 2778 comment by: *Pietro Barbagallo ENAC*

Comment:The following definitions, referred to the transport of dangerous goods by air, are missing: "Freight Container; Handling Agent".

Justification: These definitions already exist in EU-OPS1. They are essential for the proper interpretation of some requirements related to the transport of dangerous goods by air.

comment 2779 comment by: *Pietro Barbagallo ENAC*

Comment: The following definitions, referred to the flight operations, are missing: "Equivalent Position; Separate Runways".

Justification: These definitions already exist in EU-OPS1. They are essential for the proper interpretation of some requirements related to the flight operations.

comment 2994 comment by: *AEA*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *3094* comment by: *AEA*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *3097* comment by: *AEA*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *3441* comment by: *UK CAA*

Page No: 103

Paragraph No:

GM.OPS.GEN.010 Definitions 9

Comment:

'appropriate manner' needs to be clarified.

Justification:

The term 'appropriate manner' is imprecise and suggests a degree of subjectivity. Further clarification of what is intended should be provided.

comment *3662* comment by: *AUSTRIAN Airlines*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *3850* comment by: *AUSTRIAN Airlines*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *3851* comment by: *AUSTRIAN Airlines*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *4333* comment by: *KLM*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *4334* comment by: *KLM*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *4335* comment by: *KLM*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *4658* comment by: *TAP Portugal*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *4662* comment by: *TAP Portugal*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *4664* comment by: *TAP Portugal*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *4753* comment by: *British Airways Flight Operations*

Comment:

Definitions are important elements of any legislation to ensure clarity. We do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition, it should be consistent and it should be in the hard-law.

Proposal:

Clarification needed

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4934* comment by: *Deutsche Lufthansa AG*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *4935* comment by: *Deutsche Lufthansa AG*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *4936* comment by: *Deutsche Lufthansa AG*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are

listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *5209* comment by: *Virgin Atlantic Airways*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *5270* comment by: *DGAC*

Most of the definitions contained in this GM should be in the IR

It is not very convenient to have definitions spread in so many places throughout the text of the NPA (OPS.GEN.010, GM OPS.GEN.010 Definitions, AMC 1 OPS.GEN.320A(a), …). Moreover, some terms are used early in an AMC and defined later on in another AMC (ex.: Class A&C used in AMC 1 OPS.GEN.320A(a) and only defined in AMC.OPS.CAT.316A(a)(1)).

Besides, is an AMC or a GM really the proper place for a definition, especially when the term is used in the IR ? The fact that a definition could be subject to interpretation and alternative means of compliance (as AMC or GM) is questionable actually. How can a standard be applied if there is no assurance on the meaning of the terms it is built upon.

(5) 'Maximum take-off mass for helicopters':

Proposal : Amend the definition as follows and move it to OPS.GEN.010 (or to a common documents with IR status that would gather all definitions…)

'Maximum take-off mass ~~for helicopters~~' means the maximum permissible **take-off mass** ~~total helicopter mass at take-off~~.

Justification : This definition should not be restricted to helicopters. It should be rewritten taking into account the definition of 'Take-off mass' laid-down in (74) of OPS.GEN.010, and generalized at least to aeroplanes as well.

(74) 'Take-off mass' means the mass, including everything and everyone carried at the commencement of the take-off for helicopters and take-off run for aeroplanes.

comment *5501* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *5502* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *5503* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

comment *6062* comment by: *Irish Aviation Authority*

Comment:

Definitions: There is a requirement for a common set of definitions that would apply throughout all of the rules. This must include all the relevant definitions from ICAO, EU OPS, JAR OPS 3, etc and any additional definitions created and used by EASA within the rules text.

Justification:

Standardisation with already accepted aviation normal practice.

comment *6429* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6843* comment by: *Icelandair*

Relevant text:

(8) Packaging

Comment:

The definition of 'packaging is not consistent with ICAO Technical Instructions "and other safety functions" should be added.

Proposal:

Realign the definition of packaging with the ICAO TI

comment *6844* comment by: *Icelandair*

Comment:

Definitions are important elements of any legislation to ensure legal certainty. We therefore do not understand why some definitions have been published as Guidance Material whereas others are in the hard-law. If there is a definition than it should be consistent and it should be in the hard-law

Proposal:

Clarification needed

comment *6845* comment by: *Icelandair*

Relevant Text:

General Comment (Definitions)

Comment:

There should be a part common to all the other parts where definitions are listed and filtered according to type of aircraft (aeroplane, helicopter etc).

Proposal:

Introduce a common part for definitions

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC p. 104

OPS.GEN.010(a)(9)&(10) Definitions

comment *1008* comment by: *Michael Kroell*

Helicopters not fully certified to the first paragraph should not be eligible for performance class 1 operations in the HEMS helicopter role due to the nature of the operations. A Category A (certified to CS-27 in conjunction with Annex C or CS-29; JAR/FAR-27 and JAR/FAR-29 should be considered equivalent provided the certification standards are equivalent) certification shall be mandatory. For other operations, outside congested hostile areas, an alleviation depending on the operational environment may be accepted provided that the operator demonstrates an equivalent level of safety.

These mentioned helicopters do not fulfill the single engine performance requirements necessary for the successful termination of an approach in the case of a critical power failure after LDP or a critical power failure before reaching the TDP even when Category A take off and approach procedures are strictly followed.

The Type-Certificate Data Sheet proofs a full compliance to Category A.

comment *1065* comment by: *REGA*

Category A: Helicopters has to satisfy Category A criteria. The "new" separation between Category A and Performance Class 1 will open the possibility to operate "old" helicopters which are only Category A equivalent, e.g. the BO105.

To guarantee the safety targets the operation within Performance Class 1 should be limited in the future to helicopters fulfilling the whole Category A standards.

Comparing with JAR's (ACJ OPS 3.480): JAR OPS 3 set a time limit for operating Category A equivalent helicopters.

Proposal

Helicopters operated in performance class 1 or 2 not meeting the Category A certification standards should not be operated beyond 2015.

comment *1756* comment by: *EUROCOPTER*

§ 2.:

Modification proposal:

~~In addition to the above, certain~~ *Helicopters which have been certificated under FAR Part 27 and with compliance with FAR Part 29 engine isolation requirements as specified in FAA Advisory Circular AC 27-1****~~. These helicopters~~*** *may be* ***considered to satisfy the Category A criteria and therefore*** *may be accepted as eligible for Performance Class 1 or 2 operations provided ..."*

Justification: AMC OPS.GEN.010(a)(9) & (10) defines, in its § 2., additional requirements for certain helicopter types to be eligible for Performance Class 1

or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the Category A criteria. It is so proposed to amend OPS.COM.350.H § (a)(1) and AMC OPS.GEN.010(a)(9)&(10) in this purpose.

comment *2068* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

§ 2.:

~~**In addition to the above, certain**~~ Helicopters **which** have been certificated under FAR Part 27 and with compliance with FAR Part 29 engine isolation requirements as specified in FAA Advisory Circular AC 27-1.~~**—These helicopters**~~ may be **considered to satisfy the Category A criteria. Therefore they** may be accepted as eligible for Performance Class 1 or 2 operations provided ..."

Justification: AMC OPS.GEN.010(a)(9) & (10) defines, in its § 2., additional requirements for certain helicopter types to be eligible for Performance Class 1 or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the Category A criteria. It is so proposed to amend OPS.COM.350.H § (a)(1) and AMC OPS.GEN.010(a)(9)&(10) in this purpose.

comment *2337* comment by: *Austro Control GmbH*

2.

gives the rule a "second" meaning and was obviously historically introduced to allow operators to continue to operate non CAT-A certificated helicopters until manufacturers are able to serve the need on certified helicopters (see history of JAR-OPS 3 Amendments).

This requirement should be revised as this is now misleading and seems to open again the door for non-compliant (especially old) helicopters, which cannot be in the safety interest. (see also Comment to OPS.SPA.025.HEMS, page 102).

Solution suggested is to add at the end of the paragraph:

"Point 2 is not applicable for operations where Performance Class 1 is mandatory."

or delete Point 2.

comment *3096* comment by: *AEA*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *3663* comment by: *AUSTRIAN Airlines*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *3906* comment by: *FOM ANWB MAA*

AMC OPS.GEN.010(a)(9)&(10) Definitions

CATEGORY A AND CATEGORY B

2. ~~In addition to the above, certain helicopters have been certificated under FAR Part 27 and with compliance with FAR Part 29 engine isolation requirements as specified in FAA Advisory Circular AC 27-1. These helicopters may be accepted as eligible for Performance Class 1 or 2 operations provided that compliance is established with the following additional requirements of CS-29:~~

~~CS 29.1027(a) Independence of engine and rotor drive system lubrication.~~

~~CS 29.1187(e)~~

~~CS 29.1195(a) & (b) Provision of a one-shot fire extinguishing system for each engine.~~

~~CS 29.1197~~

~~CS 29.1199~~

~~CS 29.1201~~

~~CS 29.1323(c)(1) Ability of the airspeed indicator to consistently identify the take-off decision point.~~

~~* The requirement to fit a fire extinguishing system may be waived if the helicopter manufacturer can demonstrate equivalent safety, based on service experience for the entire fleet showing that the actual incidence of fires in the engine fire zones has been negligible~~

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2.

comment *4233* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

2. The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2.

comment *4336* comment by: *KLM*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *4415* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2

comment *4667* comment by: *TAP Portugal*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *4758* comment by: *British Airways Flight Operations*

Comment:

We believe this paragraph only applies to helicopters. Clarification is required.

Proposal:

Requirements for aeroplanes and helicopters should not be published in the same document. Complete revision is required.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4937* comment by: *Deutsche Lufthansa AG*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *5323* comment by: *ALFA-HELICOPTER*

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised.

comment *5505* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *5834* comment by: *Norsk Luftambulanse*

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2.

comment *6028* comment by: *HSD Hubschrauber Sonder Dienst*

The FAR 27 certificated aircraft which meet the FAR 29 engine isolation requirements are not certificated under CAT A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2.

comment *6040* comment by: *Peter Moeller*

Delete 2

The FAR 27 certificated aircraft which meet the FAR29 engine isolation requirements are not certificated under CAT A. Therefore they do not meet the requirement of OPS.CAT. 335. The AMC is not in line with the implementing rule und should be revised.

comment *6434* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6846* comment by: *Icelandair*

Comment:

It should be clarified that this paragraph only applies to **helicopters**.

Proposal:

Clarification needed.

comment *6847* comment by: *Icelandair*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *7190* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.GEN.010(a)(9)&(10) Definitions

CATEGORY A AND CATEGORY B

2. ~~In addition to the above, certain helicopters have been certificated under FAR Part 27 and with compliance with FAR Part 29 engine isolation requirements as specified in FAA Advisory Circular AC 27-1. These helicopters may be accepted as eligible for Performance Class 1 or 2 operations provided that compliance is established with the following additional requirements of CS-29:~~

~~CS 29.1027(a) Independence of engine and rotor drive system lubrication.~~

~~CS 29.1187(e)~~

~~CS 29.1195(a) & (b) Provision of a one-shot fire extinguishing system for each engine.~~

~~CS 29.1197~~

~~CS 29.1199~~

~~CS 29.1201~~

~~CS 29.1323(c)(1) Ability of the airspeed indicator to consistently identify the take-off decision point.~~

~~* The requirement to fit a fire extinguishing system may be waived if the helicopter manufacturer can demonstrate equivalent safety, based on service~~

~~experience for the entire fleet showing that the actual incidence of fires in the engine fire zones has been negligible~~

The FAR 27 certificated AC which meet the FAR 29 engine isolation requirements are not certificated under cat A and can therefore not meet the requirement of OPS.CAT.355.H. The AMC is not in line with the implementing rule and should therefore be revised. Delete all under 2.

comment *7388* comment by: *Heli Austria*

Just as per NPA 38 F.4.7 it is very important for the operators that CAT A paragraph 2 aircraft can be used for PC1 and PC2.

Currently a lot of CAT and COM operation is performed with PC3 helicopters and according to the NPA 2009-02b Category A helicopters will have to be used in the future. AS355 and B105 are aircraft with an exceptional good safety track and history.

Also the fact has been known since 1995 and it has always been clear that PC1 is mandatory by the end of 2009.

A lot of operators mixed up the requirement of PC1 versus the CAT A equivalence.

Don't let us down due to the big lobbies from ÖAMTC, ADAC and DRF to abbandon the CAT A equivalance because they never lernt reading English.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.010(a)(9)&(10) Definitions p. 104-105

comment *1406* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Definitions never can be guidance material.

Comment / Proposal:

GM and AMC are a mix of different categories of explanatory text, definitions, standards which is difficult to understand in its legal meaning.

comment *3100* comment by: *AEA*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *3664* comment by: *AUSTRIAN Airlines*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *3992* comment by: *SNEH Organisation representing all french commercial helicopters operators*

§2 :

~~**In addition to the above, certain**~~ Helicopters which have been certificated under FAR Part 27 and with compliance with FAR Part 29 engine isolation requirements as specified in FAA Advisory Circular AC 27-1. ~~**These helicopters**~~ may be considered to satisfy the Category A Criteria. Therefore they may be accepted as eligible for Performance Class 1 or 2 operations provided..."

Justification : AMC OPS.GEN.010 (a)(9) & (10) defines, in its §2. additional requirements for certain helicopter types to be eligible for Performance Class 1 or 2 operations, but omits to say that, when it has been demonstrated that these additional requirements are fulfilled, these helicopter types are considered to satisfy the CategoryA criteria. It is so proposed to amend OPS.COM.350.H §(a)(1) and AMC OPS.GEN.010 (a)(9) & (10) in this purpose.

comment *4337* comment by: *KLM*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *4670* comment by: *TAP Portugal*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *4760* comment by: *British Airways Flight Operations*

Comment:

We believe this paragraph only applies to helicopters. Clarification is required.

Proposal:

Requirements for aeroplanes and helicopters should not be published in the same document. Complete revision is required.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4938* comment by: *Deutsche Lufthansa AG*

Relevant Text:

GM.OPS.GEN.010(a)(9) & (10) Definitions

Comment:

It should be clarified that this definition only applies to helicopters.

Proposal:

Clarification needed.

comment *6435* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.010(a)(30) Definitions p. 105

comment *1068* comment by: *REGA*

Definition should be inline with the definition of page 24 point no. 30.

comment *6436* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6848* comment by: *Icelandair*

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.010(a)(41) Definitions p. 105

comment *1069* comment by: *REGA*

Only open sea areas are considered as hostile?

Proposal 1

Those ~~open sea~~ areas considered to constitute a hostile environment should be designated by the appropriate authority in the appropriate Aeronautical Information Publication or other suitable documentation.

or

Proposal 2

Those areas, e.g. open sea, mountains, desert, considered to constitute a hostile environment should be designated by the appropriate authority in the appropriate Aeronautical Information Publication or other suitable documentation.

comment *3101* comment by: *AEA*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *3665* comment by: *AUSTRIAN Airlines*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *4338* comment by: *KLM*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *4675* comment by: *TAP Portugal*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *4762* comment by: *British Airways Flight Operations*

Comment:

We believe this paragraph only applies to helicopters. Clarification is required.

Proposal:

Requirements for aeroplanes and helicopters should not be published in the same document. Complete revision is required.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4939* comment by: *Deutsche Lufthansa AG*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *5506* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

comment *6437* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6849* comment by: *Icelandair*

Comment:

It should be clarified that this only applies to helicopters

Proposal:

Clarification needed

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.010(a)(63) Definitions p. 105

comment *476* comment by: *EHOC*

Title

Editorial: It is now (73).

comment *6438* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.010(a)(73) Definitions p. 105-108

comment *477* comment by: *EHOC*

Paragraph 2.

Because this definition has been abbreviated from the original, the associated GM will also have to be amended:

1. In 2.a place a carriage return before "The selected height..." turning this into a new sentence with its subsidiary sections.

2. Delete the last sentence in 2. "The original...".

comment *3442* comment by: *UK CAA*

Page No: 106

Paragraph No:

GM.OPS.GEN.010(a)(73) Definitions 2

Comment:

Clarification is needed for the use of the word 'level'.

Justification:

The word 'level' is confusing

Proposed Text (if applicable):

delete 'level' insert 'height'

comment *6035* comment by: *HSD Hubschrauber Sonder Dienst*

(73)1.b.: It sounds like an applicable solution, but how can a helicopter pilot

know in advance (before he has landed at that site) wether he will be able to maintain that 35 ft above the obstacles in the intended flightpath, since he does not know the position and height of the obstacles, since **they are not published, nowhere!! He doesn´t even know his takeoff flightpath before he lands there and knows wind direction and speed (estimated).**

comment *6063* comment by: *Irish Aviation Authority*

Comment:

The guidance contained in this section should be expanded to include material tailored for Performance Class 3 and Single Engine Helicopters.

Justification:

Standardisation with guidance issued for all scope of operations.

Proposed text:

Expand text to include reference to Helicopter Acceleration Area and Take Off and Landing Distance To/From 100 feet. For Performance Class 3 and Single Engine Helicopters.

comment *6164* comment by: *HSD Hubschrauber Sonder Dienst*

Even if the pilot can calculate off the charts the TODRH (that calculation takes at least 5 to 10 minutes) he still can not determine, wether the distance required will be available at the landing site, because it is not published (i.e. as it is for airport runways).

comment *6441* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading.

comment *6492* comment by: *ADAC Luftrettung GmbH*

Bei der Beschreibung des Clear area procedure wird unter 3 auf das AMC1 OPS.CAT.355.H (b) verwiesen. Dieser Verweis kann nicht zugeordnet werden,

da es 1b, 2b und 3b gibt. Bitte den Verweis genauer bestimmen.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.015 Pilot-in-command responsibilities and authority p. 108-109

comment *478* comment by: *EHOC*

Paragraph 2.

For clarity, the clauses 'a' to 'd' should be preceded with their discriminant - i.e. 'for aeroplanes' etc.

comment *723* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.015:

ECA requests clarification:

Who is responsible for the aircraft between boarding of crew and first movement of A/C? The GM leaves out exactly this timeframe - legal uncertainty.

comment *880* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Refering to GM OPS.GEN.015 - Subparagr.1.:Assigns to the PIC the responsibility for safety of all persons

and cargo on board on entering the aircraft. However, the Tokyo Convention provides his means

of "imposing reasonable measures" only after closing of the doors.

comment *2330* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Assigns to the PIC the responsibility for safety of all persons and cargo on board on entering the aircraft.However, the Tokyo Convention provides his/her means of "imposing reasonable measures" only after closing of the doors.

The Tokyo Convention gives him/her global police right, but only after having closed the doors.

Conclusion: There can be no obligations without empowerment.

comment *3445* comment by: *UK CAA*

Page No: 109

Paragraph No:

GM. OPS.GEN.015

Comment:

In para 2.a. there is a need for better clarification of: 'from the moment it is first ready to move for the purpose of flight'

Justification:

A captain cannot be held responsible for the safety of the aircraft when it is being pushed backwards by a ground handling vehicle.

EU-OPS 1.085 (f)(2) states: 'be responsible for the operation and safety of the aeroplane from the moment the aeroplane is first ready to move for the purpose of taxiing prior to take off'

Also who is responsible for the operation and safety of the aeroplane when taxiing not for the purpose of take off e.g. when repositioning the aircraft on an aerodrome?

Proposed Text (if applicable):

2. The operation and safety of the aircraft:
   a. from the moment it is first ready to move, ~~for the purpose of flight~~ ***under its own power, for the purpose of ground repositioning or taxiing prior to take off***, until the moment it comes to rest at the end of the flight and the engine(s) used as primary propulsion unit(s) is/are shut down, for aeroplanes;
   b. when the rotors are turning, for helicopters;
   c. from the moment the launch procedure is started until the aircraft comes to rest at the end of the flight, for sailplanes; and
   d. from the moment the inflating of the envelope is started until the envelope is deflated, for balloons.

comment *3692* comment by: *AEA*

Relevant Text:

ADMISSION TO THE COCKPIT/PILOT COMPARTMENT

The pilot-in-command should ensure that: 1. in the interests of safety, admission to the cockpit/pilot compartment does not cause distraction and/or interfere with the flight operation; and 2. all persons carried in the cockpit/pilot compartment are made familiar with the relevant restrictions and safety procedures.

Comment

The final decision as to the admission to the cockpit always rests with the Pilot –in-command

Proposal:

- ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command

comment *3908* comment by: *FOM ANWB MAA*

GM OPS.GEN.015 Pilot-in-command responsibilities and authority

2. The operation and safety of the aircraft:

b. when the rotors are turning under power, for helicopters;

Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight

comment *4252* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

2.b. rmk: Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight

comment *4923* comment by: *HDM Luftrettung gGmbH*

GM.OPS.GEN.015 2.b.:

change to: when rotors are turned under power

rmk: Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight

comment *5310* comment by: *TAP Portugal*

2009-02B Draft Opinion Part-OPS & Draft Decision Part-Ops

P109 AMC1 OPS. GEN.015(a)(5) Pilot-in-command responsibilities and authority: Admission to the cockpit / Pilot compartment – Commercial Air Transport

Association comment

ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command

comment *5325* comment by: *ALFA-HELICOPTER*

Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight

comment *5654* comment by: *ADAC Luftrettung GmbH*

GM OPS.GEN.015 (2)(b)

change to: when rotors are turned under power

rmk: Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight.

comment *5836* comment by: *Norsk Luftambulanse*

2.b. Rmk: Windmilling of the rotor in absence of the PIC should not be included, revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight

comment *6091* comment by: *Peter Moeller*

(2)b. change to read

for helicopters from the moment the rotors start turning for the purpose of flight until the rotors come to a complete stop after flight.

comment *6169* comment by: *HSD Hubschrauber Sonder Dienst*

015 2.b:

change to: .."when rotors are turning under power"

comment *6948* comment by: *IACA International Air Carrier Association*

Assigns to the PIC the responsibility for safety of all persons and cargo on board on entering the aircraft. However, the Tokyo Convention provides his means of "imposing reasonable measures" only after closing of the doors.

The Tokyo Convention gives him/her global police rights, but only after having closed the doors. Conclusion, there can be no obligations without empowerment.

comment *7192* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

GM OPS.GEN.015 Pilot-in-command responsibilities and authority

2. The operation and safety of the aircraft:

b. when the rotors are turning under power, for helicopters;

Windmilling of the rotor in absence of the PIC should not be included. Revise text to read: For helicopters, from the moment the rotor start turning for the purpose of flight until the rotor comes to a complete stop after the flight.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC1 OPS.GEN.015(a)(5) Pilot-in-command responsibilities and authority p. 109

comment *883* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Add the following clarification: the final decision as to the admission to the cockpit rests

with the Pilot-in-command.

comment *2308* comment by: *Welcome Air*

AMC1 OPS.GEN.015(a)(5) Pilot in command responsibilities and authority

- ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command

comment *2695* comment by: *AOPA-Sweden*

(b): A further definition of "special categories of passengers" is needed.

comment *4314* comment by: *Civil Aviation Authority of Norway*

Comment:

Admission to the Flight Deck.

Para 1.c. A person authorised by the operator.

(does this apply to in flight ?)

Justification:

Current security measures should not allow the operator to approve admissions to the flight deck; such approval should come from the competent authority.

Proposed Text

(if applicable):

1.c. A person authorised by the competent authority.

comment *5151* comment by: *AUSTRIAN Airlines*

ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command

comment *6111* comment by: *Peter Moeller*

add 3.

In complex motor powered aircraft that do not require a second pilot, persons admitted to or carried in the cockpit/pilot compartment may be carried in a pilot seat

comment *6226* comment by: *Lufthansa CityLine GmbH*

ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command.

comment *6279* comment by: *Swiss International Airlines / Bruno Pfister*

ADD that the final decision as to the admission to the cockpit always rests with the Pilot –in-command

comment *6446* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

comment *6950* comment by: *IACA International Air Carrier Association*

Add the following clarification: the final decision as to the admission to the cockpit rests with the Pilot-in-command.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC2 OPS.GEN.015(a)(5) Pilot-in-command responsibilities and authority p. 109

comment *561* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.GEN.015(a)(5): change as follows:

AMC2 OPS.GEN.015(a)(5) Pilot-in-command responsibilities and authority

ADMISSION TO COCKPIT/PILOT COMPARTMENT – COMMERCIAL AIR TRANSPORT

1. Only the following persons may be admitted to or carried in the cockpit/pilot compartment:

a. An operating crew member;

b. A representative of the competent authority, if it is required for the performance of his/her official duties;

c. A person authorised by the operator;

d. Passengers, in the case of balloons with no separate pilot compartment.

2. In the case of other than complex motor-powered aircraft, persons admitted to or carried in the cockpit/pilot compartment may be carried in a pilot seat.

3. The final decision regarding admission to the cockpit/pilot compartment shall be the responsibility of the pilot-in-command.

Justification:

Compliance with JAR-OPS 1.100

comment *584* comment by: *Association of Dutch Aviation Technicians NVLT*

OPS.GEN.015(a)

Could you please clarify which person could be authorised by the operator, this can to our opinion be everybody! It is a common use by aviation companies to use the cockpit observer or crew rest seats for staff-travel or standby-passengers. To our opinion this is a unwanted and unsafe situation. Why in this case is there a closed reinforced cockpit door policy if any person authorised by the operator is allowed in the cockpit.

It is commonly used that Certifying staff is allowed in the cockpit for monitoring purposes for maintenance evaluations. The same feature will rise when certifying staff are performing a engine test run for maintenance activities when crew and passengers are on board. There should be a formal possibility to ad the certifying staff on the list of the following persons who may be admitted to or carried in the cockpit/pilot compartment,will this possibility formally acknowledged?

comment *881* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Add the following clarification: the final decision as to the admission to the cockpit rests

with the Pilot-in-command.

comment *944* comment by: *Aersud*

Comment

In case of an helicopter with a maximum certificated seating configuration up to 9, imposing the non-possibility to carry passenger in the cabin is too much restrictive and expensive if we consider that this could reduce the transport capacity from 100% to 10% (example R22 100%, EC120 20%, AW119 14%, AS355 20%, AW109 14%). In that case it is better to impose that, in case of passenger transport in the cockpit, the co-pilot flight controls shall be removed or deactivated.

Consider that in the helicopter the dual controls is a simple task operation and could be done, accordingly to maintenance manuals, in less than 30 min. With dual controls removed or deactivated, accordingly to an approved configuration, the passenger cannot interfere with the flight safety.

Proposal

ADD:

1. Only the following persons may be admitted to or carried in the cockpit/pilot compartment:

a. An operating crew member;

b. A representative of the competent authority, if it is required for the performance of his/her official duties;

c. A person authorized by the operator;

d. Passengers, in the case of balloons with no separate pilot compartment;

e. Passengers, in the case of helicopters with a maximum certificated seating configuration up to 9 and with dual controls removed or deactivated accordingly to an approved procedure.

Note

Priority: **H**

comment *964* comment by: *Thomas Baerfuss*

admission shall be allowed in helicopters with single pilot operation on the appropriate passenger seat besides the pilot

comment *2063* comment by: *claire.amos*

Para 1 recommend insert text:

while the engines are running.

comment *3449* comment by: *UK CAA*

Page No: 109

Paragraph No:

AMC2 OPS.GEN.015 (a)(5)

Comment:

Admission to the Flight Deck.

Para 1.c. A person authorised by the operator.

Justification:

Each State is responsible for the security measures, which limit access to the flight deck. Approval of the Operations Manual is the States' means of limiting access to the flight deck. The current wording in EU-OPS 1.100 (a) should be retained.

Proposed Text (if applicable):

ADMISSION TO COCKPIT/PILOT COMPARTMENT – COMMERCIAL AIR TRANSPORT

1. Only the following persons may be admitted to or carried in the cockpit/pilot compartment:

   a. An operating crew member;

   b. A representative of the competent authority, if it is required for the performance of his/her official duties;

   c. A person ~~authorised by the operator;~~ ***permitted by, and carried in accordance with instructions contained in the Operations Manual;***

   d. Passengers, in the case of balloons with no separate pilot compartment.

comment *3910* comment by: *FOM ANWB MAA*

AMC2 OPS.GEN.015(a)(5) Pilot-in-command responsibilities and authority

ADMISSION TO COCKPIT/PILOT COMPARTMENT – COMMERCIAL AIR TRANSPORT

1. Only the following persons may be admitted to or carried in the cockpit/pilot compartment:

a. An operating crew member;

b. A representative of the competent authority, if it is required for the performance of his/her official duties;

c. A person authorised by the operator;

d. Passengers, in the case of balloons with no separate pilot compartment.

2. In the case of other than complex motor-powered aircraft, persons admitted to or carried in the cockpit/pilot compartment may be carried in a pilot seat.

complex motor-powered aircraft that do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *4061* comment by: *Ryanair*

Comment

Nothing in this AMC should prevent training and checking personnel, quality personnel, etc from being granted access to the cockpit.

The final decision to grant access to the cockpit rests with the pilot-in-command

Proposal

ADD para (e):

The final decision to grant access to the cockpit rests with the pilot-in-command

comment *4250* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

2. RMK: complex motor-powered aircraft that are do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *4910* comment by: *HDM Luftrettung gGmbH*

AMC2.OPS.GEN.015(a)(5) 2:

Does this mean an operator may allow passenger in the co-pilot seat of complex motor power AC?

RMK: complex motor-powered aircraft that are do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *5274* comment by: *easyjet safety*

Add

e.The Pilot-in-command shall have the final decision on granting admission of such persons to the cockpit

comment *5327* comment by: *ALFA-HELICOPTER*

Complex motor-powered aircraft that are do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c.

comment *5657* comment by: *ADAC Luftrettung GmbH*

AMC2 OPS.GEN.015(a)(5),2

Does this mean an operator may allow passenger in the co-pilot seat of complex motor power AC?

RMK: complex motor-powered aircraft that are do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *5837* comment by: *Norsk Luftambulanse*

2. RMK: Complex motor-powered aircraft that do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *5893* comment by: *ERA*

European Regions Airline Association Comment

Add to paragraph 1 a new sub-paragraph (e) which should read as follows:

(e) The final decision to grant admission to the cockpit rests with the Pilot –in-command

comment *6176* comment by: *HSD Hubschrauber Sonder Dienst*

2. RMK.: complex motor powered aircraft, that do not require a second pilot or crew member should be excluded or the operator should be allowed to authorize a passenger in the copilot seat as mentioned in 1.c.

comment *6447* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

comment *6953* comment by: *IACA International Air Carrier Association*

Add the following clarification: the final decision as to the admission to the cockpit rests with the Pilot-in-command.

comment *7155* comment by: *Antonio Sousa*

The final decision as to the admission to the cockpit always rests with the pilot in command.

comment *7197* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC2 OPS.GEN.015(a)(5) Pilot-in-command responsibilities and authority

ADMISSION TO COCKPIT/PILOT COMPARTMENT - COMMERCIAL AIR TRANSPORT

1. Only the following persons may be admitted to or carried in the cockpit/pilot compartment:

a. An operating crew member;

b. A representative of the competent authority, if it is required for the performance of his/her official duties;

c. A person authorised by the operator;

d. Passengers, in the case of balloons with no separate pilot compartment.

2. In the case of other than complex motor-powered aircraft, persons admitted to or carried in the cockpit/pilot compartment may be carried in a pilot seat.

Complex motor-powered aircraft that do not require a second pilot or crewmember should be excluded or the operator should be allowed to authorise a passenger in the co-pilot seat as mentioned in 1.c

comment *7252* comment by: *Rui Sarmento*

The final decision as to the admission to the cockpit always rests with the pilot in command

comment *7288* comment by: *ANE (Air Nostrum) OPS QM*

Add to paragraph 1 a new sub-paragraph (e) which should read as follows:

(e) The final decision to grant admission to the cockpit

comment *7294* comment by: *IATA*

ADD (e) The final decision to grant admission to the cockpit rests with the Pilot –in-command

comment *7316* comment by: *SATA Group*

- the final decision for admission into the cockpit cabin belongs to the pilot in command.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.015(b) Pilot-in-command responsibilities and authority p. 109

comment *694* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.015(b)1: change text as follows and transfer the provision to OPS.GEN/015:

GM OPS.GEN.015(b) Pilot-in-command responsibilities and authority

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers **(e.g. inadmissible passengers, deportees or persons in custody) if their carriage poses any risk to the safety of the aeroplane or its occupants**; or

2. persons that appear to be under the influence of alcohol or drugs.

Justification:

1) The contents of the BR, 1c should be incorporated in OPS.GEN.015.

2) "special categories of passengers" is too generic. The text from EU OPS 1.085 (f) (6) should be added.

comment *696* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.015(b)1: change text as follows:

GM OPS.GEN.015(b) Pilot-in-command responsibilities and authority

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers (add following text) **(e.g. inadmissible passengers, deportees or persons in custody) if their carriage poses any risk to the safety of the aeroplane or its occupants**; or

2. persons that appear to be under the influence of alcohol or drugs.

~~Include from EU OPS 1.085 (f) (6): "special categories of passengers (e.g. inadmissible passengers, deportees or persons in custody) if their carriage poses any risk to the safety of the aeroplane or its occupants.~~

Justification:

"special categories of passengers" too generic. The text from EU OPS 1.085 (f) (6) should be added.

comment *3102* comment by: *AEA*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *3666* comment by: *AUSTRIAN Airlines*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *4339* comment by: *KLM*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *4679* comment by: *TAP Portugal*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *4940* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *5508* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AUTHORITY TO REFUSE CARRIAGE OR DISEMBARK

This may include:

1. special categories of passengers; or

2. persons that appear to be under the influence of alcohol or drugs.

Comment:

GM tries to be specific and limiting, but fails. It's useless. Company's should be able to define their own requirements

Proposal:

Delete GM

comment *6448* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

comment *7604* comment by: *AOPA UK*

A further definition of "special categories of passengers" is needed.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.015(c) Pilot-in-command responsibilities and authority p. 109-110

comment *2304* comment by: *Austro Control GmbH*

Recommendation:

check this requirement with Regulation (EC) 1107/2006 to avoid contradiction.

comment *2331* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

This is self evident.

Proposal:

The points mentioned under 2. must be reported to Air Traffic Services, in addition to the ones under 3.

comment *6449* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other

parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

comment *6956* comment by: *IACA International Air Carrier Association*

Self-evident.

Additionally, the points mentioned under 2. must be reported immediately to air traffic services, not only the ones under 3.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.015(d) Pilot-in-command responsibilities and authority p. 110

comment *648* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.015(d): change as follows:

MITIGATING MEASURES

The use of additional crew members ~~**and controlled rest during flight are**~~ **is** considered to be **an** adequate mitigating measure~~**s**~~. (add new text***)*** **To a lesser extent, the possibility of a controlled rest during flight may also be considered as a mitigating measure.**

Justification:

Even if a controlled rest during flight may be considered a mitigating measure, this shall never be considered with the same level of mitigation as additional crew members (that provides a higher level of fatigue mitigation).

comment *5737* comment by: *Ryanair*

comment *6450* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other

parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.015(d) Pilot-in-command responsibilities and authority p. 110-111

comment *3453* comment by: *UK CAA*

Page No: 110

Paragraph No:

AMC OPS.GEN.015 (d)

Comment:

OPS.GEN 015 (d) permits a multi-crew flight to be continued beyond the nearest suitable aerodrome if suitable mitigations are in place to overcome a crew's lack of capacity as a consequence of fatigue, sickness or lack of oxygen. Controlled rest and additional crew members can be accepted as a mitigation for fatigue but not as a mitigation for lack of oxygen or sickness. A comment and suggestion has been made in respect of the rule in OPS.GEN 015. However to ensure complete clarity it is further suggested that AMC OPS GEN.015(d) includes the phrase "in respect of fatigue only" – see proposed text.

Justification:

Clarification.

Proposed Text (if applicable):

MITIGATING MEASURES

The use of additional crew members and controlled rest during flight are considered to be adequate mitigating measures **in respect of fatigue only.**

comment *4602* comment by: *BALPA*

We agree that it makes sense to formalise this issue.

However within this section there are numerous references to "should" ie point 5 states "... the pilot-in-command *should* ensure that:". We feel this must be replaced by "shall" to reinforce the comment.

Section 6e - If it takes 20 minutes to recover from sleep inertia and the minimum time allowed between two subsequent controlled rest periods is also

20 minutes, when will a satisfactory briefing take place?

comment 5738 comment by: *Ryanair*

comment 6452 comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.015(e)(3) Pilot-in-command responsibilities and authority p. 111

comment 3167 comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

Our passengers are involved in the inflation and deflation.

Protective clothing mention under 1. and 2. are unnessecary, see our experience of 20 years commercial ballooning.

stout footwear for pilot and retrieve-crew it is acceptable.

comment 6453 comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Wording "Pilot-in-command" needs a more precise definition as we can find other terms as : "commander" in GM OPS.GEN.180.H, "pilot flying/pilot non flying" in GM 2 OPS.GEN.460, "non-operating/non-handling pilot" in GM2 OPS.GEN.150.A which can be really confusing. Those terms are also in other parts of NPA 2009-02 B.

Proposal

We suggest specific definitions for those wordings so the text may be more clear and understandable for operators.

Justification

This might be a legal issue regarding the scope of understanding and cause problems of reading. All those wordings can lead to specific responsabilities that can be widely diffrerent.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC1 OPS.GEN.020(a) Crew responsibilities p. 111-112

comment *479* comment by: *EHOC*

Title

It might be better to change the reference from (a) to (f) in view of the addition of the new paragraph (f).

comment *898* comment by: *Ryanair*

AMC1.OPS.GEN.020 (a) – Crew Responsibilities – Fatigue Risk Management

Comment

Of the nine crew considerations 6 would appear to be outside the direct control of an individual crew member and are restricted and managed in the interests of safety by the Operator FTL Specification Scheme

Proposal

Delete (d), (e), (f), (g), (h) and (i).

Consider reversing Items 1 & 2 to place greater emphasis on individual crew members responsibilities to make optimum use of their planned rest

comment *3456* comment by: *UK CAA*

Page No: 111

Paragraph No:

AMC1 OPS.GEN.020(a)

Comment:

The paragraph reference should be amended to correlate better with the subject rule text.

Justification:

Clarity.

Proposed Text (if applicable):

AMC1 OPS.GEN.020 ~~(a)~~ (***f***)

comment *3685* comment by: *Civil Aviation Authority of Norway*

Comment:

The reference perhaps should be amended to AMC1 OPS.GEN.020 (**f**) from (a) to correlate better with the rule text.

Justification:

Clarity.

comment *4159* ☐ comment by: *DGAC*

OPS.GEN.015(a)(4), OPS.GEN.020(f), AMC1 to OPS.GEN.020(a)

It is accepted, as mentioned in OPS.GEN.020 (f), that the flight crew has a responsibility in managing his own fatigue.

However the elements highlighted in AMC1 OPS.GEN.020(a), if the crew member works for an operator is much too detailed. The interpretation of those items will lead to a simplified vision of fatigue without taking into account operational environment, support and resources, nor individual or collective countermeasures.

It is unreasonable to assume that an individual can assess all those factors on the spot. The wording in the IR is considered sufficient to evaluate its own fatigue, notwithstanding tools and countermeasures (i.e. fatigue checklist) that an individual may use as an industry best practice. It should not be the role of a regulation body to provide an exhaustive list for a topic that also include personal life, operational issues, etc. that may impact on the non linear link between physiological fatigue and safety.

comment *4633* comment by: *BALPA*

Paragraph 2 - We feel that "shall" must be used in place of "should".

comment *4926* comment by: *HDM Luftrettung gGmbH*

AMC2.OPS.GEN.020 (a):

How does this relate to anonymous reporting?

Rmk: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *5739* comment by: *Ryanair*

Sections 1(d), 1(e), 1(f), 1(g), 1(h) and 1(i) are managed through the

operators approved FTL Scheme

Proposal

Remove

comment *6967* comment by: *IACA International Air Carrier Association*

Operators consider fatigue as an input to the airline's Safety Management System (SMS), along with other potential safety hazards such as bird strikes, ATC related hazards, runway incursions…There should not be a separate management system for fatigue. Crew members can already report any event that may endanger flight safety and the operators are required to take mitigating actions under that SMS.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC2 OPS.GEN.020(a) Crew responsibilities p. 112

comment *480* comment by: *EHOC*

Title

The reference should be to (g) and not (a).

comment *692* comment by: *ECA - European Cockpit Association*

Comment on AMC.OPS.GEN.020(a): delete the whole paragraph:

~~**AMC2 OPS.GEN.020(a) Crew responsibilities**~~

~~**REPORTING OF ANY OCCURRENCE RELATED TO THE SAFETY OF THE AIRCRAFT AND ITS OCCUPANTS**~~

~~**Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the pilot-in-command.**~~

Justification:

Reference to occurrence reporting system needs to be established in the rule.

comment *2360* comment by: *Dassault Aviation*

Technical comment:

Page 112 AMC2 OPS.GEN.020(a) Crew responsibility: The protection of the report author's anonymity - as sated in EU.OPS1.037(a)(2) - is no longer guaranteed in the NPA2008-22c "Organization Requirement" OR.GEN.200(a)(5) or AMC to OR.GEN.200(a)(5). The flight safety could be thus seriously endangered by deterring the flight crew members to report any incident. We suggest to modify the text as below (underlined): "Whenever a

crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the pilot-in-command. The identity of the author should be protected."

comment 3321 comment by: *AEA*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment 3358 comment by: *M Wilson-NetJets*

Original text:

REPORTING OF ANY OCCURRENCE RELATED TO THE SAFETY OF THE AIRCRAFT AND ITS OCCUPANTS

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the pilot-in-command.

Suggested new text:

REPORTING OF ANY OCCURRENCE RELATED TO THE SAFETY OF THE AIRCRAFT AND ITS OCCUPANTS

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the pilot-in-command, **unless the crewmember is making use of a confidential reporting structure**.

Comment/suggestion:

For safety systems that provide the possibility to report incidents confidentially there should be the possibility to not have to provide a copy to the PIC.

comment 3667 comment by: *AUSTRIAN Airlines*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *3911* comment by: *FOM ANWB MAA*

Rmk: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *4262* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Rmk: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *4341* comment by: *KLM*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *4686* comment by: *TAP Portugal*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *4941* comment by: *Deutsche Lufthansa AG*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *5329* comment by: *ALFA-HELICOPTER*

If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *5510* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *5511* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened) compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *5660* comment by: *ADAC Luftrettung GmbH*

How does this relate to anonymous reporting?

Rmk: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *5740* comment by: *Ryanair*

This does not take account of electronic reporting systems

Proposal

Whenever a crew member makes use of the applicable reporting system ~~a copy of the report should be communicated to~~ the pilot-in-command *shall be notifed*.

comment *5838* comment by: *Norsk Luftambulanse*

Rmk: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

comment *6113* comment by: *Peter Moeller*

In order to enable to establish an anonymous reporting system this paragraph needs to be revised

comment *6180* comment by: *HSD Hubschrauber Sonder Dienst*

RMK: If the intent is, to enable anonymous reporting by individual crewmembers, this paragraph needs revision.

comment *6850* comment by: *Icelandair*

Relevant text:

Whenever a crew member makes use of the applicable reporting systems, a copy of the report should be communicated to the Pilot in command

Comment:

It is not desirable to always communicate a copy of the report tho the PIC. Especially if the report is about the PIC.

And what about anonymous reporting ?

Proposal:

Delete this requirement.

comment *6968* comment by: *IACA International Air Carrier Association*

It is not an acceptable means of compliance to communicate all reports to the PIC as this may compromise any confidential reporting system.

comment *7199* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

Remark: If the intent is to enable anonymous reporting by individual crewmembers this paragraph needs revision.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.020(a) Crew responsibilities p. 112

comment *481* comment by: *EHOC*

Paragraph 2.

This text is not as clear as the original rule because it does not explicitly mention 'standby'. This should be rectified by amending the text as shown:

"Without prejudice to applicable national regulations, the consumption of alcohol while on duty **or standby**, or less than 8 hours prior to the commencement of duty **or standby**, with a blood alcohol level in excess of 0.2 promille."

comment *621* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.020(a):

The term "a certain Time period" is ambiguous - no legal certainty.

comment *693* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.020(a): text should be upgraded to IR!

Justification:

"Must" not adequate for GM.

comment *3104* comment by: *AEA*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption

of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened) compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *3458* comment by: *UK CAA*

Page No: 112

Paragraph No:

AMC2 OPS.GEN.020(a)

Comment:

The reference should be amended to **AMC1** OPS.GEN.020 (**g**) from AMC2 OPS.GEN.020(a) to correlate better with the rule text and to remove a second AMC to OPS.GEN.020(a).

Justification: Clarity.

Proposed Text (if applicable):

~~AMC 2~~ ***AMC1*** OPS.GEN.020 ~~(a)~~ (***g***)

comment *3459* comment by: *UK CAA*

Page No: 112

Paragraph No:

GM OPS.GEN.020(a)

Comment:

GM OPS.GEN 020(a) gives guidance for crews for when they should not fly e.g. after deep water diving and blood donation. Guidance should be expanded to include a minimum length during which flying should not occur.

Justification: Extra guidance required.

Proposed Text (if applicable):

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying. ***24 hours is a suitable minimum length of time after normal blood donation or normal recreational (sport) diving*.**

comment *3668* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened) compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *4342* comment by: *KLM*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened) compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *4689* comment by: *TAP Portugal*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened)

compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *4768* comment by: *British Airways Flight Operations*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in hard-law rather than guidance material. Moreover the text is slightly different (shortened) compared with EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4942* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. Effects of deep water diving and blood donation, and allowing for a certain time period between these activities and returning to flying

2. Without prejudice to more restrictive national regulations, the consumption of alcohol while on duty or less than 8 hours prior to the commencement of duties, and commencing a flight duty period with a blood alcohol level in excess of 0.2 per mille.

Comment:

This important safety requirement should be in the hard-law (rather than guidance only as suggested). Moreover the text is slightly different (shortened) compared to EU-OPS 1.085(e)

Proposal:

Realign with EU-OPS 1.085(e). Upgrade this important safety requirement to hard-law

comment *5874* comment by: *Danish Powerflying Union*

We support the suggestion of no comsumption of alcohol while on duty or less than 8 hours prior to commencing a flight and a limitation of 0,2 per mille.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.030 Transport of dangerous goods p. 112-113

comment *1185* comment by: *CAA-NL*

AMC OPS.GEN.030 1.

Comment: AMC OPS.GEN.030 1. states that the some dangerous goods may be carried when an approval has been granted by the State of Origin, "providing specific conditions which are laid down in the Technical Instructions are met." This quoted text should be deleted.

Justification: The Technical Instructions do not lay down specific conditions in respect of State of Origin approvals.

Proposed Text (if applicable):

"….permitted. The Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin~~, providing specific conditions which are laid down in the Technical Instructions are met~~. "

comment *1533* comment by: *AIRBUS*

The title of the AMC, EXEMPTION AND APPROVAL PROCEDURES OF THE TECHNICAL INSTRUCTIONS, despite being copied from the TGL 44, is misleading. The AMC only refers to the approval of exemptions to the Technical Instructions and not to the approval of the Technical Instructions themselves that are an ICAO document. The title should be changed into "APPROVAL OF EXEMPTIONS FROM THE PROVISIONS OF THE TECHNICAL INSTRUCTIONS".

comment *1534* comment by: *AIRBUS*

The Agency uses the terminology "appropriate national authority" but should rather refer to the term "Competent Authority" for consistency reasons with the wording usually used by EASA.

comment *1535* comment by: *AIRBUS*

The paragraph is copied from the TGL 44, IEM 1.1165(b), except that in the paragraph 2, the following section has been deleted: "However, the Technical Instructions allow for the State of overflight to consider an application for exemption based solely on whether an equivalent level of safety has been

achieved, if none of the other criteria for granting an exemption are relevant." In the paragraph 3, the following section has been deleted: "The Instructions do not specify who should seek exemptions and, depending on the legislation of the particular State, this may mean the operator, the shipper or an agent. If an exemption or approval has been granted to other than an operator, the operator should ensure a copy has been obtained before the relevant flight."

From a general point of view, the Agency should clarify the role of the different states (Origin, transit, overflight and destination) in the context of a single European regulatory framework.

comment *1996* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

AMC OPS.GEN.030 1. states that the some dangerous goods may be carried when an approval has been granted by the State of Origin, "providing specific conditions which are laid down in the Technical Instructions are met." This quoted text should be deleted.

Comment:

The Technical Instructions do not lay down specific conditions in respect of State of Origin approvals.

Proposal:

"….permitted. The Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin" ~~providing specific conditions which are laid down in the Technical Instructions are met~~.

comment *2362* comment by: *Dassault Aviation*

Technical comment:

Page 113 AMC OPS.GEN.030 item 2: Add the word "diversion" as follow (underlined): "The States concerned are those of origin, transit, overflight and destination and <u>diversion</u> of the consignment and…"

comment *2780* comment by: *Pietro Barbagallo ENAC*

Comment: AMC OPS.GEN.030 1. states that some dangerous goods may be carried when an approval has been granted by the State of Origin, "p**roviding specific conditions which are laid down in the Technical Instructions are met.**" This quoted text should be deleted.

Justification: The Technical Instructions do not lay down specific conditions in respect of State of Origin approvals.

Proposal: Amend AMC.OPS.GEN.030 1. as follows: (...) is greater than that permitted. The Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin, ~~providing specific conditions which are laid down in the Technical Instructions are met.~~

comment *3121* comment by: *AEA*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *3461* comment by: *UK CAA*

Page No: 113

Paragraph No:

AMC OPS.GEN.030 1.

Comment:

AMC OPS.GEN.030 1 states that the some dangerous goods may be carried when an approval has been granted by the State of Origin, "providing specific conditions which are laid down in the Technical Instructions are met." This quoted text should be deleted.

Justification:

The Technical Instructions do not lay down specific conditions in respect of State of Origin approvals.

Proposed Text (if applicable):

"….permitted. The Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin~~, providing specific conditions which are laid down in the Technical Instructions are met~~. "

comment *3669* comment by: *AUSTRIAN Airlines*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4343* comment by: *KLM*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is

aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4691* comment by: *TAP Portugal*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4943* comment by: *Deutsche Lufthansa AG*

Comment:

For legel certainty, it must be ensured that all EASA AMC and GM regarding dangerous goods are aligned **literally and without delay** with the **latest edition** of the ICAO Technical Instructions. It would therefore be better for all technical details to just refer to the current edition of the ICAO T.I. from an AMC. Otherwise it could lead to disparities between the globally applied ICAO standrad and the EU rules, at least for a certain period of time until EU matarial has been amended.

See also our comment to IR OPS.GEN.030.

Proposal:

Refer to the **latest edition** of the ICAO TI and delete all repeated technical details.

comment *5513* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *6295* comment by: *Finnish CAA*

Paragraph: AMC OPS.GEN.030 1.

Comment:

AMC OPS.GEN.030 1. states that the some dangerous goods may be carried when an approval has been granted by the State of Origin, "providing specific conditions which are laid down in the Technical Instructions are met." This quoted text should be deleted.

Justification:

The Technical Instructions do not lay down specific conditions in respect of State of Origin approvals.

Proposed text (if applicable): "….permitted. The Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin~~, providing specific conditions which are laid down in the Technical Instructions are met~~. "

comment *7273* comment by: *AIR FRANCE*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC.

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.030(b) Transport of dangerous goods p. 113

comment *1183* comment by: *CAA-NL*

AMC OPS.GEN.030(b)

Comment: The clarification provided by EU-OPS 1.1160(b) in respect of replacement articles has not been reflected.

Justification: It could be said that OPS.GEN.030 (a) already addresses this (as it refers to the Technical Instructions which highlights the need to treat replacement articles in accordance with those Instructions). But this subject played a major role in the Valujet accident in 1996 when 110 passengers and crew died because of the improper carriage of replacement articles it is suggested that it would be prudent to maintain the text of EU-OPS 1.1160(b) in AMC OPS.GEN.030(b).

Proposed Text (if applicable):

Add a new sub paragraph 3. to AMC OPS.GEN.030(b) as follows:

"3. Dangerous goods which are required to be aboard the aircraft in accordance with the relevant requirements or for operating reasons but which are intended as replacement or which have been removed for replacement must be transported in accordance with the Technical Instructions."

comment *1557* comment by: *Luftfahrt-Bundesamt*

There should be a remark, stating that (according to EU-OPS 1.160(b)) the mentioned objects have to be transported as Dangerous Goods, when defect.

Therefore a new paragraph 3 should be added as follows:

3. Dangerous Goods which are required aboard the aircraft according to the relevant operational requirements but which are intended to be used as replacements only, or such that have been replaced must be transported in accordance with the ICAO Technical Instructions.

comment *1995* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

The clarification provided by EU-OPS 1.1160(b) in respect of replacement articles has not been reflected.

Comment:

It could be said that OPS.GEN.030 (a) already addresses this (as it refers to the Technical Instructions which highlights the need to treat replacement articles in accordance with those Instructions). But this subject played a major role in the Valujet accident in 1996 when 110 passengers and crew died because of the improper carriage of replacement articles it is suggested that it would be prudent to maintain the text of EU-OPS 1.1160(b) in AMC OPS.GEN.030(b).

Proposal:

Add a new sub paragraph 3. to AMC OPS.GEN.030(b) as follows:

"3. Dangerous goods which are required to be aboard the aircraft in accordance with the relevant requirements or for operating reasons but which are intended as replacement or which have been removed for replacement must be transported in accordance with the Technical Instructions."

comment *2985* comment by: *CAA-NL*

Comment CAA-NL:

Regarding (2).

The CAA-NL proposes to EASA to clarify what is meant by 'specialised purposes'.

comment *3121* comment by: *AEA*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *3460* comment by: *UK CAA*

Page No: 113

Paragraph No:

AMC OPS.GEN.030(b)

Comment:

The clarification provided by EU-OPS 1.1160(b) in respect of replacement articles has not been reflected.

Justification:

It could be said that OPS.GEN.030 (a) already addresses this (as it refers to the Technical Instructions which highlights the need to treat replacement articles in accordance with those Instructions). But this subject played a major role in the Valujet accident in 1996 when 110 passengers and crew died because of the improper carriage of replacement articles. It is suggested that it would be prudent to maintain the text of EU-OPS 1.1160(b) in AMC OPS.GEN.030(b).

Proposed Text (if applicable):

Add a new sub paragraph 3. to AMC OPS.GEN.030(b) as follows:

"3. Dangerous goods which are required to be aboard the aircraft in accordance with the relevant requirements or for operating reasons but which are intended as replacement or which have been removed for replacement must be transported in accordance with the Technical Instructions."

comment *3671* comment by: *AUSTRIAN Airlines*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4344* comment by: *KLM*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4693* comment by: *TAP Portugal*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4721* comment by: *Virgin Atlantic Airways*

Comment:

The clarification provided by EU-OPS 1.1160(b) in respect of replacement articles has not been reflected. It could be said that OPS.GEN.030 (a) already addresses this, as it refers to the Technical Instructions that highlights the need to treat replacement articles in accordance with those Instructions. This has been an important issue

in the past and has led to fatal accidents. So it is suggested that it makes sense to maintain the text of EU-OPS 1.1160(b) in AMC OPS.GEN.030 (b).

Proposed Text:

Add a new sub paragraph 3. to AMC OPS.GEN.030(b) as follows:

"3. Dangerous goods which are required to be aboard the aircraft in accordance with the relevant requirements or for operating reasons but which are intended as replacement or which have been removed for replacement must be transported in accordance with the Technical Instructions."

comment *4944* comment by: *Deutsche Lufthansa AG*

Comment:

For legel certainty, it must be ensured that all EASA AMC and GM regarding dangerous goods are aligned **literally and without delay** with the **latest edition** of the ICAO Technical Instructions. It would therefore be better for all technical details to just refer to the current edition of the ICAO T.I. from an AMC. Otherwise it could lead to disparities between the globally applied ICAO standrad and the EU rules, at least for a certain period of time until EU matarial has been amended.

See also our comment to IR OPS.GEN.030.

Proposal:

Refer to the **latest edition** of the ICAO TI and delete all repeated technical details.

comment *5515* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *6288* comment by: *Finnish CAA*

Paragraph: AMC OPS.GEN.030(b)

Comment: The clarification provided by EU-OPS 1.1160(b) in respect of replacement articles has not been reflected.

Justification:

It could be said that OPS.GEN.030 (a) already addresses this (as it refers to the Technical Instructions which highlights the need to treat replacement articles in accordance with those Instructions). But this subject played a major role in the Valujet accident in 1996 when 110 passengers and crew died because of the improper carriage of replacement articles it is suggested that it would be prudent to maintain the text of EU-OPS 1.1160(b) in AMC OPS.GEN.030(b).

Proposed text (if applicable):

Add a new sub paragraph 3. to AMC OPS.GEN.030(b) as follows:

"3. Dangerous goods which are required to be aboard the aircraft in accordance with the relevant requirements or for operating reasons but which are intended as replacement or which have been removed for replacement must be transported in accordance with the Technical Instructions."

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC OPS.GEN.030(d)(1) Dangerous goods incident and accident reporting p. 113-116

comment *2305* comment by: *Austro Control GmbH*

It is suggested to change the wording in point 6:

*6. **Content of a** Dangerous Goods Reporting Form*

The following items shall be mandatory content of the Dangerous Goods Reporting form:

1. Operator

2. Date of Occurence

3. Local time of occurence

4. Flight date

...

Justification:

The content of the form has to be mentionned and the form itsself presents an

example, which could be an appendix or appear in AMC (but not in the rule).

It is necessary to define the content; the form represents an example; otherwise it would not be possible to use electronical forms.

comment *2986* comment by: *CAA-NL*

Comment CAA-NL:

In some situations 72 hours is too long in case where there has been no contact with other emergency response services. Therefore the CAA-NL proposes to EASA to add to the article that in cases of where immediate action is required such shall be applied by the operator.

comment *3121* ☐ comment by: *AEA*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *3672* comment by: *AUSTRIAN Airlines*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4345* comment by: *KLM*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4695* comment by: *TAP Portugal*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4945* comment by: *Deutsche Lufthansa AG*

Comment:

For legel certainty, it must be ensured that all EASA AMC and GM regarding dangerous goods are aligned **literally and without delay** with the **latest edition** of the ICAO Technical Instructions. It would therefore be better for all technical details to just refer to the current edition of the ICAO T.I. from an AMC. Otherwise it could lead to disparities between the globally applied ICAO standrad and the EU rules, at least for a certain period of time until EU matarial has been amended.

See also our comment to IR OPS.GEN.030.

Proposal:

Refer to the **latest edition** of the ICAO TI and delete all repeated technical details.

comment *5516* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *7231* comment by: *AIR FRANCE*

suggest:

4. Copies of relevant documents and any photographs taken should be attached to ~~a~~ **the** report.

8. Providing ...in paragraph 5 ~~and they have indicated wether or not these should continue to be retained~~

B. II. Draft Decision - Part-OPS - Subpart A - Section I - AMC
OPS.GEN.030(d)(2) Dangerous goods incident and accident reporting p. 117

comment *1190* comment by: *CAA-NL*

AMC OPS.GEN.030(d)(2)

Comment: The first sentence is redundant and does not address passenger baggage.

Justification: The requirement to report undeclared or misdeclared dangerous goods is contained in the rule text.

Proposed Text (if applicable):

"~~An operator should also report the finding of undeclared or misdeclared dangerous goods.~~ The first report should be dispatched……."

comment *1558* comment by: *Luftfahrt-Bundesamt*

The requirement to report the finding of undeclared or misdeclared dangerous goods is already mentioned in the concrete regulation (OPS.GEN.030(d)(2)) and therefore does not need to be claimed again in the AMC. The first sentence should be deleted: ~~An operator should also report the finding of undeclared or misdeclared dangerous goods.~~

comment *1998* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

The first sentence is redundant and does not address passenger baggage.

Comment:

The requirement to report undeclared or misdeclared dangerous goods is contained in the rule text.

Proposal:

"~~An operator should also report the finding of undeclared or misdeclared dangerous goods.~~ The first report should be dispatched……."

comment *3121* □ comment by: *AEA*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *3462* comment by: *UK CAA*

Page No: 117

Paragraph No:

AMC OPS.GEN.030(d)(2)

Comment:

The first sentence is redundant and does not address passenger baggage.

Justification:

The requirement to report undeclared or misdeclared dangerous goods is contained in the rule text.

Proposed Text (if applicable):

"~~An operator should also report the finding of undeclared or misdeclared dangerous goods.~~ The first report should be dispatched……."

comment *3673* comment by: *AUSTRIAN Airlines*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4346* comment by: *KLM*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4698* comment by: *TAP Portugal*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4947* comment by: *Deutsche Lufthansa AG*

Comment:

For legel certainty, it must be ensured that all EASA AMC and GM regarding dangerous goods are aligned **literally and without delay** with the **latest edition** of the ICAO Technical Instructions. It would therefore be better for all technical details to just refer to the current edition of the ICAO T.I. from an AMC. Otherwise it could lead to disparities between the globally applied ICAO standrad and the EU rules, at least for a certain period of time until EU matarial has been amended.

See also our comment to IR OPS.GEN.030.

Proposal:

Refer to the **latest edition** of the ICAO TI and delete all repeated technical details.

comment *5517* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *6582* comment by: *Finnish CAA*

Paragraph No: AMC OPS.GEN.030(d)(2)

Comment: The first sentence is redundant and does not address passenger baggage.

Justification: The requirement to report undeclared or misdeclared dangerous goods is contained in the rule text.

Proposed Text (if applicable):

"~~An operator should also report the finding of undeclared or misdeclared dangerous goods.~~ The first report should be dispatched……."

B. II. Draft Decision - Part-OPS - Subpart A - Section I - GM OPS.GEN.030 Transport of dangerous goods p. 117

comment *1188* comment by: *CAA-NL*

GM OPS.GEN.030

Comment: Contrary to what is indicated by NPA 2009 02f, EU-OPS 1.1145(a) does not appear to be addressed by either OPS.GEN.030 (a) and (b) or GM OPS.GEN.030(2)

Justification: It is suggested the existing EU-OPS text is beneficial in that it offers clarification of the requirement.

Proposed Text :

Amend para 1 of GM OPS.GEN.030 as follows:

"The requirements to transport dangerous goods by air in accordance with the 2007-2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is irrespective of whether:

a) an approval to carry dangerous goods in accordance with OPS.SPA.001.DG is held; or

b) the flight is wholly or partly within or wholly outside the territory of a state.
"

comment *1192* comment by: *CAA-NL*

GM OPS.GEN.030 (a)

Comment: The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Justification: A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed Text (if applicable):

"The requirements to transport dangerous goods by air In accordance with the ~~2007-2008~~ current ~~E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) ~~is~~ are irrespective of whether an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held."

comment *1428* comment by: *International Air Transport Association*

GM OPS.GEN.030 1.

As commented on in OPS.GEN.030, the reference to a specific edition of the ICAO TI is inappropriate. The TI is updated on a biennial cycle to reflect changes to the requirement applicable to the transport of dangerous goods by air. The current edition of the ICAO TI may also be revised form time-to-time by an addendum to reflect urgent changes of a safety nature. For this reason the text of paragraph 1. should refer to the "current edition of the ICAO Technical Instructions, including any addendum to the Technical Instructions issued by ICAO."

comment *1434* comment by: *International Air Transport Association*

GM OPS.GEN.030

As commented on for OPS.GEN.030 there should be reference to notices for passengers and in cargo acceptance areas. On that basis, the text shown in AMC OPS.SPA.040.DG(b) with repect to the provision of this information should also be included in this part.

comment *1559* comment by: *Luftfahrt-Bundesamt*

- No.1 refers to a specific version of the Technical instructions (edition 2007-2008) which is furthermore obsolete. Refering to a specific edition means that the Implementing Rule would have to be changed approximately every 2 years in order to be in compliance with the corresponding valid version of the Technical Instructions. Therefore „in accordance with the 2007 – 2008 Edition" should be changed into **„in accordance with the current edition"**

comment *1997* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Contrary to what is indicated by NPA 2009 02f, EU-OPS 1.1145(a) does not appear to be addressed by either OPS.GEN.030 (a) and (b) or GM OPS.GEN.030(2)

Comment:

It is suggested the existing EU-OPS text is beneficial in that it offers clarification of the requirement.

Proposal:

Amend para 1 of GM OPS.GEN.030 as follows:

"The requirements to transport dangerous goods by air in accordance with the current ~~2007-2008~~ edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is irrespective of whether:

a) an approval to carry dangerous goods in accordance with OPS.SPA.001.DG is held; or

b) the flight is wholly or partly within or wholly outside the territory of a state. "

comment *1999* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Comment:

A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposal:

"The requirements to transport dangerous goods by air in accordance with the 2007-2008 current Eedition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is are irrespective of whether an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held."

comment *2517* comment by: *Royal Aeronautical Society*

Paragraph General 1 refers to 'the 2007 – 2008 Edition of the Technical Instructions … etc'. If this specific reference is allowed to remain, it will be out-of-date by the time these regulations come into effect. Indeed, any specific reference to these TIs will similarly need regular amendment as and when ICAO published replacements. It is suggested that the existing text be replaced by text taken from JAR-OPS 1.1150 Terminology that reads, **'the latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284-AN/905), including the Supplement and any Addendum, approved and published by decision of the Council of the International Civil Aviation Organisation'**.

comment *2781* comment by: *Pietro Barbagallo ENAC*

Comment: Contrary to what is indicated by NPA 2009 02 F, OPS 1.1145 (a) does not appear to be addressed by either OPS.GEN.030 (a) and (b) or GM OPS.GEN.030 (2)

Justification: It is suggested the existing EU-OPS text is beneficial in that it offers clarification of the requirement.

Proposal: Amend para 1 of GM OPS.GEN.030 as follows: "The requirements to transport dangerous goods by air in accordance with the ~~2007-2008~~ current Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is irrespective of whether: a) an approval to carry dangerous goods in accordance with OPS.SPA.001.DG is held; or b) the flight is wholly or partly within or wholly outside the territory of a state."

comment *2782* comment by: *Pietro Barbagallo ENAC*

Comment: The text refers to an out of date edition of the ICAO's "Technical Instructions for the Safe Transport of Dangerous Goods by Air".

Justification: A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposal: Amend GM OPS.GEN.030 (a) as follows: "The requirements to transport dangerous goods by air In accordance with the ~~2007-2008~~ current Eedition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.), are ~~is~~ irrespective of whether

an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held."

comment *3121* ☐ comment by: *AEA*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *3463* comment by: *UK CAA*

Page No: 117

Paragraph No:

GM OPS.GEN.030 (1)

Comment:

Contrary to what is indicated by NPA 2009 02f, EU-OPS 1.1145(a) does not appear to be addressed by either OPS.GEN.030 (a) and (b) or GM OPS.GEN.030(2).

Justification: It is suggested the existing EU-OPS text is beneficial in that it offers clarification of the requirement.

Proposed Text (if applicable):

Amend para 1 of GM OPS.GEN.030 as follows:

"The requirement to transport dangerous goods by air in accordance with the 2007-2008 Edition (editorial note: this reference is incorrect but is subject to a separate comment) of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization (ICAO Doc 9284-AN/905.) applies whether or not:

a) an approval to carry dangerous goods in accordance with OPS.SPA.001.DG is held; or

b) the flight is wholly or partly within or wholly outside the territory of a state.
"

comment *3467* comment by: *UK CAA*

Page No: 117

Paragraph No:

GM OPS.GEN.030 (1)

Comment:

The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Justification:

A new edition of the Technical Instructions are produced by ICAO every two years; the current edition is the 2009-2010 edition.

Proposed Text (if applicable):

"The requirements to transport dangerous goods by air In accordance with the ~~2007-2008~~ current ~~E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) ~~is~~ are irrespective of whether an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held."

comment *3674* comment by: *AUSTRIAN Airlines*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4347* comment by: *KLM*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4701* comment by: *TAP Portugal*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *4726* comment by: *Virgin Atlantic Airways*

Relevant Text:

The requirements to transport dangerous goods by air In accordance with the 2007-2008 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is irrespective of whether an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held

Comment:

The text refers to an out of date edition of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Proposed Text:

Change text to:

The requirements to transport dangerous goods by air In accordance with the current e~~E~~dition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is are irrespective of whether an approval to carry dangerous goods In accordance with OPS.SPA.001.DG is held

comment *4948* comment by: *Deutsche Lufthansa AG*

Comment:

For legel certainty, it must be ensured that all EASA AMC and GM regarding dangerous goods are aligned **literally and without delay** with the **latest edition** of the ICAO Technical Instructions. It would therefore be better for all technical details to just refer to the current edition of the ICAO T.I. from an AMC. Otherwise it could lead to disparities between the globally applied ICAO standrad and the EU rules, at least for a certain period of time until EU matarial has been amended.

See also our comment to IR OPS.GEN.030.

Proposal:

Refer to the **latest edition** of the ICAO TI and delete all repeated technical details.

comment *5518* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It should be ensured that all EASA AMC and GM regarding dangerous goods is aligned with the latest edition of the ICAO Technical Instructions. It would therefore be better to refer the current edition of the ICAO TI into an AMC

Proposal:

Refer the current edition of the ICAO TI into an AMC

comment *6580* comment by: *Finnish CAA*

Paragraph No: GM OPS.GEN.030

Comment:

- Contrary to what is indicated by NPA 2009 02f, EU-OPS 1.1145(a) does not appear to be addressed by either OPS.GEN.030 (a) and (b) or GM OPS.GEN.030(2).

- The text refers to an outdated edition of ICAO Doc 9284.

Justification:

- It is suggested the existing EU-OPS 1.1145(a) text is beneficial in that it offers clarification of the requirement.

- ICAO publishes a new revised edition of Doc 9284 every two years, the current edition being the 2009-2010 edition.

Proposed Text (if applicable):

Amend para 1 of GM OPS.GEN.030 as follows:

"The requirements to transport dangerous goods by air in accordance with the current ~~2007-2008 E~~edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air published by decision of the Council of the International Civil Aviation Organization. (ICAO Doc 9284-AN/905.) is irrespective of whether:

a) an approval to carry dangerous goods in accordance with OPS.SPA.001.DG is held; or

b) the flight is wholly or partly within or wholly outside the territory of a state.
"

comment *6657* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

The requirements for transport of dangerous goods should comply with the latest version of ICAO requirements.

Proposal

Add : "latest version of "

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.100 Ice and other contaminants p. 118

comment *7* comment by: *KLM*

Training on icing has to be given to flight crew, cabin crew and relevant operational personnel.

Only training requirements for flight and cabin crew is specified. What other relevant operational personnel is has to be specified or left out.

No specific training requirements for dispatchers is provided anywhere in EU.OPS and either this is specifically given or not required.

comment *482* comment by: *EHOC*

General

There is no objective requirement to which this AMC is provided. At least an objective requirement for Flight in Expected of Known Icing Conditions should be appended to this rule.

"(c) The pilot-in-command shall not commence a flight in known or expected icing conditions unless the aircraft is certificated and equipped to cope with such conditions."

This goes beyond the ERs and places the responsibility with the PIC for entering icing conditions. This will also be seen by Private Pilots who will then know to avoid such conditions.

There might also be a need to provide an objective requirement on which to the requirement for procedures is hung - such as:

"(d) An operator shall establish procedures for flights in expected or actual icing conditions.

comment *1564* comment by: *ECA - European Cockpit Association*

Ref texts:

ACJ OPS 1.345

ACJ OPS 1.346

Comment: change as follows:

Ice and other contaminants

FLIGHT IN EXPECTED OR ACTUAL ICING CONDITIONS

1. In accordance with paragraph 2.a.5 of Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations), in case of flight into known or expected icing conditions, the aircraft must be certified, equipped and/or treated to operate safely in such conditions. The procedures to be established by the operator should take account of the design, the equipment, the configuration of the aircraft and the necessary training. For these reasons, different aircraft types operated by the same company may require the development of different procedures. In every case the relevant limitations are those which are defined in the Aircraft Flight Manual (AFM) and other must documents produced by the manufacturer.

2. The operator ensure that the procedures take account of the following:

a. The equipment and instruments which must be serviceable for flight in icing conditions;

b. The limitations on flight in icing conditions for each phase of flight. These limitations may be imposed by the aircraft's de-icing or anti-icing equipment or

the necessary performance corrections which have to be made;

c. The criteria the flight crew should use to assess the effect of icing on the performance and/or controllability of the aircraft;

d. The means by which the flight crew detects, by visual cues or the use of the aircraft's ice detection system, that the flight is entering icing conditions; and

e. The action to be taken by the flight crew in a deteriorating situation (which may develop rapidly) resulting in an adverse affect on the performance and/or controllability of the aircraft, due to:

i. the failure of the aircraft's anti-icing or de-icing equipment to control a build-up of ice; and/or

ii. ice build-up on unprotected areas.

3. Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual must reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

a. For the flight crew, the training ~~**should**~~ **must** include **among others**:

i. instruction in how to recognise, from weather reports or forecasts which are available before flight commences or during flight, the risks of encountering icing conditions along the planned route and on how to modify, as necessary, the departure and in-flight routes or profiles;

ii. instruction in the operational and performance limitations or margins;

iii. the use of in-flight ice detection, anti-icing and de-icing systems in both normal and abnormal operation; and

iv. instruction in the differing intensities and forms of ice accretion and the consequent action which should be taken.

b. For the cabin crew, the training should include;

i. awareness of **the ground weather** conditions likely to produce surface contamination; and

ii. the need to inform the flight crew of ~~**significant**~~ **suspected** ice accretion.

comment *3122* comment by: *AEA*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

Training for dispatch and flight in expected or actual icing conditions. The

*content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *3127* comment by: *AEA*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (AEA recommendations) as an acceptable means of compliance

Proposal:

Allow the usage of AEA recommendations as an AMC

comment *3312* comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3470* comment by: *UK CAA*

Page No: 118

Paragraph No:

AMC1 OPS.GEN.100 Para 3.b.i. and 3.b.ii.

Comment:

The text at 3.b.i. does not include awareness of the effects of surface contamination.

The text at 3.b.ii. does not advise of the need to inform the flight crew of surface contamination other than "significant ice accretion". The word 'significant' is not defined.

Justification:

Cabin crew should be trained in the effects of surface contamination (as per ACJ EU-OPS 1.346 4.2 a).

The guidance at 3.b.ii. relates to both dispatch and flight and therefore it should include a requirement for the crew to inform the flight crew of any surface contaminants (including slush, snow, etc.) and not just ice (as per ACJ EU-OPS 1.346 4.2 b).

Proposed Text (if applicable):

3.

b. For the cabin crew, the training should include:

i. awareness of the conditions likely to produce surface contamination ***and the effects of such contamination***; and

ii. the need to inform the flight crew of ~~significant ice accretion~~ ***any observed surface contamination.***"

comment *3472* comment by: *UK CAA*

Page No: 118

Paragraph No:

AMC1 OPS.GEN.100

Comment:

JAA NPA-OPS 50 (Operation of Helicopters Certified for Flight in Limited Icing Conditions), which followed the JAR 11 process and completed public consultation, was passed to EASA for inclusion in the IRs but has not been transferred. The agreed text of NPA-OPS 50 should be included in the AMC as indicated.

Justification:

Inclusion of text agreed following public consultation and endorsement.

Proposed Text (if applicable):

COMPLEX MOTOR-POWERED HELICOPTERS USED IN NON-COMMERCIAL OPERATIONS AND HELICOPTERS USED IN COMMERCIAL OPERATIONS

4. If the helicopter has been certified for flight in Limited Icing Conditions and it is intended to operate over water (sea areas) departing and arriving from an offshore heliport or heliports at the coast, then the operator should ensure that procedures in the Operations Manual take additional account of the following:

a. The need for the Flight Crew to use the best available information, such as an Area Forecast and liquid water content and temperature profiles, to ensure

that there is no unavoidable icing of a severity worse than the flight manual continuous limit along the planned route at the planned altitudes or flight levels;

b. The aircraft's flight path should ensure that the time to vacate icing conditions by reaching a positive temperature band of air, or landing at the arrival heliport, is not greater than the time stipulated in the Aircraft Flight Manual. The band of positive temperature air should not be less than 500 ft in depth. Offshore, the positive temperature band of air should exist at or above 500 ft AMSL and onshore between MSA and MSA +500 ft. However, an onshore approach in IFR may be conducted with the zero degree isotherm below MSA providing that sub-paragraphs 5(c) and 5(d) can be complied with;

c. If the approach is made in IMC and the 0□C isotherm is at or below the MSA with no band of positive air above MSA, then in order to ensure a missed approach back into icing conditions will not be necessary, the minimum Cloud Ceiling in the Landing Forecast should not be less than DH/MDH + 400 ft;

d. Any descent into the band of positive air should take place over the sea or as part of an instrument procedure;

e. The aircraft Minimum Equipment List (MEL) for flight in icing conditions, should include the requirement for serviceable radio altimeter and weather/mapping radar.

comment *3675* comment by: *AUSTRIAN Airlines*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

Training for dispatch and flight in expected or actual icing conditions. The content of the ***training*** *should reflect the* ***operations manual****, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *3852* comment by: *AUSTRIAN Airlines*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (AEA recommendations) as an acceptable means of compliance

Proposal:

Allow the usage of AEA recommendations as an AMC

comment *4315* comment by: *Civil Aviation Authority of Norway*

Comment:

JAA NPA-OPS 50 (Operation of Helicopters Certified for Flight in Limited Icing Conditions), which followed the JAR 11 process and completed public consultation, was passed to EASA for inclusion in the IRs but has not been transferred. It is recommended that the agreed text of NPA-OPS 50 be included in the AMC as indicated.

Justification:

Inclusion of agreed JAA text following public consultation and endorsement.

comment *4348* comment by: *KLM*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

*Training for dispatch and flight in expected or actual icing conditions. The content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *4349* comment by: *KLM*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (AEA recommendations) as an acceptable means of compliance

Proposal:

Allow the usage of AEA recommendations as an AMC

comment *4350* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4709* comment by: *TAP Portugal*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

Training for dispatch and flight in expected or actual icing conditions. The content of the ***training*** *should reflect the* ***operations manual****, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *4710* comment by: *TAP Portugal*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (AEA recommendations) as an acceptable means of compliance

Proposal:

Allow the usage of AEA recommendations as an AMC

comment *4713* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4771* comment by: *British Airways Flight Operations*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

*Training for dispatch and flight in expected or actual icing conditions. The content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4949* comment by: *Deutsche Lufthansa AG*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

*Training for dispatch and flight in expected or actual icing conditions. The content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *4950* comment by: *Deutsche Lufthansa AG*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (preferably latest edition of "AEA Recommendations for De-icing/Anti-icing of Aircraft on Ground") as an acceptable means of compliance.

Proposal:

Allow the usage of the latest "AEA Recommendations for De-icing/Anti-icing of Aircraft on Ground" as an AMC

comment *4963* comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5217* comment by: *Virgin Atlantic Airways*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around.

Proposal:

Change text into;

*Training for dispatch and flight in expected or actual icing conditions. The content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:*

comment *5275* comment by: *DGAC*

Proposal : Amend the title as follows:

"AMC~~1~~ **2** OPS.GEN.100 Ice and other contaminants**- In-flight procedures**"

Justification :

The title must reflect the fact that its content only applies to in-flight procedures

As written OPS.GEN 100 only deals with ground-procedures, it is proposed in one of our comments on OPS.GEN.100 to include in-flight procedure in second rank. As a consequence the AMC should be in second rank as well

Proposal : Amend the subtitle as follows:

"FLIGHT IN EXPECTED OR ACTUAL ICING CONDITIONS **- AEROPLANE AND HELICOPTER**"

Justification :

- This AMC includes mainly JAR-OPS ACJ 1/3.346 designed for aeroplane and helicopter only.
- No other category of aircraft is certified to fly in icing condition.

(1) Why refer to the BR and not to GEN OPS 445 as well which is additional for conditions at night.

Proposal :delete references to BR

Justification :

The BR 216 is not complete enough and

covers only "general requiremenll on

the matters.

Besides a hook for in flight procedures has been added in our proposed amendment to add a (c) in OPS GEN 100

IN-FLIGHT PROCEDURES - AEROPLANE AND HELICOPTERS

Therefore the option to delete any reference might be inline with the no repetition policy.

(3)

Proposal : Amend 3. as follows:

"3. Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew**, technical crew** and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

a. For the flight crew, the training should include:

[…]

b. For the cabin crew **and / or technical crew**, the training should include;

[…]"

Justification :

This AMC is applicable both to aeroplane and helicopter. Therefore it should

reflect the specificities of both operations as was layed-down in ACJ OPS-1/3.346 of section to of JAR-OPS 1 et 3

comment *5519* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

3.Training for dispatch and flight in expected or actual icing conditions. The content of the operations manual should reflect the training, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing conditions:

Comment:

Training should reflect the manual, not the other way around

Proposal:

Change text into;

*Training for dispatch and flight in expected or actual icing conditions. The content of the **training** should reflect the **operations manual**, both conversion and recurrent, which flight crew, cabin crew and all other relevant operational personnel require in order to comply with the procedures for dispatch and flight in icing condit*

comment *5520* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The knowledge on de/anti-icing is an evolving subject. It should therefore be possible to use industry practices (AEA recommendations) as an acceptable means of compliance

Proposal:

Allow the usage of AEA recommendations as an AMC

comment *5521* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *6975* comment by: *IACA International Air Carrier Association*

Contrary to the AMC, the rule is only dealing with pre-departure icing. Hence, the AMC should be restricted or the rule extended.

comment *7629* comment by: *Cirrus Design Corporation*

This AMC has no relation whatsoever to OPS.GEN.100 and could not be considered a method of compliance. The rule only applies to ground ice contamination and de-icing procedures. This AMC goes into operator procedures, qualifications and operational flight limitations, which are not required by OPS.GEN.100. This AMC should be moved elsewhere or OPS.GEN.100 should include requirements relative to the AMC.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC2 OPS.GEN.100 Ice and other contaminants p. 119-122

comment *649* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.GEN.100(2)(h): change as follows:

h. the pilot-in-command continually monitors the environmental situation after the performed treatment. Prior to take-off he/she **checks the airplane flight control surfaces operate normally and** performs a pre-take-off check, which is an assessment of whether the applied HoT is still appropriate. This pre-take-off check includes, but is not limited to, factors such as precipitation, wind and OAT;

Justification:

It is essential for the safety of flight to check if the flight controls operate normally after de-icing/anti-icing.

comment *1567* comment by: *ECA - European Cockpit Association*

Comment: change paragraph 2.i. as follows :

if any doubt exists as to whether a deposit **exceeds the permitted criteria** may adversely affect the aircraft's performance and/or controllability characteristics, the pilot-in-command should arrange for a pre-take-off contamination check to be performed in order to verify that the aircraft's surfaces are free of contamination **or comply with the permitted criteria**. Special methods and/or equipment may be necessary to perform this check, especially at night time or in extremely adverse weather conditions. If this check cannot be performed just before take-off, re-treatment should be applied; **then the aircraft should be taken to a position where such an inspection can take place. In the event of the criteria not being complied with, then re-treatment must take place before another despatch is attempted.**

Justification:

The wording in the final sentence appears to leaves to the commander some discretion as to the acceptability of deposits. This is not the case and needs clarifying. Also the need for an inspection if doubt exists as to compliance and the subsequent action appears optional. New wording suggested.

comment *1568* comment by: *ECA - European Cockpit Association*

Comment on paragraph 3.c.: change as follows :

c. The operator should comply with any type-specific operational requirement(s), such as an aircraft mass decrease and/or a take-off speed increase **and performance effects** associated with a fluid application;

comment *1569* comment by: *ECA - European Cockpit Association*

Comment on paragraph 4a: add as follows:

a. Before aircraft treatment. When the aircraft is to be treated with the flight crew on board, the flight **crew** and **ground** personnel involved in the operation should confirm the fluid to be used, the extent of treatment required and any aircraft type-specific procedure(s) to be used. Any other information needed to apply the HoT tables should be exchanged;

comment *1570* comment by: *ECA - European Cockpit Association*

Comment: change as follows:

Ice and other contaminants

DE-ICING/ANTI-ICING

1. De-icing and/or anti-icing procedures **must** ~~**should**~~ take into account manufacturer's recommendations, including those that are type-specific and cover:

a. contamination checks, including detection of clear ice and under-wing frost.

Limits on the thickness/area of contamination published in the AFM or other manufacturers' documentation should be followed;

b. procedures to be followed if de-icing and/or anti-icing procedures are interrupted or unsuccessful;

c. post treatment checks;

d. pre take-off checks;

e. pre take-off contamination checks;

f. the recording of any incidents relating to de-icing and/or anti-icing; and

g. the responsibilities of all personnel involved in de-icing and/or anti-icing.

2. Operator's procedures **must** ~~**should**~~ ensure that:

a. when aircraft surfaces are contaminated by ice, frost, slush or snow, they are de-iced prior to take-off; according to the prevailing conditions. Removal of contaminants may be performed with mechanical tools, fluids (including hot water), infra-red heat or forced air, taking account of aircraft type-specific requirements;

b. account is taken of the wing skin temperature versus Outside Air Temperature (OAT), as this may affect:

i. the need to carry out aircraft de-icing and/or anti-icing; and/or

ii. the performance of the de-icing/anti-icing fluids;

c. when freezing precipitation occurs or there is a risk of freezing precipitation occurring which would contaminate the surfaces at the time of take-off, aircraft surfaces should be anti-iced. If both de-icing and anti-icing are required, the procedure may be performed in a one or two-step process, depending upon weather conditions, available equipment, available fluids and the desired hold-over time (HoT). One-step de-icing/anti-icing means that de-icing and anti-icing are carried out at the same time, using a mixture of de-icing/anti-icing fluid and water. Two-step de-icing/anti-icing means that de-icing and anti-icing are carried out in two separate steps. The aircraft is first de-iced using heated water only or a heated mixture of de-icing/anti-icing fluid and water. After completion of the de-icing operation a layer of a mixture of de-icing/anti-icing fluid and water, or of de-icing/anti-icing fluid only, is to be sprayed over the aircraft surfaces. The second step will be applied before the first step fluid freezes, typically within three minutes and, if necessary, area by area;

d. when an aircraft is anti-iced and a longer HoT is needed/desired, the use of a less diluted Type II or Type IV fluid should be considered;

e. all restrictions relative to OAT and fluid application (including, but not necessarily limited to, temperature and pressure) published by the fluid manufacturer and/or aircraft manufacturer, are followed and procedures, limitations and recommendations to prevent the formation of fluid residues are followed;

f. during conditions conducive to aircraft icing on the ground or after de-icing and/or anti-icing, an aircraft is not dispatched for departure unless it has been given a contamination check or a post treatment check by a trained and qualified person. This check **must** ~~**should**~~ cover all treated surfaces of the aircraft and be performed from points offering sufficient accessibility to these parts. To ensure that there is no clear ice on suspect areas, it may be necessary to make a physical check (e.g. tactile);

g. the required entry is made in the technical log;

h. the pilot-in-command continually monitors the environmental situation after the performed treatment. Prior to take-off **the flight crew** ~~**he/she**~~ performs a pre-take-off check (**The Commander has the final saying and responsibility**), which is an assessment of whether the applied HoT is still appropriate. This pre-take-off check includes, but is not limited to, factors such as precipitation, wind and OAT;

i. if any doubt exists as to whether a deposit may adversely affect the aircraft's performance and/or controllability characteristics, the pilot-in-command **must** ~~**should**~~arrange for a pre-take-off contamination check to be performed in order to verify that the aircraft's surfaces are free of contamination. Special methods and/or equipment may be necessary to perform this check, especially at night time or in extremely adverse weather conditions. If this check cannot be performed just before take-off, re-treatment **must** ~~**should**~~ be applied;

j. when re-treatment is necessary, any residue of the previous treatment should be removed and a completely new de-icing/anti-icing treatment should be applied, **preferably in a two-step procedure**; and

k. when a Ground Ice Detection System (GIDS) is used to perform an aircraft surfaces check prior to and/or after a treatment, the use of GIDS by suitably trained personnel should be part of the procedure.

3. Special operational considerations:

a. When using thickened de-icing/anti-icing fluids, the operator should consider a two-step de-icing/anti-icing procedure, the first step preferably with hot water and/or un-thickened fluids;

b. The use of de-icing/anti-icing fluids should be in accordance with the aircraft manufacturer's documentation. This is particularly true for thickened fluids to assure sufficient flow-off during take-off;

c. The operator **must** ~~**should**~~ comply with any type-specific operational requirement(s), such as an aircraft mass decrease and/or a take-off speed increase associated with a fluid application;

d. The operator should take into account any flight handling procedures (stick force, rotation speed and rate, take-off speed, aircraft attitude etc.) laid down by the aircraft manufacturer when associated with a fluid application;

e. The limitations or handling procedures resulting from subparagraphs c and/or d above should be part of the flight crew pre-take-off briefing.

4. Communications:

a. Before aircraft treatment. When the aircraft is to be treated with the flight crew on board, the flight and **ground** personnel involved in the operation should confirm the fluid to be used, the extent of treatment required and any aircraft type-specific procedure(s) to be used. **As the final responsibility rests with the commander, his request for a higher fluid concentration will supersede the ground personnel members judgement and may include additional instructions. However the commander may not cancel a proposed de-/anti-icing procedure when contamination is detected and reported by ground personnel on the critical surfaces of the airplane.**

Any other information needed to apply the HoT tables should be exchanged;

b. Anti-icing code. The operator's procedures **must** ~~**should**~~ include an anti-icing code, which indicates the treatment the aircraft has received. This code provides the flight crew with the minimum details necessary to estimate a HoT

and confirms that the aircraft is free of contamination;

c. After Treatment. Before reconfiguring or moving the aircraft, the flight crew **must** ~~**should**~~ receive a confirmation from the personnel involved in the operation that all de-icing and/or anti-icing operations are complete, **all critical surfaces are free of contaminants** and that all personnel and equipment are clear of the aircraft.

5. Hold-over protection. The operator should publish in the operations manual, when required, the HoTs in the form of a table or a diagram, to account for the various types of ground icing conditions and the different types and concentrations of fluids used. However, the times of protection shown in these tables are to be used as guidelines only and are normally used in conjunction with the pre-take-off check.

6. Training. The operator's initial and recurrent de-icing and/or anti-icing training programmes (including communication training) for flight crew and those of its personnel involved in the operation who are involved in de-icing and/or anti-icing should include additional training if any of the following is introduced:

a. A new method, procedure and/or technique;

b. A new type of fluid and/or equipment;

c. A new type of aircraft.

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of:

a. de-icing and/or anti-icing methods and procedures;

b. fluids to be used, including precautions for storage and preparation for use;

c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and

d. checking and communications procedures.

8. Special maintenance considerations:

a. General. The operator should take proper account of the possible side-effects of fluid use. Such effects may include, but are not necessarily limited to, dried and/or re-hydrated residues, corrosion and the removal of lubricants;

b. Special considerations regarding residues of dried fluids. The operator **must** ~~**should**~~ establish procedures to prevent or detect and remove residues of dried fluid. If necessary the operator **must** ~~**should**~~ establish appropriate inspection intervals based on the recommendations of the airframe manufacturers and/or the operator's own experience:

i. Dried fluid residues. Dried fluid residues could occur when surfaces have been treated and the aircraft has not subsequently been flown and has not been subject to precipitation. The fluid may then have dried on the surfaces;

ii. Re-hydrated fluid residues. Repetitive application of thickened de-icing/anti-icing fluids may lead to the subsequent formation/build up of a dried residue in aerodynamically quiet areas, such as cavities and gaps. This residue may re-hydrate if exposed to high humidity conditions, precipitation, washing, etc., and increase to many times its original size/volume. This residue will freeze if exposed to conditions at or below zero degrees Celsius. This may cause moving parts, such as elevators, ailerons, and flap actuating mechanisms to

stiffen or jam in-flight. Re-hydrated residues may also form on exterior surfaces, which can reduce lift, increase drag and stall speed. Re-hydrated residues may also collect inside control surface structures and cause clogging of drain holes or imbalances to flight controls. Residues may also collect in hidden areas, such as around flight control hinges, pulleys, grommets, on cables and in gaps;

iii. Operators are strongly recommended to obtain information about the fluid dry-out and re-hydration characteristics from the fluid manufacturers and to select products with optimized characteristics;

iv. Additional information should be obtained from fluid manufacturers for handling, storage, application and testing of their products.

comment *1571* comment by: *ECA - European Cockpit Association*

Comment on paragraph 5.: change as follows:

5. Hold-over protection. The operator should publish in the operations manual, when required, the HoTs **unless operations in such conditions are specifically precluded. The HoTs should be** in the form of a table or a diagram, to account for the various types of ground icing conditions and the different types and concentrations of fluids **permitted to be** used. However, the times of protection shown in these tables are to be used as guidelines only and are **to be ~~normally~~** used in conjunction with the pre-take-off check.

Justification:

Unless the Operations Manual has a specific limitation that precludes all operations in such conditions, hold over tables must be provided by an operator. The types of acceptable fluids for which the table s are appropriate should also be clearly indicated. The use of the pre-takeoff check principle should be consistent whenever such procedures are used. Even when the remote de-icing is carried out at the runway end, the same principles should be applied, but in this case it would be a verification that the time from application to departure and hold over time is compatible rather than another physical check.

comment *1572* comment by: *ECA - European Cockpit Association*

Comment on paragraph 8.b.iii.: change as follows:

iii. Operators **should** ~~**are strongly recommended to**~~ obtain information about the fluid dry-out and re-hydration characteristics from the fluid manufacturers and to select products with optimised characteristics;

Justification:

The operators must do this if we are to avoid further incidents involving this problem. Wording amended to oblige operators to get the information

comment *2066* comment by: *Airbus S.A.S.*

The sub-paragraph AMC2 to OPS.GEN.100 (7) is based on ACJ OPS 1.345 (10), which states:

"the operator should ensure that the contractor complies with the operator's quality and training/qualification procedures".

In the proposed paragraph, the word "quality" has been removed.

Please confirm rationale for this change is implementation of SMS

comment *2386* comment by: *Dassault Aviation*

Technical comment:

Page 121 AMC2 OPS.GEN.100 item5: add (underlined) "The operator should publish and update in…"

comment *3125* comment by: *AEA*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3676* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3699* comment by: *AUSTRIAN Airlines*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *4351* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4361* comment by: *KLM*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *4714* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4731* comment by: *TAP Portugal*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

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item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

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Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *4970* comment by: *Deutsche Lufthansa AG*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *5276* comment by: *DGAC*

Proposal : Amend the title as follows:

"AMC~~**2**~~ **1** OPS.GEN.100 Ice and other contaminants**-ground procedures**"

Justification :

The title must reflect the fact that its content only applies to ground procedures as it comes from ACJ OPS 1.345 "Ice and other contaminants-ground procedures"

As written OPS.GEN 100 only deals with ground-procedures, it is proposed in one of our comments on OPS.GEN.100 to include in-flight procedure in second rank. As a consequence the AMC on groud procedures should be in first rank

Proposal ::

Amend the subtitle as follows :

« DE-ICING/ANTI-ICING **– AEROPLANES**"

and replace throughout the AMC the word "aircraft' by the word "aeroplane":

Justification :

This AMC OPS GEN 100 is based on ACJ OPS 1.345 which is designed for aeroplanes only

Up to know and for the coming years no standard for fluids, de-icing ground procedures, etc…. contained here will be developed for aircraft other than aeroplanes.

Wordings such as : underwing frost, type II , type IV , HOT ….do not make any sense when considering an helicopter, a glider or a balloon.

In this AMC, only §2)a) (partially) and § 6a) and c) could be also applicable to aircraft other than aeroplane. Nevertheless we do not recommend developing ea specific AMC dedicated to those items for other aircraft: indeed these items are so general that they do not add any value, and moreover there applicability would be conditioned by the development of the appropriate material by the manufacturer of the aircraft.

Proposal : Amend the beginning of 6 and 7 as follows:

"6. Training **– Complex motor-powered aeroplanes used in non-commercial operations and aeroplanes used in commercial operations.** The operator's initial and recurrent[…]

7. Contracting**– Complex motor-powered aeroplanes used in non-commercial operations and aeroplanes used in commercial operations.** When the operator contracts […]"

Justification :

This AMC OPS GEN 100 is based on ACJ OPS 1.345 which is designed for aeroplanes in CAT. We understand the benefit of applying it to all commercial operations and to non-commercial operations of CMPAeroplanes as well, but we think that extending it to the other types of operations would require further development in the provision to make it applicable.

comment *5532* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

comment *5895* comment by: *ERA*

European Regions Airline Association Comment

ERA members have been in the forefront of applying pressure on EASA to develop without delay rulemaking action on aircraft ground de-icing / anti-icing operations. EASA consider this and other areas of this NPA provide provisions that may meet the concerns related to any lack of current individual rulemaking activity in this area. The ERA Directorate would disagree and stress that EASA as a matter of urgency should be looking at rulemaking action.

There is a need for explicit statements on the establishment of procedures and methods to be considered for incorporation.

comment *6851* comment by: *Icelandair*

Relevant Text:

7. Contracting. When the operator contracts training on de-icing/anti-icing, the operator should ensure that the contractor complies with the operator's training/qualification procedures, together with any specific procedures in respect of: a. de-icing and/or anti-icing methods and procedures; b. fluids to be used, including precautions for storage and preparation for use; c. specific aircraft requirements (e.g. no-spray areas, propeller/engine de-icing, APU operation etc.); and d. checking and communications procedures.

Comment:

item 7, contracting, this item is related to SIN 2008-29 of 04 apr. 2008, item 11, subcontracting.

So, item 7 speaks of "contracting" and item 11 SIN 2008-29 of "subcontracting". Is this an error or intended?

Also in item 7 it speaks about ".....operator contracts training on de-icing/anti-icing.....", while item 11 speaks about ".....operator should ensure that the subcontractor complies....".

Should item 7 in NPA not be same as item 11 in SIN? W/G has no problem with current NPA text if it is meant to be that way, but just wants to make sure it is intended that way.

Proposal:

Clarify the use of contracting / subcontracting

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.100 Ice and other contaminants p. 122-123

comment *1573* comment by: *ECA - European Cockpit Association*

Comment paragraph 6 (a): change as follows:

Ice and other contaminants

TERMINOLOGY

Terminology. Terms used in the context of de-icing/anti-icing should be given the following meaning:

[…]

6. De-icing fluid. Such fluid includes, but is not limited to, the following:

a. Heated water **only in a pre-step de-icing process**

[…]

comment *1574* comment by: *ECA - European Cockpit Association*

Comment on paragraph 11.: Change as follows:

11. Pre-take-off check. An assessment normally performed from within the flight deck, to validate the applied HoT. **If the HoT is in doubt this will, depending on type and conditions include an appropriate visual and/or physical inspection.**

Justification:

There is a clear need for the process of ensuring that at the time of take –off that the aircraft is clear of all other than permitted contamination. This may require merely visual inspection or for some types a physical one. This should be clear in the paragraph.

comment *3126* comment by: *AEA*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3677* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3701* comment by: *AUSTRIAN Airlines*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *4352* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4362* comment by: *KLM*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *4715* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4732* comment by: *TAP Portugal*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *4971* comment by: *Deutsche Lufthansa AG*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *5277* comment by: *DGAC*

Proposal : amend the title of GM1, amend the subtitle of GM3 and regroup the GM 1, 2 and 3 into one single GM1.OPS.GEN.100 to read as follows :"**GM1 OPS.GEN.100 Ice and other contaminants-<u>-Ground procedures - Aeroplanes</u>**TERMINOLOGY

Terminology. Terms used in the context […]

[…]

12. Pre-take-off […] just before commencement of the take-off run.

~~**GM2 OPS.GEN.100 Ice and other contaminants**~~

ANTI-ICING CODES

~~1~~ **<u>13</u>**. The following are examples of anti-icing codes:

[…]

~~2~~ **14.** When a two-step de-icing/anti-icing […] may be included, if desired.

~~**GM3 OPS.GEN.100 Ice and other contaminants**~~

DE-ICING/ANTI-ICING **procedures**

Further guidance material on this issue is given in the International Civil Aviation Organization (ICAO) Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640) (hereinafter referred to as the ICAO Manual of Aircraft Ground De-icing/Anti-icing Operations).

~~1~~ **15**. General:

[…]

Justification :

The title of the GMs must reflect the fact that their content only applies to ground procedures

The title must also reflect the fact that their content only applies to aeroplanes. The material of these GMs is based on ACJ OPS 1.345 which was designed for aeroplanes only.

Up to know and for the coming years no standard for fluids, de-icing ground procedures, etc…. contained here will be developed for aircraft other than aeroplanes.

Wordings such as : underwing frost, type II , type IV , HOT ….do not make any sense when considering an helicopter, a glider or a balloon.

Warning : if it is decided as a consequence of our comment to replace throughout the GM the word "aircraft" by the word "aeroplane", it should be made carefully in order not to change the references (ICAO, ISO, AEA, SAE and other) that shall keep the word aircraft

We do not understand the rational behind splitting the remaining parts of the material coming from ACJ OPS 1.345 into GM 1, 2 and 3 as it is necessary to read the three of them in order to be able to apply OPS.GEN.100 and the related AMCs.

It should be made clear that the third part "DE-ICING/ANTI-ICING specifically deals with procedures

General comment : this GM is applicable to all kind ofoperations with aeroplanes, therefore we wont make a comment requesting to restrict any part of the GM to commercial operations or non-commercial operations of CMPA (contrary to the comment we have made on the AMC).

comment *5522* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5533* comment by: *Swiss International Airlines / Bruno Pfister*

Comment: the terms "**anti-icing**" and **"de-icing**" are missing.

Proposal: add the he terms "anti-icing" and "de-icing"

comment *5896* comment by: *ERA*

European Regions Airline Association Comment

ERA members have been in the forefront of applying pressure on EASA to develop without delay rulemaking action on aircraft ground de-icing / anti-icing operations. EASA consider this and other areas of this NPA provide provisions that may meet the concerns related to any lack of current individual rulemaking activity in this area. The ERA Directorate would disagree and stress that EASA as a matter of urgency should be looking at rulemaking action.

There is a need for explicit statements on the establishment of procedures and methods to be considered for incorporation.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM2 OPS.GEN.100 Ice and other contaminants p. 123

comment *2333* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Proposal:

Add: The Cabin Crew should confirm with the person if they are willing and able to assist the rapid evacuation of the aircraft in an emergency

comment *3312* ☐ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3678* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4353* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4716* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure

descriptions in AMC and GM.

comment *5277* ☐ comment by: *DGAC*

Proposal : amend the title of GM1, amend the subtitle of GM3 and regroup the GM 1, 2 and 3 into one single GM1.OPS.GEN.100 to read as follows :

"**GM1 OPS.GEN.100 Ice and other contaminants--Ground procedures - Aeroplanes**

TERMINOLOGY

Terminology. Terms used in the context […]

[…]

12. Pre-take-off […] just before commencement of the take-off run.

~~**GM2 OPS.GEN.100 Ice and other contaminants**~~

ANTI-ICING CODES

~~1~~ **13**. The following are examples of anti-icing codes:

[…]

~~2~~ **14.** When a two-step de-icing/anti-icing […] may be included, if desired.

~~**GM3 OPS.GEN.100 Ice and other contaminants**~~

DE-ICING/ANTI-ICING **procedures**

Further guidance material on this issue is given in the International Civil Aviation Organization (ICAO) Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640) (hereinafter referred to as the ICAO Manual of Aircraft Ground De-icing/Anti-icing Operations).

~~1~~ **15**. General:

[…]

Justification :

The title of the GMs must reflect the fact that their content only applies to ground procedures

The title must also reflect the fact that their content only applies to aeroplanes. The material of these GMs is based on ACJ OPS 1.345 which was designed for aeroplanes only.

Up to know and for the coming years no standard for fluids, de-icing ground procedures, etc…. contained here will be developed for aircraft other than aeroplanes.

Wordings such as : underwing frost, type II , type IV , HOT ….do not make any sense when considering an helicopter, a glider or a balloon.

Warning : if it is decided as a consequence of our comment to replace throughout the GM the word "aircraft" by the word "aeroplane", it should be made carefully in order not to change the references (ICAO, ISO, AEA, SAE and other) that shall keep the word aircraft

We do not understand the rational behind splitting the remaining parts of the material coming from ACJ OPS 1.345 into GM 1, 2 and 3 as it is necessary to read the three of them in order to be able to apply OPS.GEN.100 and the

related AMCs.

It should be made clear that the third part "DE-ICING/ANTI-ICING specifically deals with procedures

General comment : this GM is applicable to all kind ofoperations with aeroplanes, therefore we wont make a comment requesting to restrict any part of the GM to commercial operations or non-commercial operations of CMPA (contrary to the comment we have made on the AMC).

comment *5523* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5897* comment by: *ERA*

European Regions Airline Association Comment

ERA members have been in the forefront of applying pressure on EASA to develop without delay rulemaking action on aircraft ground de-icing / anti-icing operations. EASA consider this and other areas of this NPA provide provisions that may meet the concerns related to any lack of current individual rulemaking activity in this area. The ERA Directorate would disagree and stress that EASA as a matter of urgency should be looking at rulemaking action.

There is a need for explicit statements on the establishment of procedures and methods to be considered for incorporation.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM3 OPS.GEN.100 Ice and other contaminants p. 123-125

comment *3312* ☐ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3679* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4354* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4718* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to

convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5277* ☐ comment by: *DGAC*

Proposal : amend the title of GM1, amend the subtitle of GM3 and regroup the GM 1, 2 and 3 into one single GM1.OPS.GEN.100 to read as follows :

"**GM1 OPS.GEN.100 Ice and other contaminants-<u>-Ground procedures - Aeroplanes</u>**

TERMINOLOGY

Terminology. Terms used in the context […]

[…]

12. Pre-take-off […] just before commencement of the take-off run.

~~**GM2 OPS.GEN.100 Ice and other contaminants**~~

ANTI-ICING CODES

~~1~~ **<u>13</u>**. The following are examples of anti-icing codes:

[…]

~~2~~ **<u>14.</u>** When a two-step de-icing/anti-icing […] may be included, if desired.

~~**GM3 OPS.GEN.100 Ice and other contaminants**~~

DE-ICING/ANTI-ICING **<u>procedures</u>**

Further guidance material on this issue is given in the International Civil Aviation Organization (ICAO) Manual of Aircraft Ground De-icing/Anti-icing Operations (Doc 9640) (hereinafter referred to as the ICAO Manual of Aircraft Ground De-icing/Anti-icing Operations).

~~1~~ **<u>15</u>**. General:

[…]

Justification :

The title of the GMs must reflect the fact that their content only applies to ground procedures

The title must also reflect the fact that their content only applies to aeroplanes. The material of these GMs is based on ACJ OPS 1.345 which was designed for aeroplanes only.

Up to know and for the coming years no standard for fluids, de-icing ground procedures, etc…. contained here will be developed for aircraft other than aeroplanes.

Wordings such as : underwing frost, type II , type IV , HOT ….do not make any sense when considering an helicopter, a glider or a balloon.

Warning : if it is decided as a consequence of our comment to replace throughout the GM the word "aircraft" by the word "aeroplane", it should be made carefully in order not to change the references (ICAO, ISO, AEA, SAE

and other) that shall keep the word aircraft

We do not understand the rational behind splitting the remaining parts of the material coming from ACJ OPS 1.345 into GM 1, 2 and 3 as it is necessary to read the three of them in order to be able to apply OPS.GEN.100 and the related AMCs.

It should be made clear that the third part "DE-ICING/ANTI-ICING specifically deals with procedures

General comment : this GM is applicable to all kind ofoperations with aeroplanes, therefore we wont make a comment requesting to restrict any part of the GM to commercial operations or non-commercial operations of CMPA (contrary to the comment we have made on the AMC).

comment *5372* comment by: *DGAC*

(1)(d)(xvi) :

Proposal : Amend the text of item (xvi) as follows:

"xvi. **SAE** ARP5646 Quality Program Guidelines for De-icing/anti-icing of Aircraft on the Ground."

Justification :

ARPs are SAE documents

comment *5524* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5898* comment by: *ERA*

European Regions Airline Association Comment

ERA members have been in the forefront of applying pressure on EASA to develop without delay rulemaking action on aircraft ground de-icing / anti-icing operations. EASA consider this and other areas of this NPA provide provisions that may meet the concerns related to any lack of current individual rulemaking activity in this area. The ERA Directorate would disagree and stress that EASA as a matter of urgency should be looking at rulemaking action.

There is a need for explicit statements on the establishment of procedures and methods to be considered for incorporation.

comment *7299* comment by: *FAA*

1.

1. GM2 OPS.GEN.100 Ice and other contaminants

Comment:

ANTI-ICING CODES

The following are examples of anti-icing codes:

a. "Type I" at (start time) – To be used if anti-icing treatment has been performed with a Type I fluid;

b. "Type II/100" at (start time) – To be used if anti-icing treatment has been performed with undiluted Type II fluid;

c. "Type II/75" at (start time) – To be used if anti-icing treatment has been performed with a mixture of 75 % Type II fluid and 25 % water;

d. "Type IV/50" at (start time) – To be used if anti-icing treatment has been performed with a mixture of 50 % Type IV fluid and 50 % water. 2. When a two-step de-icing/anti-icing operation has been carried out, the anti-icing code should be determined by the second step fluid. Fluid brand names may be included, if desired.

The proposed anti-icing codes differ from the Association of European Airlines (AEA) guidelines and are not consistent with international standard for such codes.

Non-standard phraseology for aircraft ground deicing could contribute to an accident, personal injury, and or property loss.

Recommendation:

Consider adopting the AEA guidelines. The following is extracted from the AEA document for ground deicing:

3.14.3 Anti-Icing Codes

The following information shall be recorded and be communicated to the Commander by referring to the last step of the procedure and in the sequence provided below:

a) the fluid type; i.e. Type I, II, III, IV

b) the concentration of fluid within the fluid/water mixture, expressed as a percentage by volume;

N NOTE 1: no requirement for Type I fluid

c)c) the local time (hours/minutes) at the beginning of the final de-icing/anti-icing step;

d)d) the date (written: day, month, year);

N NOTE 2: required for record keeping, optional for Commander notification.

e)e) the complete name of the anti-icing fluid (so called "brand name").

N NOTE 3: optional; for type II and IV fluids only.

f) f) the statement "Post de-icing/anti-icing check completed"

N NOTE 4: For specific aircraft types, additional requirements exist e.g. special clear ice checks, such as tactile checks on wings. Additional confirmation for these checks is required.

EXAMPLE

A de-icing/anti-icing procedure whose last step is the use of a mixture of 75% of a type II fluid and 25% water, commencing at 13:35 local time on 20 February 2007, is reported and recorded as follows:

TYPE II/75 13:35 (20th FEB 2007) ("complete name of anti-icing fluid") "Post de-icing/anti-icing check completed".

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.110 Carriage of persons p. 125

comment *1575* comment by: *ECA - European Cockpit Association*

Comment: change as follows:

AMC OPS.GEN.110 Carriage of persons

SEATS WHICH PERMIT DIRECT ACCESS TO EMERGENCY EXITS

Persons who are allocated seats which permit direct access to emergency exits should appear to be reasonably fit, strong and **such a size as to be able to safely use such exits. They should be** able to assist the rapid evacuation of the aircraft in an emergency after an appropriate briefing by the crew.

Justification:

There have been instances of individuals who although strong would not appear to be able to use some of the hatch type emergency exits due to their size. These individuals appear to select seats in the exit rows so as to accommodate their size, but their presence leads to the high risk that the exit will become blocked in the event of an emergency and thus unusable. This presents an unacceptable risk to other passengers and there should be a requirement for not only fitness but suitable size in the requirements.

comment *2335* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Proposal:

Add:

The cabin crew should confirm with the person if they are willing and able to assist the rapid evacuation of the aircraft in an emergency

comment *2976* comment by: *REGA*

RMK: A patient on a stretcher is unable to fulfil these requirements.

comment *3913* comment by: *FOM ANWB MAA*

AMC OPS.GEN.110 Carriage of persons

SEATS WHICH PERMIT DIRECT ACCESS TO EMERGENCY EXITS

Persons who are allocated seats which permit direct access to emergency exits should appear to be reasonably fit, strong and able to assist the rapid evacuation of the aircraft in an emergency after an appropriate briefing by the crew.

A patient on a stretcher is unable to fulfil these requirements but stretchers are usually located next to the helicopter doors.

comment *4268* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

RMK: A patient on a stretcher is unable to fulfil these requirements.

comment *4419* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

A patient on a stretcher is unable to fulfil these requirements.

comment *4969* comment by: *HDM Luftrettung gGmbH*

AMC.OPS.GEN.110:

A patient on a stretcher is unable to fulfil these requirements.

comment *5331* comment by: *ALFA-HELICOPTER*

A patient on a stretcher is unable to fulfil these requirements.

comment *5662* comment by: *ADAC Luftrettung GmbH*

AMC OPS.GEN.110

A patient on a stretcher is unable to fulfil these requirements.

comment *5839* comment by: *Norsk Luftambulanse*

RMK: A patient on a stretcher is unable to fulfil these requirements.

comment *5957* comment by: *Ryanair*

Seats are not always 'allocated' to passengers.

Nothing in this AMC should prevent a 'free seating policy'

Proposal

"Persons who ~~are allocated~~ *occupy* seats which permit....."

comment *6187* comment by: *HSD Hubschrauber Sonder Dienst*

RMK: An exemption in the HEMS-operation should be the patient on the stretcher.

comment *6977* comment by: *IACA International Air Carrier Association*

The cabin crew should confirm with the person if they are willing and able to assist the rapid evacuation of the aircraft in an emergency.

comment *7201* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.GEN.110 Carriage of persons

SEATS WHICH PERMIT DIRECT ACCESS TO EMERGENCY EXITS

Persons who are allocated seats which permit direct access to emergency exits should appear to be reasonably fit, strong and able to assist the rapid evacuation of the aircraft in an emergency after an appropriate briefing by the crew.

A patient on a stretcher is unable to fulfil these requirements, but stretchers are usually located next to the helicopter doors.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.110 Carriage of persons p. 126

comment *1387* comment by: *Royal Danish Aeroclub*

We do support the exception of parachute operations.

comment *1576* comment by: *ECA - European Cockpit Association*

Comment: change text as follows:

The carriage of operational personnel indispensable to the performance of a task and carried on a flight taking place immediately before, during or immediately after and directly associated with a specialised task, is not considered Commercial Air Transport. **The size of team associated with the operational task should be the minimum compatible with the task or tasks to be carried out. This does not apply to parachute Operations. ~~Except for parachute operations, the number of persons carried should not exceed six, excluding crew members.~~**

Justification:

This is very prescriptive and unnecessary. The size of the crew will be appropriate to the task and if large would require cabin crew etc for safety in any case./ It is suggested that the crew be limited to those relevant to the task being performed and numbers minimised as far as practical.

comment *2070* comment by: *Airbus S.A.S.*

In the last sentence, the paragraph states:

"Except for parachute operations, the number of persons carried should not exceed six, excluding crew members".

Rationales for this statement would be appreciated

comment *2791* comment by: *Southern Cross International*

The maximum number of six persons, excluding crew members, is arbitrary and should be deleted. On large research and test aircraft (e.g. Fokker 100 or Airbus A320) the number of observers, research staff, technical staff et cetera may easily exceed the number of six.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.110 Carriage of persons p. 126

comment *1160* comment by: *Stefan Huber*

Carriage of persons : No person shall be in any part of an aircraft in flight which is not a part designed for the accommodation of persons, unless temporary access has been granted by the pilot in command for the purpose of taking action necessary for the safety of the aircraft or of any animal or goods

therein.

comment *2072* comment by: *Airbus S.A.S.*

GM OPS.GEN.110 should be renamed as "GM2 OPS.GEN.110"

comment *5916* comment by: *DGAC*

What is the rule applicable for numbering the paragraphs of this part : after GM1 we have GM ?

This GM refers to the AMC OPS.GEN.110, it should therefore be renamed "GM **to AMC** OPS.GEN.110"

comment *6979* comment by: *IACA International Air Carrier Association*

The cabin crew should confirm with the person if they are willing and able to assist the rapid evacuation of the aircraft in an emergency.

comment *7630* comment by: *Cirrus Design Corporation*

The term 'direct access' is not used in OPS.GEN.110 and has no relevant applicability within the rule. This GM should be removed.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.115 Passenger briefing p. 126

comment *1560* comment by: *Luftfahrt-Bundesamt*

Such impotant things like the definition of safety and emergency equipment should NOT be defined in the AMC-Material but in the accordant paragraph of the Implementing Rule!

comment *2696* comment by: *AOPA-Sweden*

(4): A passenger briefing card does not exist for the small GA-fleet, and should be dropped off this paragraph to let most of the GA-pilots follow the rule.

comment *3324* comment by: *AEA*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement.

comment *4363* comment by: *KLM*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement.

comment *4735* comment by: *TAP Portugal*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement

comment *4972* comment by: *Deutsche Lufthansa AG*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement.

comment *5535* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement.

comment *5918* comment by: *DGAC*

Proposal : Delete "relevant" in the beginning of the sentence "relevant safety and emergency equipment includes".

Justification : "relevant" is already in OPS.GEN.115 and some of the equipment listed in the AMC 1 might not be present according to the type of operation or aircraft (e.g. .oxygen equipment)

comment *7605* comment by: *AOPA UK*

A passenger briefing card does not exist for the small GA-fleet, and should be dropped from this paragraph to let most of the GA-pilots follow the rule.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC2 OPS.GEN.115 Passenger briefing p. 126-127

comment *123* comment by: *Loganair Limited*

The AMC is not clear in respect of aircraft carrying 19 passengers or less, that all Passenger briefing items for all phases of flight can be covered in a pre-departure brief. On short sectors pilot(s) should not be distracted by such briefs. In addition a PA system is not required on aircraft carrying 19 passengers or less (OPS.CAT.517)

comment *483* comment by: *EHOC*

General

A combination of

1. the amended wording of element 2. of the AMC2;

2. the abbrieviated wording of AMC2(from the orginal) in the individual briefing elements (before take-off, after take-off etc.); and

3. the introduction, and wording, of AMC3,

has resulted in lack of clarity about the necessity to brief in flight. This could immediately be rectified by restoring the orginal wording in AMC2 and making clear in AMC3 that the alleviation is only from the initial demonstration/briefing and not from the elements contained in AMC2 paragraph 2.

Paragraph 2.

The original statement of this requirement made it clear the the briefing was required but 'items' would only apply 'if applicable'; the statement as now constructed appears to bring into question whether the briefing is necessary - not the individual items. The text should be amended to:

"Passengers should be briefed on the following items if applicable."

Paragraph 2.b.

To ensure that the intent of ICAO that passengers should be briefed in flight is complied with, the original text should be retained.

"b. After take-off, passengers should be reminded of the following:"

Paragraph 2.c.

To ensure that the intent of ICAO that passengers should be briefed in flight is complied with, the original text should be retained.

"c. Before landing, passengers should be reminded of the following:"

Paragraph 2.d.

To ensure that the intent of ICAO that passengers should be briefed in flight is complied with, the original text should be retained.

"d. After landing, passengers should be reminded of the following:"

comment *2073* comment by: *Airbus S.A.S.*

AMC2 refers to CAT.

For consistency reasons, it should be moved to Subpart B, as AMC to OPS.CAT.115

comment *3477* comment by: *UK CAA*

Page: 126

Paragraph No:

AMC2 OPS.GEN.115

Comment:

The text refers to MOTOR POWERED AIRCRAFT – COMMERCIAL AIR

TRANSPORT. This item (together with AMC3 OPS.GEN.115 – see separate comment) should be moved to the CAT section.

Additionally, the text at paragraph 2 could be improved as indicated below.

Justification:

Consistency of rules.

Proposed Text (if applicable):

AMC1 OPS.CAT.115 Passenger briefing

MOTOR POWERED AIRCRAFT – COMMERCIAL AIR TRANSPORT

1. Before take-off …….

2. Passengers should be given a briefing, ~~if applicable~~, on the following items, ***if applicable***:

…….*(previous text)*

comment *3702* comment by: *AUSTRIAN Airlines*

Relevant text:

Relevant safety and emergency equipment includes:....

5. other emergency equipment.

Comment:

Mentioning "other emergency equipment" can mean everything, even not relevant. Also Emergency briefing card are existing.

Proposal:

Delete this requirement.

comment *4761* comment by: *Virgin Atlantic Airways*

Relevant Text:

"back of seat to be in the upright position and tray table stowed before take-off and landing."

Comment:

(a)(i) relates to briefing to be provided before take-off, therefore delete mention of 'and landing'.

(c)(iii) relates to briefing to be provided pre landing, there delete mention of 'take-off and'.

Proposed Text:

(a)(i)

"back of seat to be in the upright position and tray table stowed before take-off ~~and landing~~."

AND

(c)(iii)

"back of seat to be in the upright position and tray table stowed before ~~take-off and~~ landing."

comment *5112* comment by: *Elaine Allan Monarch*

Page No. 126

Ref No. NPA 2009 – 2b AMCOPS.GEN.115

Page 126 of 464

Summary of EASA Proposed Requirement:

2. Passengers should be given a briefing, if applicable, on the following items before take –off:

(a) ii back of seat to be in the upright position and tray table stowed before take-off and landing.

Comment:

Reference to landing is not relevant.

Justification:

Proposed Text (if applicable)

Remove text "**and landing"**

comment *6865* comment by: *ETF*

Comment to point 4:

The text is more excluding than the OPS reference as to the possibility to make use of passengers in emergencies. (ABA). This could be interpreted into the previous OPS text. OPS 1.285 (f) "In an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances." Unless it is covered elsewhere it is suggested to rewrite the text in order to incorporate this item.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC3 OPS.GEN.115 Passenger briefing p. 127

comment *484* comment by: *EHOC*

Title

Because of the title of this AMC, it appears as though this method of compliance is required when "no cabin crew is required to be carried"

In addition, because it refers to paragraph 2 of AMC1 to CAT OPS.GEN.115 (which no longer contains a requirement to brief after take-off, before landing and after landing), it is not clear that these broadcasts are still required when complying with this AMC.

Paragraph 1.

Editorial: References incorrect

Paragraph 2.

Editorial: References incorrect

comment *1070* comment by: *REGA*

2. Medical Passenger, e.g. the doctor, have been trained once a year.

Proposal:

Medical Passenger should be treated other than a "usual" passenger.

comment *2074* comment by: *Airbus S.A.S.*

AMC refers to CAT.

For consistency reasons, it should be moved to Subpart B, as AMC to OPS.CAT.115

comment *3128* comment by: *AEA*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *3478* comment by: *UK CAA*

Page: 127

Paragraph No:

AMC3 OPS.GEN.115

Comment:

The text refers to MOTOR POWERED AIRCRAFT – COMMERCIAL AIR TRANSPORT. This item (see comment on AMC2 OPS.GEN.115) should be moved to the CAT section.

Additionally, the references in paragraphs 1 and 2 are incorrect. However,

these should be adjusted to reflect the repositioning of this text to the CAT section as indicated below.

If adopted, AMC4 OPS.GEN.115.B will require changing to AMC2 OPS.GEN.115.B.

Justification:

Consistency of rules.

Proposed Text (if applicable):

AMC2 OPS.CAT.115 Passenger briefing

PASSENGER SAFETY TRAINING – MOTOR-POWERED AIRCRAFT WHERE NO CABIN CREW IS REQUIRED TO BE CARRIED – COMMERCIAL AIR TRANSPORT

1. An operator should establish a training programme for passengers covering safety and emergency procedures, including ~~AMC1 CATOPS.GEN.115~~ ***AMC1 OPS.CAT.115*** 1. and 2. for a given type of aircraft.

2. Passengers who have been trained according to this programme and have flown on the aircraft type within the last 90 days may be carried on board without receiving a briefing/demonstration as required by ~~AMC1 CAT OPS. GEN.115~~ ***AMC1 OPS.CAT.115***.

comment *3703* comment by: *AUSTRIAN Airlines*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *3998* comment by: *AIRBUS*

The AMC 3 OPS.GEN.115 includes references to AMC1 CAT OPS.GEN.115 1. and 2, and to AMC1 CAT OPS.GEN.115. These AMCs do not exist in the proposed structure.

comment *4364* comment by: *KLM*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor

powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *4736* comment by: *TAP Portugal*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *4973* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *5114* comment by: *Elaine Allan Monarch*

Page No.

127

Ref No.

NPA 2009 – 2b AMC1 OPS.GEN.115

page 127 of 464

Summary of EASA Proposed Requirement:

2.Passengers should be given a briefing, if applicable, on the following items:

(c) Before landing:

iii . back of the set to be in the upright position and tray table stowed before take-off and landing

Comment:

Reference to take –off not relevant

Justification:

Proposed Text (if applicable)

Remove text **"and take-off"**

comment *5536* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted

Proposal:

Delete AMC3 OPS.GEN.115

comment *5663* comment by: *ADAC Luftrettung GmbH*

comment *5922* comment by: *DGAC*

The reference to "AMC1 CAT OPS.GEN.115" is erroneous and should be replaced by a reference to "AMC2 OPS.GEN.115"

This paragraph is not applicable if the verb is "should": A passenger briefing is feasible, a training is not (ICAO word, not applicable in the context of IROPS). In that context it would be preferable to replace the verb "should" by the the verb "may".

comment *6122* comment by: *Peter Moeller*

to improve the level of safety, passenger briefings should be done once a year.

comment *7278* comment by: *AIR FRANCE*

Relevant Text:

AMC3 OPS.GEN.115 Passenger briefing (Passenger Safety Training – motor powered aircraft where no cabin crew is required to be carried

Comment:

On all-cargo flights, the flight crew will brief the passengers using specific briefing material. It would be impossible to organize dedicated training for specific passengers on cargo flights and it would not be practical to track whether they did fly on a cargo flight in the preceding 90 days. Therefore this AMC should be deleted.

Proposal:

Modify the applicabilty of AMC3 OPS.GEN.115 and remove cargo aircrafts.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC4 OPS.GEN.115.B Passenger briefing p. 127-128

comment *3168* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

change "suitable clothing" in "gloves"

comment *5132* comment by: *UK CAA*

Page No: 127

Paragraph No:

AMC4 OPS.GEN.115.B

Comment:

The text requires clarification in order to define before which phases of flight briefings should be given.

Justification:

Clarification.

Proposed Text (if applicable):

GENERAL - BALLOONS

1. ***Prior to take-off and landing*** passengers should be given a briefing…..

comment *5351* comment by: *Danish Balloon Organisation*

Typing error ?

1. Before ~~and after~~ take-off and landing, passengers should be given a briefing, relevant to the phase of flight, on the following items:

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.120.B Securing of passenger cabin and galleys p. 128

comment *3169* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

We do not see any reasons for the limitation of baggage article.

Passengers used to have their picnic items with them.

As balloonflights are pleasureflights such a refusal could produce a bad atmosphere.

In our eyes such a restriction has not a security reason.

comment *6115* comment by: *Austro Control GmbH*

It is assumed that *"food, drinks and clothes"* are also covered by this paragraphe and the wording "*etc.".* But an explanation could be helpful.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.125 Portable electronic devices p. 128-130

comment *704* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.125 - GENERAL – COMMERCIAL AIR TRANSPORT :

The chapter addresses "GEN", but the title addresses commercial air transport.

ECA requests clarification:

Is this AMC related to GEN or CAT?

comment *1577* comment by: *ECA - European Cockpit Association*

Comment on paragraph 2.c.: change as follows:

c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices **before, during and after the flight** ~~**before fastening their seat belts**~~;

Justification:

Unnecessarily prescriptive in suggested timing. This item should be dealt with during the initial safety briefing as described in AMC2 OPS.GEN.115 Passenger briefing para 2

comment *3130* comment by: *AEA*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **~~and ground agents~~** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *3132* comment by: *AEA*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *3373* comment by: *M Wilson-NetJets*

Original text:

2. Restrictions on use of PEDs by passengers: If an operator permits passengers to use PEDs on board its aircraft, procedures should be in place to control their use. It is the responsibility of the operator to ensure that all aircraft crew and ground agents are trained to enforce the restrictions on this equipment consistent with these procedures. These procedures should ensure the following: a. Cell phones and other transmitting devices are not used and are switched off from the time at the start of the flight when the passengers

have boarded and all doors have been closed until the end of the flight when a passenger door has been opened. The pilot-in-command may permit the use of cell phones when the aircraft is stationary during prolonged departure delays provided that sufficient time is available to check the cabin before the flight proceeds. Similarly, after landing, the pilot-in-command may authorise cell phone use in the event of a prolonged delay for a parking/gate position (even though doors are closed and the engines are running). This paragraph does not apply to a PED where the sole means of transmission is identified as a low power transmitting device compliant with the "Bluetooth" Standard.

This paragraph may not apply to systems installed in the aircraft for the use of cell phones in-flight;

Suggested new text:

2. Restrictions on use of PEDs by passengers: If an operator permits passengers to use PEDs on board its aircraft, procedures should be in place to control their use. It is the responsibility of the operator to ensure that all aircraft crew and ground agents are trained to enforce the restrictions on this equipment consistent with these procedures. These procedures should ensure the following: a. Cell phones and other transmitting devices are not used and are switched off from the time at the start of the flight when the passengers have boarded and all doors have been closed until the end of the flight when a passenger door has been opened. The pilot-in-command may permit the use of cell phones when the aircraft is stationary during prolonged departure delays provided that sufficient time is available to check the cabin before the flight proceeds. Similarly, after landing, the pilot-in-command may authorise cell phone use in the event of a prolonged delay for a parking/gate position (even though doors are closed and the engines are running).

On aeroplanes with a MPSC of 19 or less the PIC may allow the use of PED up to shortly before take-off and shortly after landing, if it is determined that passengers using PED are easily identified and means exist to communicate with those passengers to command the disuse of PEDs.

This paragraph does not apply to a PED where the sole means of transmission is identified as a low power transmitting device compliant with the "Bluetooth" Standard. This paragraph may not apply to systems installed in the aircraft for the use of cell phones in-flight;

Comment/suggestion:

Aeroplanes with a MPSC of 19 or less can more easily command and check that PEDs are switched off and therefore should be allowed to have PEDs operate until shortly before take-off since there is no apparent safety risk due to the fact that it very difficult to miss a passenger using his/her PED.

comment *3704* comment by: *AUSTRIAN Airlines*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not

effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

2. ...It is the responsibility of the operator to ensure that all aircraft crew ***~~and ground agents~~*** *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *3979* comment by: *AIRBUS*

The text of the AMC OPS.GEN.125 and GM OPS.GEN.125 is derived from the JAA TGL 29. This TGL was linked to JAR-OPS 1, therefore applicable to Commercail Air Transportation only. As the PED requirements have been placed into the GEN subpart, it is understood that they become applicable to any kind of operation. The AMC and the GM nevertheless remain applicable to CAT only.

The EASA should clarify if it was the original intent to make these requirements applicable to any kind of operation. If this is not the case, the requirement should be shifted into the subpart CAT, as well as the corresponding AMC & GM.

comment *4365* comment by: *KLM*

Relevant Text:

2. ...It is the responsibility of the operator to ensure that all aircraft crew ***and ground agents*** *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

2. ...It is the responsibility of the operator to ensure that all aircraft crew ***~~and ground agents~~*** *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *4366* comment by: *KLM*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *4737* comment by: *TAP Portugal*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

*2. ...It is the responsibility of the operator to ensure that all aircraft crew ~~**and ground agents**~~ are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *4739* comment by: *TAP Portugal*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *4974* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

2. ...It is the responsibility of the operator to ensure that all aircraft crew ~~***and ground agents***~~ *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *4975* comment by: *Deutsche Lufthansa AG*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *5055* comment by: *Airbus SAS*

Airbus proposes to replace the last 2 sentences of Subsection 2.a., saying:

"2. Restrictions on use of PEDs by passengers:

a. ...

This paragraph does not apply to a PED where the sole means of transmission is identified as a low power transmitting device compliant with the "Bluetooth" Standard.

This paragraph may not apply to systems installed in the aircraft for the use of cell phones in-flight;" ,

by the following text:

"This paragraph does under the conditions within this paragraph not apply to a PED where the sole means of transmission is identified as a low power transmitting device limited to less than 10 to 100 mW effective isotropic radiated power inside the 2.4 to 2.5 GHz ISM band, e.g. early Bluetooth standards. Such radio standards may be operated only, if the aircraft electronic equipment is qualified to a level of 5 V/m and higher in the above mentioned frequency range.

Mobile phones and other transmitting PEDs operation may only be permitted under the provision that the intentional radio transmission inside the aircraft in it's configuration has been demonstrated to not adversely affect safe flight and landing. This shall be demonstrated according to state of the art electromagnetic compatibility (EMC) test procedures, which in particular

address the operational approval of radio transmitter standards inside the aircraft ."

Rationale:

The allowance of operating low power Bluetooth transmitters is too restrictive on the one hand, because only a particular brand and not a low power transmitter in general is described.

The paragraph has turned out being too vague on the other hand, because the brand Bluetooth includes some different radio transmitting standards for the time being, which are also different between each other with respect to their transmission power level.

As Bluetooth initially (2001 at the time when TGL 29 has been written) operates in the 2.4 to 2.5 GHz at RF transmission levels of 10 to 100 mW it may be better practice to name this frequency band and similar standards. Other wise there won't be a physical reason to allow Bluetooth but forbid WLAN 802.11 b/g/n with similar frequency and power characteristic

EUROCAE ED-130, chapter 4, defines the guidance for the operational approval of T-PED technologies new to the aircraft and provides the needed EMC demonstration guidance, that has already been used as a basis for the German "Luftfahrzeug-Elektronik-Betriebs-Verordnung – LuftEBV" , which bases on "Guidance for the Use of Portable Electronic Devices (PEDs) on Board Aircraft EUROCAE, ED-130, Issued December 2006)

comment *5068* comment by: *Airbus SAS*

This comment is related to AMC OPS.GEN.125, subsections 2. e., f. and h.:

- Airbus proposes to replace subsection 2.e. by the following text:

"e. The operator shall establish operational guidance for the crew regarding the operational approval of PED (transmitting and non-intentional transmitting PEDs), which is in line with applicable European aviation standards on the usage of portable electronic devices on board."

- Airbus proposes to delete subsections f. and h.

Rationale:

- For replacing subsection e.:

Subsection e. is precising the guidance, ED-130 chapter 3 and 4 contains the needed guidance.

- For deletion of subsection g. and h.:

Subsection f. is ineffective as PED are battery powered and cannot be switched off. In addition PED in-seat power supplies are no paths of RF-interference, as they are EMC-filtered and in addition coupling from PED takes places via radiation but not via wiring, which has been shown in RTCA and EUROCAE working groups.

Subsection h. has led to many reports but neither an incident could be assigned to a real interference situation caused by PED, nor can the same flight situation be repeated w/o PED, which is a mandatory prerequisite to identify whether or not a PED is the root cause of a particular observation. The better means is to follow the guidance on operational approval of PED given in

ED-130 chapter 4, and harden the aircraft accordingly.

comment *5072* comment by: *Airbus SAS*

Attachment #13

Airbus proposes to rewrite subsection 2.b. from "This restriction applies to..." on , to read as following:

This restriction applies to equipment carried on by the passenger and equipment loaned to the passenger by the aircraft operator *(see rationale a)*

For use during all phases of flight, equipment controlled by the aircraft operator or equipment loaned to the passenger by the aircraft operator shall be qualified against unintentional radio transmission according to a radio frequency emission category H defined in EUROCAE document ED-14 "Environmental Conditions and Test Procedures for Airborne Equipment" *(see rationale a)*

This paragraph does under the conditions within this paragraph not apply to a PED where the sole means of transmission is identified as a low power transmitting device limited to less than 10 to 100 mW effective isotropic radiated power inside the 2.4 to 2.5 GHz ISM band, e.g. early Bluetooth standards. Such radio standards may be operated only, if the aircraft electronic equipment is qualified to a level of 5 V/m and higher in the above mentioned frequency range. *(see rationale b,c,d)*

Rationales:

a)

Eaaaaa) EUROCAE ED-130 page 19, table 6, recommends :

For the table, see the attached .pdf-file

b) The allowance of operating low power Bluetooth transmitters is too restrictive on the one hand, because only a particular brand and not a low power transmitter in general is described.

c) The paragraph has turned out being too vague on the other hand, because the brandmark Bluetooth includes some different radio transmitting standards for the time being, which are also different between each other with respect to their transmission power level.

d) As Bluetooth initially (2001 at the time when TGL 29 has been written) operates in the 2.4 to 2.5 GHz at RF transmission levels of 10 to 100 mW it may be better practice to name this frequency band and similar standards. Other wise there won't be a physica reason to allow Bluetooth but forbid WLAN 802.11 b/g/n with similar frequency and power characteristic.

comment *5092* comment by: *Airbus SAS*

Airbus proposes to delete in AMC Subsection 4.c. the examples in brackets :

"c. ...

Flight and cabin crews should avoid using cell phones and other transmitting devices during critical pre-flight procedures. ~~(e.g. when loading route~~

~~information into navigation systems or when monitoring fuel loading).~~ Otherwise, flight crews and other persons involved in dispatching the aircraft will need to observe the same restrictions as passengers. "

Rationale:

There is no physical mechanism that requires not using RF energy while fueling the aircraft. Example: If this were the case radar observation would have needed to be switched of during a/c fueling. Physical Rationale: RF energy from Cell phones cannot ignite fuel.

comment *5098* comment by: *Airbus SAS*

AIRBUS proposes to add following AMC:

In the context of this AMC, PED are devices including passenger mobile phones, portables devices used by the crew, but excludes Electronic Flight Bags.

If an operator allows the use of PED's aboard its aircraft, procedures should be established and spelled out clearly to control their use during passenger-carrying operations. The procedures, when used in conjunction with an operator's program, should provide the following:

(1) (1) Methods to inform passengers of permissible times, conditions, and limitations when various PED's may be used. This may be accomplished through the departure briefing, passenger information cards, captain's announcement, and other methods deemed appropriate by the operator. The limitations, as a minimum, should state that use of all such devices (except certain inaccessible medical electronic devices, such as pacemakers) are prohibited during any phase of operation when their use could interfere with the communication or navigation equipment on board the aircraft or the ability of the flight crew to give necessary instructions in the event of an emergency.

(2) (2) Procedures to terminate the operation of PED's suspected of causing interference with aircraft systems.

(3) (3) Procedures for reporting instances of suspected and confirmed interferences by a PED.

(4) (4) Cockpit to cabin coordination and cockpit flight crew monitoring procedures.

(5) (5) Procedures for determining acceptability of those portable electronic components to be operated aboard its aircraft. The operator of the aircraft must make the determination of the effects of a particular PED on the navigation and communication systems of the aircraft on which it is to be operated. The operator determines that the operation of such types of PEDs that are exempted from the general prohibition will not interfere with the communication or navigation systems of the aircraft on which they are to be operated.

(6) (6) Prohibiting the operation of any PED's during the takeoff and landing phases of flight. It must be recognized that the potential for personal injury to passengers is a paramount consideration as well as the possibility of missing important safety announcements during these important phases of flight. This is in addition to lessening the possible interference that may arise during sterile cockpit operations (below 10,000 feet).

(7) (7) Prohibiting the operation of any PED's aboard aircraft, which are

classified as intentional radiators or transmitters, unless specific types of PEDs are explicitly authorized.

Rationale:

EASA and FAA have elaborated material, which should be applicable in case an operator is asking for approval of wireless or mobile telephone services onboard of commercial flight, and which should be useable during flight phases in addition to on-gate and taxing. This material is been used for the proposal of the additional AMC (AMC2) and GM (GM2) for OPS.GEN.125 Portable electronic devices.

Sources: EASA CRI SE-37 (AIRBUS single aisle programme) mainly for the proposed AMC material; FAA AC 91.21-1A for the GM.

comment *5218* comment by: *Virgin Atlantic Airways*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures....*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions.

Proposal:

Delete the reference to ground agents.

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **~~and ground agents~~** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *5537* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

*2. ...It is the responsibility of the operator to ensure that all aircraft crew **~~and ground agents~~** are trained to enforce the restrictions on this equipment*

consistent with these procedures. ...

comment *5538* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

Comment:

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *5899* comment by: *ERA*

European Regions Airline Association Comment

- 2. ...It is the responsibility of the operator to ensure that all aircraft crew **and ground agents** are trained to enforce the restrictions on this equipment consistent with these procedures. ...

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Therefore, delete the reference in paragraph 2 to ground agents as follows:

2. ...It is the responsibility of the operator to ensure that all aircraft crew ~~and ground agents~~ are trained to enforce the restrictions on this equipment consistent with these procedures. ...

- 2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

The ERA Directorate question the need for this requirement in the above paragraph, as the passengers are permitted to use their mobile phones until the aircraft doors are closed.

Therefore, delete para 2 c

comment *5923* comment by: *DGAC*

Most of the content of this GM should not be restricted to CAT but should be applicable to all aircraft

comment *6616* comment by: *KLM Cityhopper*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

2. ...It is the responsibility of the operator to ensure that all aircraft crew ~~***and ground agents***~~ *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

comment *6617* comment by: *KLM Cityhopper*

We question the need for this requirement as the passengers are permitted to use their mobile phones until the aircraft doors are closed

Proposal:

Delete para 2 c

comment *6622* comment by: *KLM Cityhopper*

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *6852* comment by: *Icelandair*

Relevant Text:

2. ...It is the responsibility of the operator to ensure that all aircraft crew ***and ground agents*** *are trained to enforce the restrictions on this equipment consistent with these procedures. ...*

Comment:

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Proposal:

Delete the reference to ground agents.

2. ...It is the responsibility of the operator to ensure that all aircraft crew ~~***and ground agents***~~ *are trained to enforce the restrictions on this equipment*

consistent with these procedures. ...

comment *7296* comment by: *ANE (Air Nostrum) OPS QM*

2. ...It is the responsibility of the operator to ensure that all aircraft **crew and ground agents are** trained to enforce the restrictions on this equipment consistent with these procedures. ...

The requirement for ground agents training has no added value and is not effective as it is allowed for the passengers to use their PEDs (mobile phones) until the aircraft doors are closed. Ground agents can therefore not enforce those restrictions

Therefore, delete the reference in paragraph 2 to ground agents as follows:

2. ...It is the responsibility of the operator to ensure that all aircraft **crew are** trained to enforce the restrictions on this equipment consistent with these procedures. ...

2. c. Necessary announcements are made both prior to and during boarding of the aircraft so that passengers may be reminded of the restrictions applicable to cell phones and other transmitting devices before fastening their seat belts;

We question the need for this requirement in the above paragraph, as the passengers are permitted to use their mobile phones until the aircraft doors are closed.

Therefore, delete para 2 c

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.125 Portable electronic devices p. 130-134

comment *3134* comment by: *AEA*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *3709* comment by: *AUSTRIAN Airlines*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *3979* ☐ comment by: *AIRBUS*

The text of the AMC OPS.GEN.125 and GM OPS.GEN.125 is derived from the JAA TGL 29. This TGL was linked to JAR-OPS 1, therefore applicable to Commercail Air Transportation only. As the PED requirements have been placed into the GEN subpart, it is understood that they become applicable to any kind of operation. The AMC and the GM nevertheless remain applicable to CAT only.

The EASA should clarify if it was the original intent to make these requirements applicable to any kind of operation. If this is not the case, the requirement should be shifted into the subpart CAT, as well as the corresponding AMC & GM.

comment *4367* comment by: *KLM*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *4740* comment by: *TAP Portugal*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *4777* comment by: *British Airways Flight Operations*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical, costly and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4976* comment by: *Deutsche Lufthansa AG*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *5046* comment by: *Airbus SAS*

Airbus proposes to replace subsection 3.a. by the following text:

"a. Mobile phones:

The full frequency range and effective isotropic power level range and the characteristic modulation (pulsed or continuous wave signal) assigned to a

mobile-phone technology shall be considered for the operational approval of a particular mobile phone technology (e.g. GSM or CDMA). This shall be covered by applying guidance, which considers the electromagnetic interference character of mobile phone standards in terms of modulation, cumulative effects, frequency and maximum transmittable power.

Modern aircraft and upcoming aircraft generations may be designed already being PED (transmitting and non-intentional transmitting PEDs) tolerant. The operator shall obtain a confirmation from the aircraft manufacturer whether an aircraft is approved T-PED tolerant. T-PED tolerance is given for particular mobile phone standards.

Mobile phones shall be allowed only if an operational approval and a T-PED tolerant aircraft design is available for the particular aircraft.

Without electromagnetic compatibility demonstration of the aircraft with the mobile phone standards, the operator should prevent the operation of mobile phones during any phase of flight."

Rationale:

The entire text as proposed by EASA is so far a statement on some technical features of mobile phones, which are technically not completely correct and give no guidance for the aircraft operator. It is more helpful to explain what to do and what to consider for the operational approval of a mobile phone. Otherwise w/o electromagnetic compatibility demonstration the operation of mobile phones should be prohibited. Aircraft programs under development, as A350, include already the feature of T-PED tolerance.

comment *5083* comment by: *Airbus SAS*

Airbus proposes to delete the below stroke-through parts in subsection 1. and add new wording (underlined) at the end:

GM OPS.GEN.125 Portable electronic devices

GENERAL - COMMERCIAL AIR TRANSPORT

1. General:

The use of PEDs on board aircraft by crew members and passengers presents a **well-known** source of electro-magnetic radiation with a **low** risk of adverse interference effects to aircraft systems. ~~Given that a civil aircraft flying at high altitude and high speed in busy airspace is in an obviously hazardous environment, and given that many of the onboard systems are safety devices intended to reduce the risks of that environment to tolerable levels, then anything that degrades the effectiveness of those systems will increase the exposure of the aircraft to the hazards. Consequently,~~ The aircraft operator needs to take measures that will ~~reduce~~ keep the risks ~~to~~ within acceptable limits. *(See rationale a))*

PEDs fall into two main categories; non-intentional transmitters and intentional transmitters. The first category includes, but is not limited to, computing equipment, cameras, radio receivers, audio and video reproducers, electronic games and toys, together with portable, non-transmitting devices intended to assist crew members in their duties. Intentional transmitters are transmitting devices such as remote control equipment (which may include some toys), two-way radios, cell phones and satellite phones. ~~In periods between transmissions, an intgentional transmitter may radiate interference as a non-~~

~~intentional transmitter.~~ In periods between transmissions and during transmission, an intentional transmitter radiates very low level of electromagnetic field strength as a non-intentional transmitter, which might cause low-level radiation. **.** *(See rationale b))*

Rationale:

a) Since the activity of EUROCAE WG 58 and of RTCA SC 202 took place the RF-environment due to PED and transmitting PED is well-known (See annex 4 of ED-130 and Appendix 3 of DO-294) and identified being low.

b) Of course intentional transmitters radiate unintentional signals during and between periods of intentional transmission, if they are switched on. It is a physically unavoidable feature of any electronic.

Wording has been precised in addition, PED do not transmit interference but electromagnetic fields.

comment *5086* comment by: *Airbus SAS*

Airbus proposes to delete the below stroke-through words in subsection 3. and modify the wording as shown in underlined characters:

3. Intentional transmitting PEDs:

PEDs that are intentional transmitters may induce interference directly into aircraft equipment, wiring or components with sufficient power to adversely affect the proper functioning of aircraft systems. ~~Many aircraft have non-metallic floors and internal doors that present no barrier to prevent the transmission from penetrating to the avionics equipment bays and to the flight deck.~~ Tests have shown that demonstrated ~~susceptibility~~ radio-frequency-immunity qualification levels of aircraft equipment, particularly equipment qualified to earlier standards can easily be exceeded, while the true susceptibility being higher than the qualification level is unknown.

Rationale:

A non-metallic floor made of carbon fiber is electrically conductive and in the PED (transmitting and non-intentional transmitting PEDs) transmission frequency range a shield as good as a metallic floor. Deletion of incorrect statements is recommended, the document becomes less attackable.

The wording is from a physical point of view not correct. The susceptibility levels are typically higher than the demonstrated RF-immunity levels. Example: A successful qualification against 5 V/m does not mean that equipment fails at 6 V/m. The 5V/m qualified equipment may even sustain 100 V/m. For economic reasons, susceptibility levels are not necessarily tested up to failure, but only up to specified and agreed values.

comment *5102* comment by: *Airbus SAS*

AIRBUS proposes to add following GM Guidance Material:

If an operator operates an aircraft providing mobile phone services on board following guidance shall be considered in conjunction with the AMC proposed above:

The briefing of the aircraft operator's policy on PED use to passengers,

identifying:

- that mobile phones can only be used onboard the aircraft equipped with a certificated and approved mobile telephone system;

- when mobile phones can be used, i.e. during the cruise phase of flight;

- when they must not be used, such as during safety briefings;

- when all PEDs must be switched off, including during takeoff and landing.

The ability to communicate the policy in a manner that all passengers understand and act on accordingly.

The method of announcing and ensuring that all mobile phones are turned off and remain off prior to commencement of the flight, until such time that safe use is to be permitted.

The method of announcing, and ensuring if necessary, that all mobile phones are turned off, and remain off, if the onboard telephone system is to be switched off in flight. If appropriate this must include the suitable action to take to prevent interference to the aircraft systems, should it becomes evident that mobile phones remain switched on in flight after the announcement to turn them all off has been made.

The operator shall present a strategy covering EMI assessment for such applicable aircraft providing an onboard telephone service and that have major cabin interior or avionic systems upgrades or changes. The strategy shall address the need for re-evaluation of previously approved installations when significant modifications are made to the aircraft avionic systems or to the cabin configuration. The objective is that the operator has to provide evidence, that the new installed aircraft electronic equipments, especially of communication and navigation avionics, are resistant against the electromagnetic threads (PED tolerance). Guidance relating to EMI assessment to achieve PED tolerance, guidance and test instructions for aircraft operator maintenance organization can be found within RTCA DO-307 and EUROCA ED-130.

The necessity to adapt to a change in aircraft occupants' behaviour, identified as follows:

The use of mobile phones onboard large aeroplanes is currently prohibited in flight. The pre-flight briefings provided remind occupants of this policy and of the potential interference to aircraft systems.

The introduction of the Onboard telephone system is intended to result in a change to this policy such that mobile phone use is now shown to be safe. A change in public perception is likely, and it is difficult to judge the change in behaviour that will result, but the continued reliance on existing procedures requesting mobile phones to be turned off before the beginning of the flight, due to the risk of interference to aircraft systems, if the system certification identifies that this is still potentially possible, could possibly be challenged by passengers travelling on an aircraft that permits the use of mobile phones in flight.

Any reliance on procedures to ensure that phones are turned off if the onboard telephone system is switched off during any phase of flight may need to be supplemented by a means of verifying the procedure's effectiveness, to ensure that all phones remain off if the safety analysis identifies that this may cause a safety effect. Supplemental equipment might be required to provide for this.

The aircraft crew's ability to differentiate between PEDs that are permitted and

those that must remain restricted or prohibited

The aircraft operator should be made aware of the increased risk of lithium battery fires that could arise through an expected increase in use of PEDs.

The control of mode of outgoing and incoming calls and text messages, including the ability to select between call and text mode as required by the aircraft.

Use of PEDs, especially mobile phones, has the potential to increase the number of disruptive passenger incidents. Appropriate information should be provided for inclusion within the aircraft crew conflict management training. As a minimum, this should include awareness of:

High speech volume levels that a user may resort to due to confusion caused by high ambient noise levels, with attention paid to speech interference levels and the ambient noise levels within the various parts of the aircraft cabin.

The inability of passengers to move away from a person making a telephone call while seated.

The means to permit only text messaging rather than voice calls, during certain times of the day. This should include the need to consider the different perceptions of passengers especially on long sectors where some passengers will wish to sleep at time when other passengers might be more interested in using their mobile phones.

The continued use of mobile phones during PA broadcasts has the potential to prevent the user, and persons seated nearby due to high speech volume levels, from hearing the broadcast message.

Use of PEDs, especially mobiles, has the potential to increase the number of disruptive passenger incidents. Appropriate information should be provided for inclusion within the aircraft crew conflict management training. As a minimum, this should include awareness of:

- Why the use of mobile phones may be permitted on some aircraft, but not others

- High speech volume levels.

- The inability of passengers to move away from a person making a telephone call.

- The effects of selected denial of service, such as permitting text messages only or preventing incoming calls during certain phases or times of flights.

- The effects of interrupted calls by Passenger Announcements broadcast or loss of the picocell (the onboard telephone transceiver station).

Due to the perceived increased risk of PED induced fires, particularly those with lithium batteries charged from in-seat power supplies, cabin crew awareness or training should be considered.

Licensing conditions that impose geographical and height operating restrictions for the telephone system should be stated in the operating manuals.

The applicant must furnish the appropriate documentation identifying the exact restrictions that apply, for inclusion within the operating manuals.

Procedures should be included in both the Operations Manual and the Cabin Crew Operations Manual, or their equivalent

Guidance relating to PED policy, guidance and training for aircraft operators can be found within RTCA DO-294A Appendix 8A.

Rationale:

EASA and FAA have elaborated material, which should be applicable in case an operator is asking for approval of wireless or mobile telephone services onboard of commercial flight, and which should be useable during flight phases in addition to on-gate and taxing. This material is been used for the proposal of the additional AMC (AMC2) and GM (GM2) for OPS.GEN.125 Portable electronic devices.

Sources: EASA CRI SE-37 (AIRBUS single aisle programme) mainly for the proposed AMC material; FAA AC 91.21-1A for the GM.

comment *5104* comment by: *Airbus SAS*

Airbus proposes to delete the complete Subsection 3.b. and replace it by the following text:

"b. Private Mobile Radios (PMRs):

The full frequency range and effective isotropic power level range and the characteristic modulation (pulsed or continuous wave signal) assigned to a PMR standard shall be considered for the operational approval of a particular PMR standard (e.g. PMR 446). This shall be covered by applying guidance, which considers the electromagnetic interference character of PMR standards in terms of modulation, cumulative effects, frequency and maximum transmittable power.

Modern aircraft and upcoming aircraft generations may be designed already being T-PED tolerant. The operator shall confirm with the aircraft manufacturer whether or not a particular aircraft is within the category of T-PED tolerant aircraft design and whether or not a particular PMR standard is covered prior allowing the use of PMRs.

PMRs shall be allowed only if an operational approval or a T-PED tolerant aircraft design that covers the PMR transmission characteristics or an equivalent demonstration of electromagnetic compatibility with PMR radio transmissions is given for the particular aircraft.

Without electromagnetic compatibility demonstration of the aircraft with the PMR standard, the operator should prevent the operation of PMRs."

Rationale:

It is more helpful to explain what to do and what to consider for the operational approval of a PMR standard. The necessary guidance is available within ED-130. Otherwise w/o electromagnetic compatibility demonstration one should prevent the operation of PMRs. Current aircraft programs under development include already the feature of T-PED tolerance.

comment *5105* comment by: *Airbus SAS*

Airbus proposes to delete the complete subsection 3.c. and replace it by the following text:

"c. Wireless Area Networks:

Wireless Local Area Network (WLAN) is an evolving technology offering wireless data communications, replacing Ethernet cables, for computing

information exchange with a range of about 100 metres. It is limited to typically 100mW effective isotropic radiated power. Most portable computers incorporate such a technology. In general interference is not expected, but older aircraft electronic may lack immunity qualification within the operational frequency band of WLANs, and an immunity demonstration is recommended for affected aircraft.

The full frequency range and effective isotropic power level range and the characteristic modulation (pulsed or continuous wave signal) assigned to a WLAN standard shall be considered for the operational approval of a particular PMR standard (e.g. PMR 446). This shall be covered by applying guidance, which considers the electromagnetic interference character of PMR standards in terms of modulation, cumulative effects, frequency and maximum transmittable power.

Modern aircraft and upcoming aircraft generations may be designed already being tolerant against WLAN operation. The operator shall confirm with the aircraft manufacturer whether or not a particular aircraft is within the category of T-PED tolerant aircraft design and whether or not a particular WLAN standard is covered prior allowing the use of WLAN technology.

Without electromagnetic compatibility demonstration of the aircraft with the WLAN standard, the operator should evaluate the interference risk prior allowing WLAN."

Rationale:

It is more helpful to explain what to do and what to consider for the operational approval of a wireless standard. The necessary guidance is available within ED-130. Otherwise w/o electromagnetic compatibility demonstration one should prevent the operation of wireless standards. Current aircraft programs under development include already the feature of T-PED tolerance.

For Bluetooth the same comments as previously, because the Bluetooth standard has changed since 2000.

comment *5107* comment by: *Airbus SAS*

Airbus proposes to delete subsection 6.a., renumber 6.b. to 6.a. and add a new subsection 6.b., to read as following:

"6. Recommendations:
~~a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorized transmissions from commonly used types of cell phone.~~

a. Aircraft operators should seek the assistance of airport operators for the display of safety notices at aircraft boarding points reminding passengers to switch off cell phones and other transmitting devices.

b. If the aircraft operator achieved operational approval for a particular cell phone or radio transmission standard, the operator shall provide guidance and crew training regarding the use of radio transmitters on the flights and aircraft affected. "

Rationale:

PED detectors have been identified not being effective within both committees dealing with PEDs (RTCA SC202 and EUROCAE WG 58). The rationale is that on

all aircraft PED including cell phones may be switched on any time. In critical phases of flight when PED may be asked for to be switched off, nobody may physically check this, or the PED is stowed away in cargo or elsewhere. From an operational point of view and considering that on a daily basis many thousand PEDs are switched on during flight, The impact and risk generated by a warning indication without the possibility to switch off the root cause, e.g. a phone in the cargo hold, generates increased crew work load, but does not mitigate anything, while the interference risk is low.

Instead of detecting means, which are insufficient for their intended purpose, the operator shall establish specific crew procedures and trainings.

comment *5108* comment by: *Airbus SAS*

Airbus proposes to modify the last sentence of Subsection 5.b. as shown below:

" However, in the confines of a metallic aircraft fuselage, complex propagation paths arise due to reflections from the metallic structure which can lead to signal cancellation or re-enforcement at different locations in the aircraft. Although the free space equation does not give reliable results under these conditions, tests have shown that the field strength of the interfering cell phone transmission, at maximum power, will exceed by a significant margin the levels used in susceptibility tests for avionic equipment qualified to earlier standards. Similarly, these tests have shown that interference levels would vary by relatively small changes of location of a cell phone and that persons obstructing the transmission path reduce the ~~interference~~ transferred field strength levels. "

Rationale:

Consider accuracy of wording: Interference is nothing which is radiated or what can be reduced, but an observed malfunction of an illuminated device during it's exposition to radio frequency energy or transferred field strengths.

comment *5539* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *5902* comment by: *ERA*

European Regions Airline Association Comment

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Such a recommendation as above would be impractical and is not essential for safety. It should therefore be deleted

comment *6210* comment by: *Virgin Atlantic Airways*

Relevant Text:

6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Comment:

Such a recommendation would be impractical and is not essential for safety. It should therefore be deleted

Proposal:

Delete paragraph 6 from GM OPS.GEN.125

comment *7298* comment by: *ANE (Air Nostrum) OPS QM*

Para 6. Recommendations:

a. Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

Such a recommendation as above would be impractical and is not essential for safety.

Para 6.a should therefore be deleted

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.135.A Taxiing of aeroplanes p. 134

comment *650* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.135.A: add the following proposed text:

QUALIFIED PERSONNEL

A qualified person is either a flight crew member or a person designated by the operator that is:

1. competent to taxi;

2. qualified to use the radio telephone if radio communications are required;

3. has received instruction from a competent person on operational procedures, aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures; ~~**and**~~

4. able to conform to the operational standards required for safe aircraft movement at the aerodrome~~.~~ **; and**

5. Taxi in low visibility conditions will not be permitted unless, at least, a flight crew member is at the controls.

Justification:

Taxiing an aeroplane in low visibility conditions requires not only specific training, but also the necessary situational awareness. Only experienced flight crew members have this kind of situational awareness.

comment *6910* comment by: *Flybe*

This seems to adda requirement for all personnel qualified to taxi an aircraft to possess a radio telephone licence. Engineers may be qualified and trained to taxi an aircraft but not be in possession of an R/T licence.

It is proposed that training in radio procedures be acceptable training in place of an R/T licence.

"qualified through training or possession of a radio licence to use the radio telephone if radio communications are required "

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.140.H Rotor engagement p. 134

comment *961* comment by: *Fjallflygarna AB*

There are situations when a pilot has to leave the controls with the rotor spinning for safety reasons or for practical reasons. With this cognizance we believe it is better to allow pilots to leave the aircrafts while the rotor is spinning provided that the operator in the Operations Manual has stated the special conditions that should be met and provided that it is not inappropriate because of the construction of the helicopter. It is better that this is done legally and under stated conditions than illegal and out of control.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.145 Use of aerodromes/operating sites p. 134

comment *8* comment by: *KLM*

AMC1 OPS.GEN.145 Use of aerodromes/operating sites point i

says site suitability with reference etc.

This had better be changed into: site usability with reference etc.

The word suitability is not to be used because of the connection by many with weather requirements.

comment *651* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.GEN.145(1): change as follows:

1. The ~~**pilot-in-command should have available from**~~ **operator should provide the pilot-in-command** a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:

Justification:

It is the operator's responsibility to provide the pilot-in-command with suitable documentation for the safe conduct of the flight.

comment *2697* comment by: *AOPA-Sweden*

It is impossible to predict a take-off flight path, you will never know when the critical engine fails, See definition of take-off flight path, OPS.GEN.010 (75)

comment *3136* comment by: *AEA*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *3711* comment by: *AUSTRIAN Airlines*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *4368* comment by: *KLM*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *4741* comment by: *TAP Portugal*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *4781* comment by: *British Airways Flight Operations*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This paragraph is only applicable to helicopters, not to aeroplane operations. In the case of aeroplane operations, the AIP is used. Requirements for helicopters and aeroplanes should not be published in the same document. THe NPA should be completely reviewed.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4978* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *5133* comment by: *UK CAA*

Page No: 134

Paragraph No:

AMC1 OPS.GEN.145 2

Comment:

Balloon landing sites should be pre-surveyed from the ground, possibly by the retrieve crew.

Justification:

It is not possible for the pilot-in-command to pre-survey landing sites from the air.

Proposed Text (if applicable):

2. For sites which are not pre-surveyed, the pilot in command should make a judgement on the suitability of a site, from the air; ***or, in the case of balloons, a judgement on the suitability of a site from the ground.***

comment *5266* comment by: *Graham HALLETT*

AMC1 OPS.GEN.145, 2.

A typo, I think.

This should say '…OR, in the case of balloons….', rather than AND…., using the same phraseology as AMC2 OPS.GEN.145, 2.

comment *5540* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *5925* comment by: *DGAC*

At the end of paragraph 2 of this AMC the reference to the AMC is erroneous as there is no AMC OPS.GEN.145.

Therefore the text should be amended as follows :

"2. For sites […] of a site. At least AMC**1** OPS.GEN.145 […]"

comment *6853* comment by: *Icelandair*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *7282* comment by: *AIR FRANCE*

Relevant Text:

Use of Operating Sites

1. *The pilot-in-command should have available from a pre-survey or other publication, for each operating site to be used, diagrams or ground and aerial photographs, depiction (pictorial) and description of:*

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used.

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations.

comment *7606* comment by: *AOPA UK*

(1)(c) It is impossible to predict a take-off flight path, you will never know when the critical engine fails, See definition of take-off flight path, OPS.GEN.010 (75)

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC2 OPS.GEN.145 Use of aerodromes/operating sites p. 135

comment *85* comment by: *Air Southwest*

AMC2 OPS.GEN.145 This doesn't read properly. 'When defining adequate operating sites ..... an operator should take into account that an adequate site is a site which the operator considers to be satisfactory!' The implication is that the operator has already determined that the site is satisfactory. Sub-paragraph (a) is a definition of an adequate site not criterion by which an adequate site is determined. Paragraph 1 needs to be rewritten.

comment *1834* comment by: *claire.amos*

Formalises requirement to survey.

Night restriction.

comment *2336* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Proposal:

Delete "aerodromes" from the title as it is inconsistent with the text that

follows which refers to OPERATING SITES.

comment *3137* comment by: *AEA*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *3712* comment by: *AUSTRIAN Airlines*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *4369* comment by: *KLM*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *4743* comment by: *TAP Portugal*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *4979* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *5134* comment by: *UK CAA*

Page No: 135

Paragraph No:

AMC2 OPS.GEN.145

Comment:

Balloon landing sites should be pre-surveyed from the ground, possibly by the retrieve crew.

Justification:

It is not possible for the pilot to pre-survey landing sites from the air.

Proposed Text (if applicable):

2. For sites which are not pre-surveyed, the operator should have in place a procedure which enables the pilot to make a judgement on the suitability of a site, from the air; ***or, in the case of balloons, a judgement on the suitability of a site from the ground.***

comment *5541* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *6854* comment by: *Icelandair*

Relevant Text:

Use of Operating Sites – Commercial Air Transporrt

Comment:

This should not apply to any aeroplane operations. In the case of aeroplane operations, the AIP is used (there is no pre-survey conducted for aeroplane operations)

Proposal:

Clarification needed to make clear that it does not apply to commercial aeroplane operations

comment *6980* comment by: *IACA International Air Carrier Association*

Delete "aerodromes" from title as it is inconsistent with the text that follows which refers to OPERATING SITES.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC3 OPS.GEN.145.H Use of aerodromes/operating sites p. 135-139

comment *2518* comment by: *Royal Aeronautical Society*

Paragraph f ii refers to a 'crash box' but does not describe its purpose. **It is suggested that text be added to describe briefly the purpose for having or requiring a crash box.**

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC4 OPS.GEN.145 Use of aerodromes/operating sites p. 139

comment *768* comment by: *EHOC*

General

The intention of the AMC is not clear: as was previously mentioned in a comment to OPS.GEN.150(d), to 'take account of' might mean that elements of AMC2 OPS.GEN.145 should be considered; this is what a general reading of the text indicates. If that is not the case and the intent was to 'take full account of' the references AMC; perhaps that might have been better expressed by extending the scope of AMC2 to Commercial Operations (and not just to Commercial Air Transport).

This is an interesting case because it has already been noted that in OPS.GEN.150(d) the original text 'take full account of' had been shortened to 'take account of'. In fact it confirms the belief that 'take account of' is meant as 'you have to consider the elements of the AMC but they are not binding'.

It is thought that, in this case, if AMC2 is binding on Aerial Work the scope has to be amended; if that is not the case then another form of words should be used.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.145 Use of aerodromes/operating sites p. 139

comment *2698* comment by: *AOPA-Sweden*

Another point where the author only thinks about major airline and airports. The majority of all movements are done from uncontrolled fields.

comment *3139* comment by: *AEA*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *3714* comment by: *AUSTRIAN Airlines*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *4370* comment by: *KLM*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *4745* comment by: *TAP Portugal*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *4980* comment by: *Deutsche Lufthansa AG*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *5219* comment by: *Virgin Atlantic Airways*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety.

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *5542* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS and should be in the hard-law rather than guidance material. The downgrading of this requirement to guidance material could jeopardize flight safety

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *5926* comment by: *DGAC*

If the text of this GM is the definition of an adequate aerodrome see EU-OPS 1.192 (a) and replace by :

"An aerodrome which the operator considers to be satisfactory, taking account of the applicable performance requirements and runway characteristics; at the expected time of use, the aerodrome will be available and equipped with necessary ancillary services such as ATS, sufficient lighting, communications, weather reporting, navaids and emergency services.

Is a GM really the proper place to give a definition ?

Available : is an aerodrome closed unless emergency compliant with this description ?

Where can we find a definition for ATS service ? It should be in a « definition » paragraph

comment *6660* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

The question of emergency services is only adressed in this GM for the whole NPA 2009-02 B. This is firstly not acceptable to not speak more about it and non logic to enclose it in a GM. GMs cannot contain essential safety requirements as important as emergency services.

comment *7283* comment by: *AIR FRANCE*

Relevant Text:

GM1 OPS.GEN.145 Use of aerodromes/operating sites (Adequate aerodromes)

Comment:

The definition of adequate aerodrome should be realigned with EU-OPS 192 as it is a safety issue.

Proposal:

Realign with EU-OPS and add the definition to the hard law material

comment *7607* comment by: *AOPA UK*

Another point where the author only thinks about major airline and airports. The majority of all movements are done from unlicensed aiIiields.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM2 OPS.GEN.145 Use of aerodromes/operating sites p. 139-140

comment *3142* comment by: *AEA*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *3715* comment by: *AUSTRIAN Airlines*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *4372* comment by: *KLM*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *4746* comment by: *TAP Portugal*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *4981* comment by: *Deutsche Lufthansa AG*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *5543* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

3. commercially available aeronautical publications (e.g. Jeppesen, AERAD, Fugawi); and

Comment:

EASA should not list examples of commercial publications in particular since not all available publications are mentioned.

Proposal:

Delete the examples of commercial available publications

comment *5927* comment by: *DGAC*

Replace the reference to "AMC OPS.GEN.145" with a reference to "AMC**1** OPS.GEN.145"

Amend item 1 as follows :

« ~~(Military)~~ Aeronautical Information Publication**. Civil AIP if available can be used also**;"

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM3 OPS.GEN.145 Use of aerodromes/operating sites p. 140

comment *3144* comment by: *AEA*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *3716* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *4373* comment by: *KLM*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *4747* comment by: *TAP Portugal*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *4783* comment by: *British Airways Flight Operations*

Comment:

It is not clear why this paragraph makes reference to ICAO Annex 14. Annex 14 is not intended (by its own preamble) to limit or regulate the operation of aeroplanes. Therefore, EASA should be very careful when making reference to it in a document containing operational rule material.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4982* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *5223* comment by: *Virgin Atlantic Airways*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *5544* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.145 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.145

comment *5929* comment by: *DGAC*

ICAO annex 14 is not applicable for an air operator but for aerodromes operators.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.147(c)(1) Visual Flight Rules (VFR) Operating minima p. 140

comment *86* comment by: *Air Southwest*

This paragraph is applicable to helicopters only (Ref OPS.GEN.147(c)(1)). To maintain the convention should it not have an 'H' somewhere in the paragraph number?

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 140

comment *87* comment by: *Air Southwest*

The use of "may be" negatively also implies 'may not be'. As a considerable number of operators use Aerad and Jeppesen publications for AOM it is requested that this paragraph be more explicit in stating that the use of such publications **is** acceptable means of compliance.

comment *1833* comment by: *claire.amos*

Highly acceptable

comment *2052* comment by: *Ulrich Baum*

Please clarify. Does this mean looking in the Jeppesen approach plate is enough?

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC2 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 140

comment *485* comment by: *EHOC*

General

It is not clear that sections 2 and 3 of AMC2 OPS.GEN.150 can stand without a requirement. It might be better if there was an additional element in OPS.GEN.150 which would provide the objective on which this method of compliance is hung:

"(b) The minima referred to OPS.GEN.150(a) shall take account of any increment:

(1) imposed by the competent authority; and/or

(2) applied to non-precision minima when a stabilised approach is not flown."

The text from items 2 and 3 of the AMC could then be put into a separate AMC which is attached to OPS.GEN.150(b)(2).

Paragraph 3.

The text of Paragraph 3 contains the following:

"When calculating the minima in accordance with **AMC4** OPS.GEN.150, the applicable minimum Runway Visual Range (RVR) should be increased by..."

It is AMC6 which contains the applicable RVR/CMV.

comment *1832* comment by: *claire.amos*

Investigate implications e.g. ALC runway 28 etc.

comment *3903* comment by: *AIRBUS*

Some confusion is being created by some of the AMCs linked to the paragraph OPS.GEN.150. The subject addressed in the AMCs should be part of the Section IV, Low Visibility Operations of the Subpart OPS.SPA.

comment *4156* comment by: *IAOPA Europe*

It is agreed ha a Continuous Descend Final Approch (CDFA) technique is recommended. However, for non-commercial operation it is not acceptable that RVR must be increased by 2-400 metres in case the CDFA technique is not used.

The CDFA approach requires specialised equipment not normally available in GA aircaft and IAOPA is not aware of any safety concerns with the currently aplied visibility requirements for such operations.

comment *5753* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

Rules for Low Visibility Operations should not be included as AMCs.

Proposal:

Move rules for LVO from AMCs to Implementation Regulations.

comment *5930* comment by: *DGAC*

Point 3 specifies that for approaches not flown using CDFA, RVR should be increased by 200m or 400m. In fact it can be more than that. Indeed when the CDFA technique is not used, the third line of the Table 3 of AMC6 OPS.GEN.150. has to be used to compute the RVR. By doing this, the Max cut off (1500m cat A and B, 2400 cat C and D) is not applicable and RVR can become greater. Furthermore the add-on 200m/400m is already specified in this table.

Proposal : Write instead:

"When calculating the minima in accordance with AMC 6 OPS GEN 150, RVR could become far higher for approach not flying the CDFA technique…."

comment *6906* comment by: *PPL/IR Europe*

Our comments on the AMC to OPS.GEN150 apply in general because we do not beleive OPS.GEN150 is suitable for non-commercial operations

The application of these AMC (i.e. using them as default minima) to non-commercial operations exceeds ICAO Annex 6 Part II requirements and

therefore in the absence of an explicit safety case, violates the provisions of Art 8(6) of the Basic Regulation. See General remarks.

Landing minima may be covered by state requirements, and the application of restrictive take-off minima are disproportionate to the risk involved in other aspects of non-commercial operations of non-complex aircraft.

Para 3: The application of Continuous Descent Final Approach (CDFA) technique to non-commercial operations of non-complex aircraft is, in particular, unjustified by a safety case. While CDFA makes good sense for commercial operations of transport category aircraft, considerations of equipment, crew composition and aircraft performance do not make CDFA mandatory for light aircraft operations to smaller airports

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC3 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 140-144

comment *88* comment by: *Air Southwest*

As with Appendix 1 to JAR-OPS 1.430(a)(2) in paragraph AMC3 OPS.GEN.150 2.a. the term 'discontinued take-off' is used. Would now be a suitable opportunity to use the more generally accepted term 'rejected take-off' and its accepted abbreviation 'RTO' as defined in SKYbrary (Eurocontrol and ICAO sponsored).

comment *312* comment by: *CAA-NL*

Attachment #14

Sent the attached file as EASA RPF december 2006.

comment *486* comment by: *EHOC*

Paragraph 1.a.

The meaning of the original has not been preserved; it was originally intended to account for some departure procedures where penetration into the OFS was permitted or when performance was insufficient to permit OEI departures ; it might be clearer if the text of the last sentence were modified to say:

~~Depending on the obstacle situation on departure and/or forced landing~~, **Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing**, additional conditions (e.g. ceiling) should be specified;

comment *592* comment by: *ECA - European Cockpit Association*

Comment on AMC3 OPS.GEN.150: This complete part should be an IR, not as

AMC!

Justification:

Take-off minima is crucial information that should be standardised as implementing rule. Operational safety concerns.

comment *596* comment by: *ECA - European Cockpit Association*

Comment on AMC3 OPS.GEN.150 table 1a: change as follows:

Runway edge**/FATO** lighting **and/or** centreline~~ **lighting**~~ **marking**

Justification:

Ref. EU-OPS Appendix 1 to OPS 1.430 Table 1. The text "centreline lighting" makes no sense since there would be 2 different sets of rules in case of runway edge lighting and centreline lighting.

comment *597* comment by: *ECA - European Cockpit Association*

Comment on AMC3 OPS.GEN.150(3)(a)(ii): change as follows:

ii. For multi-engined aeroplanes whose performance is such that they cannot comply with the performance conditions in 3.a.i., in the event of a critical power unit failure, there may be a need to re-land immediately and to see and avoid obstacles in the take-off area. Such aeroplanes may be operated to the following take-off minima provided they are able to comply with the applicable obstacle clearance criteria, assuming engine failure at the height specified. The take-off minima specified by an operator must be based upon the height from which the One-Engine-Inoperative (OEI) net take-off flight path can be constructed. The RVR minima used may not be lower than either of the values given in Table 1a or 2a~~**, unless an approval in accordance with OPS.SPA.001.LVO is obtained**~~;

Justification:

Tables already take into account LVTO approval or not.

comment *599* comment by: *ECA - European Cockpit Association*

Comment on AMC3 OPS.GEN.150(3)(a)(iv): This part should be under OPS.SPA.001.LVO and not under OPS.GEN.150.

comment *892* comment by: *KLM*

Table 2a of AMC3 ops.gen.150

note2:

iv operators approved in accordance with ...etc.

This should not be under note 2 but a next item of the AMC3. This is the non-standard possibility and is a seperate issue.

Therefore it has to be taken out of note 2 and made point 4.

suitable is no longer used and shall be replaced.

comment *1578* comment by: *ECA - European Cockpit Association*

Comment: change note 2 as follows:

Note 2: The reported RVR/visibility value representative of the initial part of the take-off run **and any other consecutive sections that are fully visible from the start of the take-off roll position** can be replaced by pilot assessment.

Justification:

This can be limiting when the whole of the runway is visible. In particular, in conditions where there is shallow fog over grass areas surrounding transmissometers, but the runway is totally clear and visible. The suggested wording allows for take-off where the visibility is such that consecutive sections of runway are visible from the f light deck on line up

comment *1579* comment by: *ECA - European Cockpit Association*

Comment on paragraph A.5. under table 2.a of AMC3 to OPS.GEN.150: change as follows :

5. The required RVR value has been achieved for all of the relevant RVR reporting points **as specified by the operator for the runway and/or runway conditions**.

Justification:

Vague and needs clarificatios to what is relevant for crews to refer to

comment *2799* comment by: *M Wilson-NetJets*

Original text:

See NPA text

Suggested new text:

No suggested text

Comment/suggestion:

Note 2 to Table 1a states that the RVR of the "initial part of the take-off" can be replaced by pilot assessment. The initial part of the take-off is not exactly defined. The lack of definition can lead to significant differences between operators and subsequent differences in levels of safety.

comment *3482* comment by: *UK CAA*

Page No: 141

Paragraph No:

AMC3 OPS.GEN.150 1(a)

Comment:

The meaning of the text from EU-OPS/JAR-OPS has not been preserved; it was originally intended to account for some departure procedures where penetration into the obstacle free sector was permitted or when performance was insufficient to permit one engine inoperative departures.

Justification:

Clarity of purpose.

Proposed Text (if applicable):

~~Depending on the obstacle situation on departure and/or forced landing~~, ***Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing***, additional conditions (e.g. ceiling) should be specified;

comment *3483* comment by: *UK CAA*

Page No: 143

Paragraph No:

AMC3 OPS.GEN.150 3. iv. A. 3

Comment:

Suggest adoption of "FSTD" – with an appropriate glossary - instead of "flight simulator" throughout.

Justification:

Consistency of terminology

comment *3903* ☐ comment by: *AIRBUS*

Some confusion is being created by some of the AMCs linked to the paragraph OPS.GEN.150. The subject addressed in the AMCs should be part of the Section IV, Low Visibility Operations of the Subpart OPS.SPA.

comment *4311* comment by: *Civil Aviation Authority of Norway*

Comment:

The meaning of the text from EU-OPS/JAR-OPS has not been preserved; it was originally intended to account for some departure procedures where penetration into the OFS was permitted or when performance was insufficient to permit OEI departures.

Justification:

Clarity of purpose.

Proposed Text

(if applicable):

~~Depending on the obstacle situation on departure and/or forced landing~~, ***Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing***, additional conditions (e.g. ceiling) should be specified;

comment *4705* comment by: *IAOPA Europe*

The take/off minimas for non-commercial operations are too restrictive and not aligned with the current practice in Europe.

For non-commercial operations it is suggested to allow operations in accordance with LVTO minimas but without requiring the associated LVTO approval.

This would preserve the existing minimas typically applied in Europe today. There seems to be no indication case that the existing regulation for non-commercial operations is not sufficiently safe.

comment *5754* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

Note 2: The reported RVR/visibility value representative of the initial part of the take–off run can be replaced by pilot assessment.

Note 3: The required RVR value should be achieved for all of the relevant RVR reporting points with the exception given in Note 2 of Table 1a.

Comment:

The text will be more clear and easier to read with the proposed change.

Proposal (including ***new text***):

Note 2: The ~~reported~~ ***required*** RVR~~/visibility~~ value ~~representative of the initial part of the take–off run~~ ***should be achieved for all of the relevant RVR reporting points with the exception that the reported RVR/visibility value representative of the initial part of the take–off run*** can be replaced by pilot assessment.

Note 3: ~~The required RVR value should be achieved for all of the relevant RVR reporting points with the exception given in Note 2 of Table 1a.~~

comment *5755* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

iv. A. 5. The required RVR value has been achieved for all of the relevant RVR reporting points.

Comment:

The possibility for pilot assessment of the RVR/visibility value representative of

the initial part of the take–off run will be clarified by the proposed change.

Proposal (including ***new text***):

iv. A. 5. The required RVR value has been achieved for all of the relevant RVR reporting points ***with the exception that the reported RVR/visibility value representative of the initial part of the take–off run can be replaced by pilot assessment***.

comment *6071* comment by: *Irish Aviation Authority*

Comment:

RVR - There is a potential for confusion over the applicability of the text contained in Note 1 due to the layout. Suggest that the note be contained in a single cell at the foot of the table.

Justification:

Clarification of written text.

comment *6424* comment by: *Konrad Polreich*

AMC3 OPS.GEN.150 (1)(b)

AMC3 OPS.GEN.150 (1)(b) requires, that the PIC should not commence take-off unless the weather conditions at the aerodrome of departure are equal to or better than applicable minima for landing at that aerodrome unless a suitable take-off alternate aerodrome is available.

OPS.GEN.155 does not require a take-off alternate for helicopters, which are not involved in CAT (even if not being able to land at the aerodrome of departure). The AMC3 OPS.GEN.150 (1)(b), as it is written, does require it for all operations, if due to weather necessary. This is the only AMC dealing with take-off minima. Does it mean it is binding for non CAT helicopters? The result for non-commercial ops with helicopter would be, that an AMC does require a take-off alternate, whereas the IR doesn't, which might not be correct.

Suggestion:

Bring both texts in line to either demand an take-off alternate for all operations (if necessary due to weather) or change AMC3 OPS.GEN.150 (1)(b) that this paragraph is meant for all aeroplanes and helicopter involved in CAT only.

comment *6427* comment by: *Konrad Polreich*

AMC3 OPS.GEN.150 (1)(b)

Alternate aerodrome:

Helicopters should be able to use operating sites as alternates, if weather conditions permit. This might be the safest course of action under certain conditions (i.e. if the alternate is also marginal and distant located whereas an operating site might be available close to the aerodrome).

Change AMC3 OPS.GEN.150 (1)(b) to read:

…….unless a suitable take-off alternate aerodrome/operating site is available.

Or:

Insert an new AMC or GM which states, that for helicopters an operating site might be used as take-off and destination alternate aerodrome, if weather conditions permit (= VMC).

comment *6428* comment by: *Konrad Polreich*

AMC3 OPS.GEN.150 (3)(b)

Acc. AMC3 OPS.GEN.150 (3)(a)(iv) there is the possibility to reduce the take-off minima to below 150 m for airplanes, whereas it is not for helicopters. This is not adequate, since this procedures can also be flown in helicopters (MPH) with a high safety level, when proper procedures are established and trained in simulators.

Suggestion:

Insert the same options for helicopters as there are for airplanes, to reduce the take-off minima below 150 m (under the same provisions, as training, etc.).

comment *6991* comment by: *IACA International Air Carrier Association*

top page 143: Avoid starting new page without introductory wording. Suggest relocating tables.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC4 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 144-145

comment *89* comment by: *Air Southwest*

Table 1 of AMC4 OPS.GEN.150

EU-OPS Appendix 1 to OPS 1.430 table 3 (dated 20-9-2008) defines the system minima for non-precision aids. This gives system minima for NDB for aeroplanes as 300ft, whereas Table 1 of AMC4 OPS.GEN.150 quotes 350ft. Also, EU-OPS Appendix 1 to OPS 1.430 table 3 quotes 300ft for VDF for aeroplanes, whereas Table 1 of AMC4 OPS.GEN.150 quotes 350ft.

Why are the figures quoted Table 1 of AMC4 OPS.GEN.150 different to EU-OPS Appendix 1 to OPS 1.430 table 3?

comment *600* comment by: *ECA - European Cockpit Association*

Comment on AMC4 OPS.GEN.150: this complete part should be an IR, not as AMC.

Justification:

All requirements of MDH/DH/RVR should be published as Implementing Rules.

comment 601 comment by: *ECA - European Cockpit Association*

Comment on AMC4 OPS.GEN.150: Required visual reference for NPA.

Justification:

The required visual reference for non precision approaches is missing in the NPA.

Ref. EU-OPS Appendix 1 to OPS 1.430 (b)(3)

comment 602 comment by: *ECA - European Cockpit Association*

Comment on AMC4 OPS.GEN.150: Required visual reference for Cat1

Justification:

The required visual reference for Category 1 precision approaches is missing in the NPA.

Ref. EU-OPS Appendix 1 to OPS 1.430 (c)(3).

comment 603 comment by: *ECA - European Cockpit Association*

Comment on AMC4 OPS.GEN.150: There should be different texts for non precision approach and precision approach cat1 to improve readability.

comment 722 comment by: *EHOC*

Table 1 of AMC4 OPS.GEN.150

Table 1 - the system minima vs facilities - has been amended from that contained in EU-OPS and JAR-OPS to include a row for RNAV/LNAV; the aeroplane cell contains a lowest MDH of 300ft; the helicopter cell contains n/a.

ICAO Doc 8168 contains the procedure description for RNAV procedures applicable to helicopters in Part IV of Volume II; in 1.1 - General - is contained the wording:

1.1.1 The general criteria in Part I, Section 4, as well as Part III, Section 2, Chapter 2, as amplified or modified by the criteria in this chapter apply to area navigation (RNAV) approach procedures for basic GNSS receivers. These specified instrument procedures may be developed for the use of helicopters. It is intended that these specified procedures be designed using the same conventional techniques and practices for aeroplane categories as those explained elsewhere in this document.

The section then goes on to describe the provision of such procedures for helicopters.

A number of States have already started to develop RNAV procedures for helicopters and, in some States, these are already in use. It is not clear why, in

the light of the contents of Doc 8168, when the table was amended it was not deemed appropriate to apply the limit for aeroplanes also to helicopters.

It is recommended that n/a be replaced by 300ft.

comment *799* comment by: *French SAMU using helicopters for medical transport*

Why is there no value in the last column helicopter in the RNAV/LNAV ? 300 feet should be inserted instead of N/A

ICAO has already developed procedures for helicopters

And they are used in the US, Australia and in development in several EU member states such as France and Switzerland.

"Circling" is not anymore in use by ICAO for helicopters during the visual phase [PANS-OPS ICAO doc 8168 paragraph "**7.1.2 Applicability to helicopters**

Circling procedures are not applicable to helicopters. The helicopter pilot has to conduct a visual manoeuvre in adequate meteorological conditions to see and avoid obstacles in the vicinity of the final approach and take-off area (FATO) in the case of Category H procedures, or a suitable landing area in the case of Category A or point-in-space procedures. However, the pilot must be alert to any operational notes regarding ATS requirements while manoeuvring to land. »]

Delete "circling" after ONSHORE and replace it by" visual maneuver

1 delete "for circling is the term in use to describe"

Insert "is the part " after The visual phase

2 delete "circling"

3 delete "circling"

comment *1002* comment by: *EHOC*

General

See also the comment on OPS.GEN.200(c).

See also the comment on the absence of RNAV/LNAV for helicopters.

This AMC does not appear to include a paragraph with the required *visual references* - this is the correct place-holder for such text, not OPS.GEN.200 (which specifically addresses the approach ban); the table includes RNAV/LNAV which might, when applied to helicopters, not result in a termination at a runway. The absence of a *visual reference* paragraph, prevents a flexible approach to procedures which might not fit into the fixed wing standard.

comment *1831* comment by: *claire.amos*

Point 3:- The DH for APV approach is not reflected in Point 4 or in Table 1 of AMC4 OPS.GEN.150.

comment *4666* comment by: *Eurocontrol CND*

In 3. The definition of APV is not good even though we are aware that it comes from ICAO. It says that APV does not meet the requirements for precision approach and landing and that the DH cannot be lower than 250ft. In the US APV procedures using WAAS are already flown down to 200ft DH with equivalent requirements to ILS Cat I. In Europe we intend to do the same using EGNOS once some experience has been gained. The 250ft limitation is too restrictive for this document. Approach classification is currently under review in ICAO.

I would propose that you do not say what APV is not and leave the door open for APV down to 200 ft as follows:

An Approach Procedure with Vertical guidance (APV) is an instrument approach which uses lateral and vertical guidance using SBAS or Barometric VNAV with a DH not lower than 200 ft and an RVR of not less than 550 m for aeroplanes and 500 m for helicopters.

comment *5931* comment by: *DGAC*

In this AMC, APV are limited to a DH 250ft.

However LPV (APV SBAS) can be published with a DH 200ft. FAA has published several approach procedure with DH 200'. EASA is issuing an AMC (AMC 20-28) which gives the airworthiness and operational criteria for LPV including LPV 200.

Proposal : LPV 200 should then be introduced in this AMC4. Otherwise European operator would not be able to fly LPV 200

comment *6325* comment by: *Eurocontrol CND*

In Table 1: RNAV/LNAV approaches can be designed to a 250ft OCH there is no obvious reason to add is 50ft and require 300ft minimum. There is no reason for the minimum DH/MDH to be higher for an LNAV/VNAV then a VOR/DME when the OCH is 250ft.

Please amend LNAV/VNAV minima to 250ft.

comment *6430* comment by: *Konrad Polreich*

AMC4 OPS.GEN.150

Why does it state n/a for RNAV/LNAV and NDB/DME facilities (approaches) in the coloumn 'Helicopters', since also helicopters should be able to fly approaches using these facilities.

Suggestion:

RNAV/LNAV and NDB/DME: Insert the same values as for airplanes.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC5 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 145-146

comment *605* comment by: *ECA - European Cockpit Association*

Comment on AMC5 OPS.GEN.150:

The limit for the vertical profile is changed to 4.5 degrees for Cat A & B aeroplanes and 3.77 degrees for Cat C & D aeroplanes instead of 4 degrees in current EU-OPS

The limit of 3.77 degrees will have a clear impact on operations on certain aerodromes. What is RVR to be used in case of steeper vertical profile? Max of AMC6 Table3?

comment *2349* comment by: *EHOC*

General

In taking this text from Appendix 1 to (New) OPS 3.430(b), only paragraphs 1 to 5 (of 6) were reproduced. As a consequence, paragraph '6. Visual reference' has been omitted. This is the only procedure where the visual reference is not contained in the text.

Although it could be regarded as illogical to provide an operational instruction inside a method of establishing approach (and take-off) minima, from the very inception of JAR-OPS Appendix 1 to OPS X430 has been provided in the form of a template with each of approach procedures 'hung' onto the skeleton. All procedures had one paragraph dedicated to *Visual Reference*.

Operators/pilots become familiar with templates and, when producing their operational manuals or, when seeking to clarify the provisions of a procedure, reference to the regulations is simple and familiar.

Is is suggested that paragraph 6 is reinstated to ensure elements, required for visual reference, are in the procedure.

comment *7427* comment by: *Axel Schwarz*

Under 2. amend the first sentence with "for precision approaches, or the MAPt for non-precision approaches", since a DA/H is only specified for precision approaches.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC6 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima p. 146-149

comment *90* comment by: *Air Southwest*

There seems to be something wrong with either the formula in paragraph 2, or

the computed figures in table 2(FALS).

Taking a CAT I ILS with 3 deg GP with DH = 200ft; and ICAO CAT I lighting (centreline = 900m) this gives:

(200 x 0.3048) = 60.96; 60.96 ÷ tan 3 deg (0.0524) = 1164; 1164 - 900 = 264m (table 2 (FALS) gives 550m)

It just about works for DH = 250ft (554m v table 2 = 550m), but for MDH 350ft it gives 1136m (table 2 = 900m)

There also seems to be a discrepancy in the figures in table 2 (FALS) and those in EU-OPS App 1 to OPS 1.430 tables 4a and 5.

Also, there doesn't seem to be a statement anywhere (OPS.GEN.150 or OPS.CAT.150 or in the AMCs or GMs) that the minimum RVR for CAT I operations is 550m. In EU-OPS App 1 to OPS 1.430(c)(1) it is clearly stated that the minima for CAT I is DH 200ft and 550m RVR. The cross reference to EU-OPS App 1 to OPS 1.430(c) [page 27 of section f.] refers to AMC5 OPS.GEN.150, but this is erroneous.

Note also, ICAO Annex 14 (5.3.4.10 - Note) states that where a CAT I approach lighting system is less than 900m CAT I operations may be prejudiced. {At 200ft on a 3 deg GP the aircraft will be 900m from the threshold}.

comment *307* comment by: *Rega / Swiss Air-Ambulance*

AMC6 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

Scope:

Application of RVR in relation to DH for ILS category I approach operation. Typing error to be corrected.

Text to be added:

Paragraph 5a. of AMC6 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima needs to corrected.

a. for Category I approach operations to runways with Full Approach Light Systems (FALS), Runway Touchdown Zone Lights (RTZL) and Runway Centerline Lights (RCLL), provided that the DH is not **less** than 200 ft.

Proof:

Focusing to Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH the wording "provided that the DH is not more than 200ft" makes no sense, the correct wording must be "provided that the DH is not less than 200ft"

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without

respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *606* comment by: *ECA - European Cockpit Association*

Comment on AMC6 OPS.GEN.150.A: Item 4 should be added as a note with table 2 to improve readability.

comment *607* comment by: *ECA - European Cockpit Association*

Comment on AMC6 OPS.GEN.150.A(6): change as follows:

6. RVR values lower than those given in Table 2 of AMC6 OPS.GEN.150.A (RVR/CMV vs DH/MDH) may be used for HUDLS and ~~**auto-land operations in accordance with Part OPS.SPA.LVO**~~ **category II or III operations in accordance with Part OPS.SPA.020.LVO**.

Justification:

There are no provisions in proposed text for Category II approaches without autoland. Reference is not correct as well.

comment *608* comment by: *ECA - European Cockpit Association*

Comment on AMC6 OPS.GEN.150.A : the RVR values fo AMC6 should be in an IR, not as AMC.

Justification:

All requirements of MDH/DH/RVR should be published as Implementing Rules.

comment *2075* comment by: *Airbus S.A.S.*

Typo error:

In the 4th line of subparagraph 1, close brackets to read: "cut-off limits))".

comment *2364* comment by: *Dassault Aviation*

Technical comment:

Page 146 AMC6 OPS.GEN.150.A item 4: In order to ensure coherence within the NPA2009-02, we suggest indicating that the value must not exceed 5000m as in AMC2 OPS.GEN.150 p140 item3 (underlined): "If the approach is flown with a level flight segment at or above MDA/H, 200 m should be added for Category A and B aeroplanes and 400 m for Category C and D aeroplanes to the minimum RVR/CMV value resulting from the application of Table 2 of AMC6 OPS.GEN.150.A (RVR/CMV vs DH/MDH) and Table 3 of AMC6 OPS.GEN.150.A

(Minimum and maximum applicable RVR/CMV for all instrument approaches down to Category I minima (lower and upper cut-off limits) provided the resulting RVR/CMV value does not exceed 5000 m."

comment *3189* comment by: *AEA*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *3255* comment by: *Eurocontrol CND*

Table 1 of AMC6 OPS.GEN.150.A Approach light systems

ICAO CAT I lighting requirement length is 900m where as EU OPS states that 720m is ICAO compliant. 720m was the required approach length specified in JAR OPS previously.

Proposed Action: Remove reference to ICAO from the table in Table 4.

comment *3718* comment by: *AUSTRIAN Airlines*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *4374* comment by: *KLM*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *4748* comment by: *TAP Portugal*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *4784* comment by: *British Airways Flight Operations*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS Appendix 1 (New) to Ops 1.430

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4832* comment by: *IAOPA Europe*

For non-commercial operations the restrictions for single-pilot operations are too restrictive and not aligned with the current practice in Europe.

In non-commercial operations It should be possible to land single pilot with an RVR of 550 meters. Provided that full facilities are available including TDZ lighting or centerline lighting an autopilot should not be required.

The proposed limitations will considerable restrict non-commercial GA IFR operations compared to today.

comment *4983* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *5545* comment by: *Swiss International Airlines / Bruno Pfister*

elevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

comment *5903* comment by: *ERA*

European Regions Airline Association Comment

The text is understood to apply also to non-circling procedures to provide an upper cut-off for special (one-off) approach operations with clear public interest. However this is not clear so some clarification is required.

comment *5933* comment by: *DGAC*

There are some mistakes in the minima table, in particular for DH from 441 ft to 500ft, when the class of lightning is BALS

Please consider the EU OPS table 5 of the appendix 1 OPS 1.430 instead.

The differences are highlighted below :

Table 2 (AMC 6A OPS.GEN.150)	Table 5 (App 1 1.430 (d))
Part-OPS (AMC6 OPS.GEN.150.A)	***EU-OPS (App 1 1.430 (d))***

DH ou MDH	Class of lighting facility				Class of lighting facility			
	FALS	IALS	BALS	NALS	FALS	IALS	BALS	NALS
ft	m				m			
421-440	1300	1600	1800	2000	1300	1600	1800	2000
441-460	1400	1700	***1800***	2100	1400	1700	***1900***	2100
461-480	1500	1800	***1900***	2200	1500	1800	***2000***	2200
481-500	1500	1800	***2000***	2300	1500	1800	***2100***	2300
501-521	1600	1900	2100	2400	1600	1900	2100	2400

Table 3 of AMC6 OPS.GEN.150.A

For non precision approaches which do not fulfil the CDFA criteria (3rd category), add the following sentence (bold underlined text) :

Max	According to table 2 of AMC6 OPS.GEN.150.A if flown using the CDFA technique, otherwise an add-on of 200/400m applies to the values in Table 2 of AMC6 OPS.GEN.150.A but not to result in a value exceeding 5000 m. **If this value is lower than the Min value, the maximum value to be considered is the value from the above Min line.**

Reason: To avoid misinterpretation when the "maximum" value extracted from table 2 is lower than 1000m (CAT A & B) or 1200m (CAT C & D): It is just to emphasize that in any case RVR cannot be lower than those minimal values.

comment *6454* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There are 4 types of facilities defined according ICAO + FAA requirements by now. What is the reason and benefits for including FAA concerns into European legislation ?

comment *6456* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Moreover BALS figures and DH/MDH between 441 and 500 ft must be harmonized between EU-OPS (Appendix 1 to OPS 1.430 (New)) and Part-OPS as those figures come from the same formula (Required RVR/Visibility (m) = [(DH/MDH (ft) x 0.3048)/tan a] - length of approach lights(m)).So It cannot vary.

Proposal

The calculation for Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH may be done again.

Justification

obvious

comment *6613* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Even if Table 3 of AMC6 OPS.GEN.150.A complies with new requirements of appendix 1 (new) to OPS 1.430 from EU-OPS, it is still hardly understandable for operators.

Proposal

The appearance, explanation and use of this table should be more explicit and practical.

Justification

obvious

comment *7284* comment by: *AIR FRANCE*

Relevant Text:

Table 2 of AMC6 OPS.GEN.150.A RVR/CMV vs DH/MDH

Comment:

The figures of the table are not correct and different from EU-OPS

441-460 BALS =1800 (EU-OPS: 1900)

461-480 BALS =1900 (EU-OPS: 2000)

481-500 BALS = 2000 (EU-OPS : 2100)

Proposal:

Realign with EU-OPS

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC7 OPS.GEN.150.H Instrument Flight Rules (IFR) operating minima p. 150-151

comment *1003* comment by: *EHOC*

General

See also the comment on OPS.GEN.200(c).

See also the comment on the absence of RNAV/LNAV for helicopters.

This AMC does not appear to include a paragraph with the required *visual references* - this is the correct place-holder for such text, not OPS.GEN.200 (which specifically addresses the approach ban); the table includes RNAV/LNAV which might, when applied to helicopters, not result in a termination at a runway. The absence of a *visual reference* paragraph, prevents a flexible approach to procedures which might not fit into the fixed wing standard

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC8 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima p. 151-152

comment *609* comment by: *ECA - European Cockpit Association*

Comment on AMC8 OPS.GEN.150.A: This complete part should be an IR, not as AMC.

Justification:

All requirements of MDH/RVR should be published as Implementing Rules.

comment *1581* comment by: *ECA - European Cockpit Association*

Comment on paragraph 4.: change as follows:

4. Notwithstanding the requirements in AMC8 OPS.GEN.150.A 3. above and limited to locations where there is a clear public interest to maintain current operations, the visibility may ~~**not be increased above**~~ **be permitted at** the values derived from Table 1 of AMC8 OPS.GEN.150.A. **This will require a documented safety case, establishing the extent and nature of the variation and the mitigating factors in place to justify it. This will take not be increased above the values derived from Table 1 of AMC8 OPS.GEN.150.A,** taking into account the operator's experience, training programme, documentation and flight crew qualification.

Justification:

If there is a reason for the minima to be increased then there needs to be clear and transparent method for justifying another value. The operators experience is actually the experience of the crew. There needs to be a formal analysis of how such operations have been carried out and a documented rationale developed to ensure continued compliance with a target level of safety, otherwise it would be very easy to lose sight of what made the operation acceptable. The suggested wording deals with that aspect.

comment *3465* comment by: *M Wilson-NetJets*

Original text:

(4) Notwithstanding the requirements in AMC8 OPS.GEN.150.A 3. above and limited to locations where there is a clear public interest to maintain current operations, the visibility may not be increased above the values derived from Table 1 of AMC8 OPS.GEN.150.A, taking into account the operator's experience, training programme and flight crew qualification.

Suggested new text:

4. Notwithstanding the requirements in AMC8 OPS.GEN.150.A 3. above and limited to locations where there is a clear public interest to maintain current operations, the visibility may not be **decreased below** the values derived from Table 1 of AMC8 OPS.GEN.150.A, taking into account the operator's experience, training programme and flight crew qualification.

Comment/suggestion:

It appears that the visibility requirement has been reversed.

comment *5904* comment by: *ERA*

European Regions Airline Association Comment

The text is understood to apply also to non-circling procedures to provide an upper cut-off for special (one-off) approach operations with clear public interest. However this is not clear so some clarification is required.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC12 OPS.GEN.150 Instrument Flight Rules (IFR) operating minima p. 153-154

comment *311* comment by: *CAA-NL*

Attachments #15 #16

Sent the attached file as EASA RPF december 2006.

This proposed rulemaking form has opbviously been used for this NPA as it is fully translated into table 1 of AMC2 OPS.SPA.020.LVO.

Unfortunately the translation into table 1 of this AMC has gone wrong due to misreading of the columns on the 'RVR assessment systems' and 'approach lights'. For both the left column should equal the right.

Furthermore item 2c above table 1 concerns cat II/III and should be deleted as this is mentioned in AMC2 OPS.SPA.020.LVO.

For completeness the initial EASA RPF and table have been added.

comment *774* comment by: *Lukas KISTLER*

Helicopters conducting a Precision Approach CAT I to an onshore facility can do so even without any lighting system (as described in Table 2 of AMC7 OPS.GEN.150.H).

Given that fact a downgraded facility (Approach lights u/s in Table 1 of AMC12 OPS.GEN.150) should still be available to helicopters using a minimum RVR of 1000m.

comment *882* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Referint to AMC 12 OPS.GEN.150 – Table 1:

We suggest to retain „no effect for

CAT I" when all **RVR assessment systems** are inop (refer to EU OPS). Furthermore, we suggest for CAT I without approach lights same minima as for NALS. We suggest for CAT I with approach lights of only 210 m to use the same minima as for NALS. There is no logic in prohibiting either an CAT I approach without approach lights nor a CAT I approach with rudimentary approach lights.

comment *925* comment by: *REGA*

Helicopters conducting a Precision Approach CAT I to an onshore facility can do so even without any lighting system (as described in Table 2 of AMC7 OPS.GEN.150.H).

Given that fact a downgraded facility (Approach lights u/s in Table 1 of AMC12 OPS.GEN.150) should still be available to helicopters using a minimum RVR of 1000m.

comment *1234* comment by: *AUSTRIAN Airlines*

How shall we use the table falied or downgraded equipment for LTS Cat I and OTS Cat II?

The problem:

1) LTS Cat I and OTS Cat II are not shown in table falied or downgraded equipment

2) In GM1 OPS.SPA.001.LVO - Terminology the definition shows:

h. 'Lower than Standard Category I Operation'. A Category I Instrument Approach and Landing Operation using Category I DH, with an RVR lower than would normally be associated with the applicable DH.

i. 'Other than Standard Category II Operation'. A Category II Instrument Approach and Landing Operation to a runway where some or all of the elements of the ICAO Annex 14 Precision Approach Category II lighting system are not available.

that implies, that for the LTS Cat 1 the "standard" Cat I rules (tables) apply (if not otherwise indicated) and for OTS Cat 2 the "standard" Cat II rules (tables) apply (if not otherwise indicated).

Now back to table falied or downgraded equipment: with this interpretation i use Cat I column for LTS Cat I and Cat II column for OTS Cat II. 3) The problem now is that the LTS Cat I requires autoland and the visual references like Cat II and OTS Cat II does NOT require a Cat II approach light system but can also be used with NALS, IALS, etc .. Some examples where this does not match in table falied or downgraded equipment:

When i use the Cat I column for LTS Cat I:

- Column "Touchdown zone RVR assessment system": should be the same as Cat 2

When i use the Cat II column for OTS Cat II:

- Column "Approach lights": Should be same as for Cat I (Minima for NALS apply)
- Column "Approach lights except the last 210 m": Should be same as for Cat I (Minima for NALS apply)
- Column "Whole runway light system": Should be same as for Cat I (Minima for NALS apply)
- Column "Centreline lights": Day RVR 300 is not applicable as lowest RVR cat OTS Cat II is 350!
- Column "Touchdown zone lights": Day RVR 300 is not applicable as lowest RVR cat OTS Cat II is 350!

comment *1583* comment by: *ECA - European Cockpit Association*

Comment: changes in the table as follows:

Edge lights, threshold lights and runway end lights:

- Day – no effect
- Night – not permitted **<u>at any time during an approach</u>**

Centreline lights :

- No effect if ~~**F/D,**~~ HUDLS or auto-land otherwise RVR 750 m

Justification:

Not sure why the F/d has been included, as the landing manoeuvre is a visual one and F/D offers no assistance.. Suggest F/D be deleted

comment *1779* comment by: *claire.amos*

Does this mean loss of the entire combination or any part thereof?

comment *2076* comment by: *Airbus S.A.S.*

The sub-paragraph AMC12 OPS.GEN.150.A (2)(a) reads:

"Multiple failures of runway / FATO lights other than indicated in Table 1 of AMC12 OPS.GEN.150 may not be acceptable".

This provision, as written, is unclear.

In this sentence, "may not be acceptable" should be replaced by "are not acceptable".

comment *3190* comment by: *AEA*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *3191* comment by: *AEA*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *3256* comment by: *Eurocontrol CND*

page 153, 2d:

Replace ILS by XLS

Define XLS generally in the introduction section - replace ILS and/or MLS by

XLS throughout text (with Caveat for CAT III)

comment *3374* comment by: *M Wilson-NetJets*

Original text:

2. Conditions applicable to Tables 1 of AMC12 OPS.GEN.150: a. Multiple failures of runway/ FATO lights other than indicated in Table 1 of AMC12 OPS.GEN.150 may not be acceptable; b. Deficiencies of approach and runway/FATO lights are treated separately; c. Category II or III operations. A combination of deficiencies in FATO/runway lights and RVR assessment equipment is not permitted; d. Failures other than ILS affect RVR only and not DH.

Suggested new text:

No suggested text

Comment/suggestion:

CAT II and III operations are part of an SPA an therefore are better described in the appropriate AMC SPA.LVO than in AMC OPS.GEN.150.

comment *3484* comment by: *UK CAA*

Page No: 153

Paragraph No: Table 1 of AMC12 OPS.GEN.150

Comment: Errors in the table with regard to Cat 1 approach and downgraded approach lighting.

Justification: Transcription error.

Proposed Text (if applicable):

Table 1 of AMC12 OPS.GEN.150 Failed or downgraded equipment - effect on landing minima

FAILED OR DOWNGRADED EQUIPMENT	EFFECT ON LANDING MINIMA	
	Category I	APV & Non-Precision
ILS Standby Transmitter	No effect	
Outer Marker	No effect if replaced by equivalent position	APV – not applicable NPA with FAF: no effect unless used as FAF. If the FAF cannot be identified (e.g. no method available for timing of descent), non-precision operations cannot be conducted
Middle Marker	No effect	No effect unless used as MAPt

RVR Assessment Systems	On runways equipped with 2 or more RVR Assessment Units; one may be inoperative	No effect
Approach lights	~~Not permitted~~ ***Minima as for NALS***	
Approach lights except the last 210 m	~~Not permitted~~ ***Minima as for BALS***	
Approach lights except the last 420 m	~~No effect~~ ***Minima as for IALS***	
Standby power for approach lights	No effect	
Edge lights, threshold lights and runway end lights	Day – no effect Night – not permitted	
Centreline lights	No effect if F/D, HUDLS or auto-land otherwise RVR 750 m	No effect
Centreline lights spacing increased to 30 m	No effect	
Touch Down Zone lights	No effect if F/D, HUDLS or auto-land otherwise RVR 750 m	No effect
Taxiway light system	No effect	

comment *3485* comment by: *UK CAA*

Page No: 153

Paragraph No: AMC12 OPS.Gen.150 (1.)

Comment:

Para 1. refers to outer marker or equivalent position.

The reference should be to 1000ft above aerodrome.

Justification:

The outer marker or equivalent position is no longer used as the approach ban point. OPS.GEN.200 now refers to 1000 ft above the aerodrome.

Proposed Text (if applicable):

AERODROME MINIMA – EFFECT ON LANDING MINIMA OF TEMPORARILY FAILED OR DOWNGRADED GROUND EQUIPMENT

1. These instructions are intended for use both pre-flight and in-flight. It is however not expected that the pilot-in-command would consult such instructions after passing ~~the outer marker or equivalent position~~ ***1000ft above the aerodrome***. If failures of ground aids are announced at such a late stage, the approach could be continued at the pilot-in-command's discretion. If failures are announced before such a late stage in the approach, their effect on the approach should be considered as described in Table 1 of AMC12 OPS.GEN.150, and the approach may have to be abandoned to allow this to happen.

comment *3854* comment by: *AUSTRIAN Airlines*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *3855* comment by: *AUSTRIAN Airlines*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not

to this one.

Proposal:

Realign with EU-OPS

comment *4376* comment by: *KLM*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *4377* comment by: *KLM*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *4750* comment by: *TAP Portugal*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *4752* comment by: *TAP Portugal*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *4786* comment by: *British Airways Flight Operations*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4787* comment by: *British Airways Flight Operations*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4984* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *4985* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS)

/NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *5225* comment by: *Virgin Atlantic Airways*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *5546* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150 (RVR Assessment Systems – Effect on Category I: on runways equipped with 2 or more RVR assessment units, one may be inoperative)

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A) where there is no effect for Category I. The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *5547* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A).

The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS

comment *6995* comment by: *IACA International Air Carrier Association*

Table 1

IACA suggests to retain „no effect for CAT I" when all RVR assessment systems are inoperative (refer to EU-OPS).

Furthermore, IACA suggests for CAT I without approach lights to revise applicable minima to "Minima as for NALS". IACA suggests for CAT I with approach lights of only 210 m to use "Minima as for NALS". There is no logic in prohibiting either a CAT I approach without approach lights nor a CAT I approach with rudimentary approach lights since you can even fly a CAT I approach without any approach lights.

comment *7286* comment by: *AIR FRANCE*

Relevant Text:

Table 1 of AMC12 OPS.GEN.150

Approach lights

Approach lights except last 210m

Approach lights except last 420 m

Comment:

This requirement is not in line with Appendix 1 (new) to OPS.1.430 (table 6A). The EASA proposal states that it is not permitted (ALS) / not permitted (210m) / no effect (420m) for Category I whereas EU-OPS states NIL minima (ALS) /NALS minima (210m) / IALS minima (420m) may be used for Category I.

The explanatory note only refers to changes related to EVS and HUDLS but not to this one.

Proposal:

Realign with EU-OPS.

comment *7351* comment by: *FAA*

1. Table 1 of AMC12 OPS.GEN.150; *and*

paTable 1 of AMC2 OPS.SPA.020.LVO

Comment:

The tables which describe the affect of failed or downgraded equipment on landing minima only apply to operational requirements. A similar strategy should be applied to navaid facility, aerodromes, and air traffic control requirements. The determination that a facility or instrument approach procedure is not suitable for use negates the intent and the effects of these tables for operators. Similar standards are needed to authorize continued operations in the event of system downgrades or failures. In some circumstances, it may be appropriate for approved operators to continue in the event of component failures if those operators use suitable equipment, training, and procedures to mitigate the failure of specific components.

Recommendation:

Apply similar navaid facility, aerodrome, and air traffic control requirements in the event of component failure.

comment *7355* comment by: *FAA*

1. Table 1 of AMC12 OPS.GEN.150

Comment:

The rows "Approach Lights" and "Approach lights except the last 210 m" indicates that Category I is not permitted. This should be changed to "minima as for NALS" which is the same as the APV. Category I operations can be conducted without approach lights.

Recommendation:

The "Minima as for NALS" should be used for both columns.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima p. 154

comment *610* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.GEN.150.A: This complete part should be an IR, certainly not as GM.

Justification:

Airplane categories is crucial information and should be standard categories established as implementing rule.

comment *1584* comment by: *ECA - European Cockpit Association*

Comment on paragraph 3.: change as follows:

3. Permanent change of category (maximum landing mass):

a. An operator may impose a permanent, lower, landing mass, and use this mass for determining the VAT **amendable only via the operations manual**

and not varied on a frequent basis. A change should not be valid for not less than a month unless exceptional circumstances occur, such as permanent substitution caused by technical reasons occur;

b. The category defined for a given aeroplane should be a permanent value and thus independent of the changing conditions of day-to-day operations;

c. The category should be stated in the operations manual, where required.

Justification:

ECA requests clarification:

The term "permanent needs" clarification. Definition of the term is needed.

comment *3376* comment by: *M Wilson-NetJets*

Original text:

3. Permanent change of category (maximum landing mass):

a. An operator may impose a permanent, lower, landing mass, and use this mass for determining the VAT;

b. The category defined for a given aeroplane should be a permanent value and thus independent of the changing conditions of day-to-day operations; c. The category should be stated in the operations manual, where required.

Suggested new text:

4. Permanent change of category (maximum landing mass) for certain aerodromes:

a. An operator may impose a permanent, lower, landing mass for certain aerodromes, and use this mass for determining Vat;

b. The category for a given aeroplane at a given aerodrome should be a permanent value thus independent of changing conditions of day to day operations in and out of that aerodrome;

c. The category should be clearly stated in the route manual for that given aerodrome:

d. The operator shall conduct special training as necessary to familiarize flight crew with the limitations of operating to a lower category at that aerodrome and should have mitigating procedures in place to prevent flight crew flying at higher categories at that aerodrome than designated by the operator;

e. The operator should ensure that no other limitation of the aerodrome and its associated procedures are exceeded.

Comment/suggestion:

Certain aerodromes have limiting categories for aeroplanes. These limitations usually are due to airspace or procedural restrictions. Due to the limited number of movements of these business jet operators at those aerodromes it would not be cost effective to design new procedures or change airspace restrictions to accommodate higher categories as it would for an airline operator with less total number of destinations and a subsequent larger number of movements at those destinations. It is feasible to operate at lower categories if there are sufficient safeguards and training in place to prevent accidently flying at higher categories and that no other limitations are exceeded. Therefore, it is suggested to add a 4th point describing this

possibility.

comment *7320* comment by: *ANE (Air Nostrum) OPS QM*

We suggest to add the following:

For aircraft certified for Landing with different flap setting the operator has to choose one flap setting for selecting Aircraft approach category (A; B, C, D) The operator can choose any flap setting for any landing as long as he applies at least the minimums that apply to that approach cat. The operator should be able, after being approved, to be able to aply a different approach minima.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima p. 155-165

comment *540* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.150.A:

ECA requests clarification:

An approach using the CDFA technique will always be flown as an SAp, since this is a requirement for applying CDFA.

Is a Stabilised approach a prerequisite for a CDFA?

According to blz 103 GM OPS.GEN.010 Definitions:

"Stabilised Approach (SAp)' means an approach which is flown in a **controlled and appropriate** manner in terms of configuration, energy and control of the flight path" and is applicable to <u>any</u> approach.

comment *562* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.150.A(5)(f): editorial change:

The number "1000" should be written on one line.

comment *563* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.150.A(7): change as follows:

7. Operational procedures and instructions for using the CDFA technique or not:

a. The operator should establish procedures and instructions for flying approaches using the CDFA technique ~~**and**~~ **<u>or</u>** not. These procedures should be included in the operations manual and should include the duties of the flight crew during the conduct of such operations:

comment *564* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.150.A(6): change as follows:

6. Visual reference and path-control below MDA/H when not using the CDFA technique~~.~~ **:**

In addition to the requirements stated in OPS.GEN.150 and its AMC material the pilot should have attained a combination of visual cues to safely control the aeroplane in roll and pitch to maintain the final approach path to landing. This should be included in the standard operating procedures and reflected in the operations manual.

Justification:

Under point 6: a ":" should follow the first sentence i.s.o. a dot.

comment *666* comment by: *EHOC*

General

It is not possible to distinguish the contents of any of the AMCs/GMs to OPS.GEN.150 from the description in the index; there is a necessity to have the description of the material (the second line) within the index. Without an appropriate entry, an intimate knowledge of the contents is required before any guidance can be found.

Paragraph 6.

Within paragraph 6. - Visual Reference, is the following text: "In addition to the requirements stated in OPS.GEN.150 and its AMC material".

In the original rules each type of procedure (take-off, non-precision, Cat 1, Cat 2, Cat 3A and B and ARA) had a description contained in Appendix 1 to JAR-OPS X.430. Each type of procedure was logical described and always included a single paragraph which was dedicated to *'Visual Reference'*.

It is clearly understood why the procedures have been split into that contained in OPS.GEN.150 - which can be applied without approval, and Subpart SPA.LVO which requires a separate approval.

The text that is contained in Subpart SPA.LVO, and specifically Appendices 2 and 3, follows quite closely the order that was contained in the original text; they both also contain a specific paragraph that deals with the required *'Visual Reference'*.

On examination of the AMCs to OPS.GEN.150 whilst it can be seen that whilst AMC3 to OPS.GEN.10 - Take-off Minima, follows quite closely the intent and order of the original rule and therefore contains two paragraphs on the requirement for '*Visual reference*', the same is not true for non-precision and Cat 1 approaches where there is now no appropriate paragraph.

Bearing in mind that the most important part of the procedure is the transition from instrument flying to visual flying - which might occur at the DA/H, MDA/H, it is imperative that text for '*Visual Reference'* is reinstated into the appropriate AMCs.

comment *1585* comment by: *ECA - European Cockpit Association*

Comment on paragraph 4.g.: change as follows:

g. When applying CDFA on an approach with a nominal vertical profile to a DA/H, it ~~**may**~~ **will** be necessary to apply an add-on to the published minima (vertical profile only) to ensure sufficient obstacle clearance **and that obstacle surfaces are not penetrated**. The add-on, if applicable, should be published in the operations manual **for each airport performance class** (Aerodrome Operating Minima). However, the resulting procedure minimum will still be referred to as the DA/H for the approach;

Justification:

An add-on is vital to avoid penetrating the obstruction surfaces. Guidance should be given as to the minimum values required to allow for the initiation of the go-around maneuver in timely manner so as not to penetrate these surfaces. Ideally these should be for each category of aircraft and helicopter.

comment *1586* comment by: *ECA - European Cockpit Association*

Comment on paragraph 4.h.: change as follows:

h. Operators should establish a procedure to ensure that an appropriate callout (automatic or oral) is made when the aeroplane is approaching DA/H. If the required visual references **as specified for the approach** are not established at DA/H, the missed approach procedure is to be executed promptly. Visual contact with the ground alone is not sufficient for continuation of the approach. With certain combinations of DA/H, RVR and approach slope, the required visual references may not be achieved at the DA/H in spite of the RVR being at or above the minimum required for the conduct of the approach. The safety benefits of CDFA are negated if prompt go-around action is not initiated;

Justification:

Operators will need to specify what cues are acceptable for certain approaches where visual cues may be non standard. Wording amended to reflect this.

comment *1587* comment by: *ECA - European Cockpit Association*

Comment on paragraph 5.g.: add text as follows:

g. For approaches where the pilot has visual reference with the ground, stabilisation should be achieved not later than 500 ft above aerodrome

elevation. However, it is recommended that **whenever possible** the aeroplane should be stabilized when passing 1000 ft above runway threshold elevation; **in the case of circling approaches flown after a CDFA, it is recommended that the aircraft be stabilised in the circling configuration not later than passing 1000 ft above the runway elevation.**

Justification:

To cater for circling approaches the wording be modified to reflect the circling configuration requirements. This may usefully be added to the IFR approach

requirements.

comment *1778* comment by: *claire.amos*

Point f. ii

Can MDA really be used as DA?

comment *2077* comment by: *Airbus S.A.S.*

The text proposed in GM2 OPS.GEN.150.A (3)(h) endorses the complete TGL 44 Para 3.8 (TGL page 65). For clarity and consistency reasons, also the sub-title "Missed approach" should be kept in front of " The manoeuvre associated with...", as used in TGL 44.

comment *2079* comment by: *Airbus S.A.S.*

Typo error.

The end of first line of sub-paragraph GM2 OPS.GEN.150.A (4)(i)(ii) should read:

"The target ROD should not exceed 1000 fpm". Delete ")"

comment *2081* comment by: *Airbus S.A.S.*

The text proposed in GM2 OPS.GEN.150.A (4)(i)(ii) endorses provisions of TGL44, § 4.9(b) "Rate of Descent" (Page 66). The TGL paragraph allows a ROD deviation up to ±300 fpm from the target ROD.

The proposed text reads:

"The ROD should deviate by no more than + 300 fpm".

For consistency reason with TGL 44, replace wording "+ 300 fpm" with "±300 fpm".

comment *3095* comment by: *Michael Hoeck*

Page 163, Item 8 Training:

to me its not clear if the CDFA technique training is required for ALL operators or the AOC holders only. this is because of the cross reference to Part OR.OPS.FC

In Addition I think that legislation has been overtaken by reality, I doubt that many operators don´t use their aircrafts abilities to fly an CDFA`s. The modern avianic suites mnake it way easier to fly an CDFA rather than a non CDFA.

Make the CDFA an requirement on a Class/Typerating used in IFR and then there is no need for further trainng. For existent C/R´s and or T/R`s make a

CDFA mandatory on the checkride and then we are done.

Special training is IMO not required.

comment *3312* ☐ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3464* comment by: *M Wilson-NetJets*

Original text:

(3)(e) For circling approaches (Visual Maneuvering), all the applicable criteria with respect to the stability of the final descent path to the runway should apply. In particular, the control of the desired final nominal descent path to the threshold should be conducted to facilitate the techniques described in 4. and 5.: i. Stabilization during the final straight-in segment for a circling approach should ideally be accomplished by 1000 ft above aerodrome elevation for turbo-jet aeroplanes;

Suggested new text:

e. For circling approaches (Visual Maneuvering), all the applicable criteria with respect to the stability of the final descent path to the runway should apply. In particular, the control of the desired final nominal descent path to the threshold should be conducted to facilitate the techniques described in 4. and 5.:

i. Stabilization, during **the final segment of the instrument approach used**

to reach the circling MDA/H, should ideally be accomplished by 1000 ft above aerodrome elevation for turbo-jet aeroplanes;

Comment/suggestion:

There are circling approaches that do not have an final straight-in segment. These approaches should also be stabilized 1000' above the aerodrome elevation.

comment *3466* comment by: *M Wilson-NetJets*

Original text:

(4) (g) When applying CDFA on an approach with a nominal vertical profile to a DA/H, it may be necessary to apply an add-on to the published minima (vertical profile only) to ensure sufficient obstacle clearance. The add-on, if applicable, should be published in the operations manual – (Aerodrome Operating Minima). However, the resulting procedure minimum will still be referred to as the DA/H for the approach;

Suggested new text:

No suggested text

Comment/suggestion:

Currently there are many interpretation differences as when to increase the DA/H during a CDFA flown approach. Therefore, it would be beneficial to give a better explanation as to when the DA/H needs to actually be increased.

comment *3683* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to

be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4355* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5101* comment by: *M Wilson-NetJets*

Original text:

(1) (e) Non-precision approaches operated other than using a constant pre-determined vertical path or when the facility requirements and associated conditions do not meet the conditions specified in 2.d., RVR penalties apply. However, this should not preclude an operator from applying CDFA technique to such approaches. Those operations should be classified as special letdown procedures, since it has been shown that such operations, flown without additional training, may lead to inappropriately steep descent to the MDA/H, with continued descent below the MDA/H in an attempt to gain (adequate) **visual reference**;

Suggested new text:

No suggested text

Comment/suggestion:

Change "…visual reference" to "….visual reference(s)".

comment *5103* comment by: *M Wilson-NetJets*

Original text:

(3) (d) In cases where the CDFA technique is not used **with high MDA/H**, it may be appropriate to make an early descent to MDA/H with appropriate safeguards to include the above training requirements, as applicable, and the application of a significantly higher RVR/Visibility;

Suggested new text:

No suggested text

Comment / suggestion:

change to "….. with **a** high MDA/H….."

comment *5525* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5936* comment by: *DGAC*

Inconsistency between 1.d and 2.b.1 :

1.d says that **CDFA** is a technique to fly any non precision approach (that is to say an approach which has **no designated vertical profile**).

*2.b.1 introduces the concept of **designated vertical profile** for a **CFDA***

APV is not considered as a non precision approach, since it is an approach which has a designated vertical profile which has to be flown with the appropriate vertical guidance.

AMC5 OPS.GEN.150 clearly makes the distinction between approach with designated vertical profile (ILS, MLS, GLS, PAR and APV) and instrument approach procedure flown using CDFA technique

Solution: All the reference to APV should be suppressed from this GM2..

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM3 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima p. 165-168

comment *565* comment by: *ECA - European Cockpit Association*

Comment on GM3 OPS.GEN.150.A(2): change as follows:

GM3 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AERODROME MINIMA – CIRCLING – AEROPLANES

1. Terminology: XLS = ILS/MLS/GLS etc.

2. Visual manoeuvring (circling)~~.~~ **:**

The purpose of this guidance material is to provide operators with supplemental information regarding the application of aerodrome operating minima in relation to circling approaches.

Justification:

After '(circling)' a : should follow i.s.o. a dot.

comment *798* comment by: *French SAMU using helicopters for medical transport*

AERODROME MINIMA –VISUAL MANOEUVERS –HELICOPTERS chapter is totally missing

We consider that something similar to the AEROPLANE PART should be developed. It is important to specify that during the visual phase the pilot shall maintain a minimum speed between VTOSS and VIMC and attract pilot attention that low speed with strong down winds may generate vortex or settling with power risk.

comment *1588* comment by: *ECA - European Cockpit Association*

Comment on paragraph 3.: add point d. as follows:

3. Conduct of flight – General:

a. The MDH and OCH included in the procedure are referenced to aerodrome elevation;

b. The MDA is referenced to mean sea level;

c. For these procedures, the applicable visibility is the meteorological VIS.

d. Operators shall provide tabular guidance of the relationship between height above threshold and the in-flight visibility required to obtain and sustain visual contact during the circling manoeuvre.

Justification:

This does not require a clear explanation of the relationships between the visibility minima and the In flight visibility likely to be needed to execute such an approach. For example, 2400 meters is a little over 1.3 nm, at which value the runway threshold would be visible at only 450 ft in ideal conditions on a 3

degree descent path.

Guidance should be provided to ensure that realistic assumptions are made as to the likelihood of success of an approach flown in poor visibility. The suggested wording adds a requirement for the operator to provide this as guidance.

comment *1589* comment by: *ECA - European Cockpit Association*

Comment on paragraph 4.f.: change as follows:

f. Descent below MDA/H should not be initiated until the threshold of the runway to be used has been appropriately identified ~~**and t.**~~ **The aeroplane must be is in a position to continue clear of all obstructions along the line of flight, with a normal rate of descent and land within the touchdown zone. The stabilised approach criteria of should be observed, in particular the suggested 1000ft and 500ft minimums for stabilisation. Caution should be exercised when flying outside of the defined areas of coverage of any visual approach aids such as PAPIS, as obstacle clearance may be reduced.**

Justification:

This is still somewhat vague and is open to misinterpretation as to what constitutes a "normal" rate of descent and how this relates to the obstacle clearance planes around a runway and the extended centreline. This needs to be clarified, in particular where the obstructions dominating the minima may be within the segment flown. The criteria should at least contain the clear position of the aircraft relative to the threshold and the centreline. The wording is indicative of the type of wording required.

comment *3258* comment by: *Eurocontrol CND*

1. introduces XLS terminology, but excludes PAR - in citations before PAR was always included. What is the reason for not mentioning PAR?

comment *5106* comment by: *M Wilson-NetJets*

Original text:

(6) (d) The aeroplane should not leave the visual maneuvering (circling) area, which is obstacle protected, unless:

i. established on the appropriate **missed approach track**; or

ii. at Minimum Sector Altitude (MSA);

Suggested new text:

No suggested text

Comment/suggestion:

change "…missed approach track…" to "….missed approach **segment**….."

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM4 OPS.GEN.150.H Instrument Flight Rules (IFR) operating minima p. 168

comment *6439* comment by: *Konrad Polreich*

GM4 OPS.GEN.150.H

What is the sense of the requirement to be 'clear of cloud at TDP' when taking-off in fog with a visibility of 150 m?

Is this fog condition considered a cloud?

I suggest to change to the following sentence.

Suggestion:

The visibility (or conditions) should be such as to allow for the pilot flying to remain in sight of the surface, as to be able to safely reject the take-off, until reaching the Take-off Decision Point (TDP)/Defined Point After Take-Off (DPATO) and the minimum speed for flight in IMC, as stated in the AFM.

Or use the sentence of AMC1 OPS.CAT.335.H (1)(b), which is sufficient.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.155.H Selection of alternate aerodromes p. 168

comment *3486* comment by: *UK CAA*

Page No: 168

Paragraph No:

GM2 OPS.GEN.155.H

Comment:

This guidance material should be in AMC OPS.CAT and associated with AMC OPS.CAT.155.H(c).

Justification:

Correction of location of GM.

Proposed Text (if applicable):

~~GM2 OPS.GEN.155.H~~ ***GM OPS.CAT.155.H(c)***

comment *6073* comment by: *Irish Aviation Authority*

Comment:

(1,c) Selection of Offshore Alternates -

The text in note 1c. should refer to OEI in Ground Effect (IGE) as set out in JAR OPS 3, AMC OPS 3.295(e) 2.

Justification:

Standardisation with text and procedures already employed in JAR OPS 3.

Proposed text:

Amend text to reflect the relevant JAR OPS 3 text.

comment *6076* comment by: *Irish Aviation Authority*

Comment:

(1,e) Selection of Offshore Alternates -

The text in note 1e. makes no reference to meteorological observations having to be taken by an observer acceptable to the Authority as is set out in JAR OPS 3, AMC OPS 3.295(e), 3.1.

Justification:

Standardisation with text and procedures already employed in JAR OPS 3.

Proposed text:

Amend text to reflect the relevant JAR OPS 3 text.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.155.A(a)(3) Selection of alternate aerodromes p. 168

comment *3192* comment by: *AEA*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *4378* comment by: *KLM*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *4754* comment by: *TAP Portugal*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *4986* comment by: *Deutsche Lufthansa AG*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *5228* comment by: *Virgin Atlantic Airways*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *5548* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *6855* comment by: *Icelandair*

Relevant Text:

GM1 OPS.GEN.155A(a)(3) Isolated Aerodrome – Aeroplanes (definition)

Comment:

The definition of an isolated aerodrome should not be in guidance material but should at least be an AMC

Proposal:

Upgrade to AMC

comment *6921* comment by: *Konrad Polreich*

GM1 OPS.GEN.155.A (a)(3)

This reference doesn't exist. Should it be GM1 OPS.GEN.155. (e)(3)?

Second: Why is there no definition of an isolated place of intented landing for helicopters, since there is a requirement to plan a PNR, when flying to an isolated landing site.

Change GM1 OPS.GEN.155.A (a)(3) into GM1 OPS.GEN.155. (e)(3) and add a suitable definition of an isolated place of intented landing for helicopter also.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM2 OPS.GEN.155.H Selection of alternate aerodromes p. 168-169

comment *2519* comment by: *Royal Aeronautical Society*

The text in paragraph 3 a refers to "a specified period of validity, which is normally not less than nine hours, or more than 24 hours in duration". TAFs are now issued with a period of validity up to 30 hours. **It is suggested that '24' be amended to read '30'**.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.165.A Noise abatement p. 170

comment *91* comment by: *Air Southwest*

Paragraph 1 doesn't make sense (is the word "which" superfluous?).

Paragraph 2 is ambiguous. Does the noise abatement procedure or the pilot-in-command have the detrimental effect of aircraft safety? Suggest re-write "

Noise abatement procedures are to be complied with except when aircraft safety would be prejudiced."

comment 542 comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.165.A: add the following text:

3. Noise abatement procedures should only be applied when noise benefits can be expected.

4. Noise abatement procedures should only be considered in a balanced approach to the local noise problem.

comment 1678 comment by: *Dassault Aviation*

Editorial comment.

Page 170: AMC OPS.GEN.165.A §1: removed "which" to read "*The operator's noise abatement procedures for departure and arrival/approach for each aircraft type, ~~which~~ should be designed to be simple and safe to operate with no significant increase in crew workload during critical phases of flight.*"

comment 2520 comment by: *Royal Aeronautical Society*

Paragraph 1 contains an unnecessary comma followed by the unnecessary word 'which'. **It is suggested that the relevant text should be amended to read, '… for each aircraft type should be designed …'.**

A third paragraph is needed to reflect the recent insertion in ICAO PANS-OPS (Doc 8168), Volume I, Part V, Chapter 2 subparagraph 2.1.3 and in PANS-ATM (Doc 4444) Chapter 7 subparagraph 7.2.5, thus: **'3. A pilot-in-command prompted by safety concerns can refuse a runway offered for noise preferential reasons'**. ICAO sanctioned this amendment as a partial response to a fatal accident in a European State in which a pilot did not challenge an air traffic instruction driven largely by noise mitigation reasons to perform a non-precision approach in poor weather conditions when a precision approach was available on another runway.

comment 3193 comment by: *AEA*

Relevant Text:

Operating Procedures shall take into account the need to mimise the effect of aircraft noise

Comment:

The possibility for the pilot in command not to follow the noise abatement procedures whenever there is a detrimental effect on aircraft safety should not be in the AMC (see page 170, AMC.OPS.GEN.165A) but should be in the hard-law. As currently written, EASA seems to give priority on environmental issue above safety. The unclear spread of noise abatement requirements between

hard-law, AMC and guidance material does not provide legal certainty. This proposal is therefore unacceptable to AEA since it could result in some airport authorities forcing airlines to fly unsafe procedures.

Proposal:

Realign with EU-OPS 1.235 at the level of hard law

comment *3722* comment by: *AUSTRIAN Airlines*

elevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *4038* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety, as safety is only addressed in AMC, and not in first place. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Transfer EU-OPS 1.235 as a whole into Implementing Rule.

comment *4379* comment by: *KLM*

Relevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law

comment *4755* comment by: *TAP Portugal*

Relevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *4790* comment by: *British Airways Flight Operations*

Relevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to uncertainty, potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *5549* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AMC OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *7128* comment by: *Virgin Atlantic Airways*

Relevant Text:

1. The operator's noise abatement procedures for departure and arrival/approach for each aircraft type, which should be designed to be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

Comment:

Delete the word 'which' (editorial)

Proposed Text:

1. The operator's noise abatement procedures for departure and arrival/approach for each aircraft type, ~~which~~ should be designed to be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.165.A Noise abatement p. 170

comment *92* comment by: *Air Southwest*

Use of the word "may" is vague. Suggest re-write to read "Commercially available information specifying minimum terrain altitudes is acceptable as means of compliance."

comment *544* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.165.A: change as follows:

4. "Sequence of actions" means the order**, height/altitude** and the timing in which these pilot's actions are done.

5. Example:

For a given aeroplane type, when establishing the distant NADP, an operator should choose either to reduce power first and then accelerate, or to accelerate first and then wait until slats/flaps are retracted before reducing power. The two methods constitute two different sequences of actions. For an aeroplane type, each of the two departure climb profiles may be defined by:

a. one sequence of actions (one for close-in, one for distant);

b. two Above Aerodrome Level (AAL) altitudes/heights:

c. the altitude of the first pilot's action (generally power reduction with or without acceleration). This altitude should not be less than 800 ft AAL; or

d. the altitude of the end of the noise abatement procedure. This altitude should usually not be more than 3 000 ft AAL.

~~**These two altitudes may be runway specific when the aeroplane Flight Management System (FMS) has the relevant function which permits the crew to change thrust reduction and/or acceleration altitude/height. If the aeroplane is not FMS equipped or the FMS is not fitted with the relevant function, two fixed heights should be defined and used for each of the two NADPs.**~~

Justification:

Every different altitude/height for acceleration or configuration change constitutes of a different noise abatement procedure. (In fact, this is implied by

timing).

This restriction is to increase the pilot's oversight and awareness and enhance the pilot's mental picture of the vertical profile. Easy FMS programming of this profile is not relevant for increasing a mental picture.

comment *1679* comment by: *Dassault Aviation*

Editorial comment.

Page 170: GM OPS.GEN.165.A §1 Noise abatement: "should" to be replaced by "may" to read "*For each aeroplane type only two departure procedures may be defined, in accordance with Part I Section 7 of ICAO PANS-OPS Volume 1 (Doc 8168-OPS/611), as follows:*"

comment *2082* comment by: *Airbus S.A.S.*

Item (c) is to be considered as sub-para of (5)(b). It should be renamed as (5)(b)(i)

comment *2083* comment by: *Airbus S.A.S.*

Item (d) is to be considered as sub-para of (5)(b). It should be renamed as (5)(b)(ii)

comment *3194* comment by: *AEA*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level of hard law.

comment *3471* comment by: *M Wilson-NetJets*

Original text:

(2) This GM addresses only the vertical profile of the departure procedure. Lateral track has to comply with the Standard Instrument Departure (SID).

Suggested new text:

2. This GM addresses only the vertical profile of the departure procedure. Lateral tracks **have** to comply with the **Departure Instructions (SID, OMNI**

directional departure, radar vectored departure etc.)

Comment/suggestion:

More types of departures exist and therefore this GM should not be limited to only exclude SID lateral tracks.

comment *3473* comment by: *M Wilson-NetJets*

Original text:

(5) Example: For a given aeroplane type, when establishing the distant NADP, an operator should choose either to reduce power first and then accelerate, or to accelerate first and then wait until slats/flaps are retracted before reducing power. The two methods constitute two different sequences of actions.

For an aeroplane type, each of the two departure climb profiles may be defined by:

a. one sequence of actions (one for close-in, one for distant);

b. two Above Aerodrome Level (AAL) altitudes/heights:

c. the altitude of the first pilot's action (generally power reduction with or without acceleration). This altitude should not be less than 800 ft AAL; or

d. the altitude of the end of the noise abatement procedure. This altitude should usually not be more than 3 000 ft AAL. These two altitudes may be runway specific when the aeroplane Flight Management System (FMS) has the relevant function which permits the crew to change thrust reduction and/or acceleration altitude/height. If the aeroplane is not FMS equipped or the FMS is not fitted with the relevant function, two fixed heights should be defined and used for each of the two NADPs.

Suggested new text:

5. Example: For a given aeroplane type, when establishing the distant NADP, an operator should choose either to reduce power first and then accelerate, or to accelerate first and then wait until slats/flaps are retracted before reducing power. The two methods constitute two different sequences of actions.

For an aeroplane type, each of the two departure climb profiles may be defined by:

a. one sequence of actions (one for close-in, one for distant);

b. two Above Aerodrome Level (AAL) altitudes/heights:

c. the altitude of the first pilot's action (generally power reduction with or without acceleration). This altitude should not be less than 800 ft AAL **(certain departures with low intitial level-off altitudes may require earlier thrust/power reductions during low take-off mass departures or for high performance aeroplane types)**; or

d. the altitude of the end of the noise abatement procedure. This altitude should usually not be more than 3 000 ft AAL. These two altitudes may be runway specific when the aeroplane Flight Management System (FMS) has the relevant function which permits the crew to change thrust reduction and/or acceleration altitude/height. If the aeroplane is not FMS equipped or the FMS is not fitted with the relevant function, two fixed heights should be defined and used for each of the two NADPs.

Comment / suggestion:

Certain departure procedures require level-off at low altitudes/heights above the AAL. These level-offs require aeroplanes that take-off at low take-off mass or high performance aeroplane type in general to reduce thrust/power at an altitude lower than 800ft AAL to be able to capture the lower altitude/height and not overshoot it.

comment *3720* comment by: *AUSTRIAN Airlines*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *4049* comment by: *Deutsche Lufthansa AG*

Relevant Text:

This GM as a whole.

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety, as the requirement to consider safety at first has been downgraded to AMC (see respective comment) and even GM only. This requirement should be in the **hard-law** and it should be realigned with EU-OPS 1.235, i.e. not go beyond the requirements of EU-OPS 1.235.

Proposal:

Realign with EU-OPS 1.235, at the level of IR.

comment *4380* comment by: *KLM*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law

comment *4756* comment by: *TAP Portugal*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *4794* comment by: *British Airways Flight Operations*

Relevant Text:

GM OPS.GEN.165A Noise Abatement

Comment:

The EASA proposals will lead to uncertainty, potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *5550* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

comment *6856* comment by: *Icelandair*

Relevant Text:

GM OPS.GEN.165.A Noise Abatement

Comment:

The EASA proposals will lead to legal uncertainty potentially jeopardizing flight safety. This requirement should be in the **hard-law** and it should be realigned with EU-OPS

Proposal:

Realign with EU-OPS, at the level or hard law.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.170 Minimum terrain clearance altitudes p. 171

comment *3195* comment by: *AEA*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion.

comment *3724* comment by: *AUSTRIAN Airlines*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion.

comment *4381* comment by: *KLM*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion.

comment *4759* comment by: *TAP Portugal*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion.

comment *4987* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.175 Minimum flight altitudes p. 171

comment *93* comment by: *Air Southwest*

The use of the word "may" also implies the negative situation and makes the content too vague.

comment *5551* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Commercially available information specifying minimum terrain clearance altitudes may be used

Comment:

This is a new proposal. At least safety should be ensured.

Proposal:

Suggest to delete this AMC which might lead to confusion

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.175 Minimum flight altitudes p. 172

comment *487* comment by: *EHOC*

General

Whilst it is understood that this is in GEN and therefore is available to anyone, it was provided in the original to permit en-route let down whilst offshore - i.e. a cloud break procedure over water to VFR below (used to: avoid complex RADAR let downs at the oil field; or as part of the coastal airport procedure etc.). Attempting to generalize the rule has now made it completely obscure and probably not practical. Perhaps the best that can be done it to return the use to the application for which it was provided - offshore operations.

"An aircraft shall not be flown below specified minimum altitudes, except when:

(a)...

(b) descending in accordance with procedures approved by the State of the Operator."

This was never intended to be used for VFR operations as is now evident in by GM OPS.GEN.175; perhaps element 2. of that GM should be removed.

It is also not clear how an approval could be obtained from the 'State Overflown'.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.180.H Routes and areas of operation p. 172

comment *488* comment by: *EHOC*

General

This text in OPS.CAT.180 refers generally to terrain. This AMC for coastal transit is written to account for operations in a defined hostile environment (such as the North Sea - for which this concept was designed); this permits operation outside the specification contained in AMC4 OPS.CAT.355.H 1.a.

"PERFORMANCE CLASS 3 CRITERIA 1. Operations in Performance Class 3 should only be conducted:

a. from/to those aerodromes/operating sites and over such routes, areas and diversions contained in a non-hostile environment;"

The North Sea (by definition) is a 'hostile environment' and precludes operations in PC3. This is therefore an alleviation which permits entry to the coastal transit around the coasts of North Sea States, but only on the basis of 'non-hostile conditions'.

Perhaps "AMC H CAT OPS.GEN.180 Routes and areas of operation" should be promoted into this IR.

comment *6444* comment by: *Konrad Polreich*

AMC OPS.GEN.180.H

There is no definition of 'helicopter coastal transit operation'

Suggestion:

Insert a definition for 'helicopter coastal transit operation'

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.180.H Routes and areas of operation p. 172-174

comment *2296* comment by: *Austro Control GmbH*

Page 173, Point 7 (a):

The word "*commander*" has to be replaced by "*pilot in command*"

Justification:

Due to the explanatroy note (page 47, point 25), there is no more a commander as it was forseen by EU-OPS.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.185 Meteorological conditions p. 174

comment *3487* comment by: *UK CAA*

Page No: 174

Paragraph No:

AMC1 OPS.GEN.185

Comment:

The text of this AMC is explanatory and therefore would be better if contained in GM.

Justification: Standardisation

Proposed Text (if applicable):

~~**AMC1**~~ ***GM*** **OPS.GEN.185 Meteorological conditions**

CONTINUATION OF A FLIGHT

In the case of in-flight re-planning, continuation of a flight refers to the point from which a revised flight plan applies.

Renumber AMC2 and AMC3 accordingly and adjust cross-referencing

comment *3687* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of this AMC is explanatory and therefore would be better if contained in GM.

Justification:

Standardisation

Proposed Text

(if applicable):

~~AMC1~~ *GM* OPS.GEN.185 Meteorological conditions

CONTINUATION OF A FLIGHT

In the case of in-flight re-planning, continuation of a flight refers to the point from which a revised flight plan applies.

Renumber AMC2 and AMC3 accordingly and adjust cross-referencing.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC2 OPS.GEN.185 Meteorological conditions p. 174

comment *303* comment by: *Rega / Swiss Air-Ambulance*

AMC2 OPS.GEN.185 Meteorological conditions

Scope:

To gain the full picture for flight preparation, pilots shall also carefully evaluate (amongst the topics already specified) the winds aloft.

Text to be added:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, **winds aloft**, ... rest of text no change

Proof:

Besides temperatures aloft, the winds aloft also must be carefully evaluated by the pilots to gain the full picture during flight preparation.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *3196* comment by: *AEA*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *3727* comment by: *AUSTRIAN Airlines*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *4382* comment by: *KLM*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo

products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *4763* comment by: *TAP Portugal*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *4988* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *5552* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate

changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

comment *6857* comment by: *Icelandair*

Relevant Text:

Pilots should carefully evaluate the available meteorological information relevant to the proposed flight, such as applicable surface observations, temperatures aloft, terminal and area forecasts, AIRMETs, SIGMETs, and pilot reports. The ultimate decision whether, when, and where to make the flight rests with the pilot-in-command. A pilot also should continue to re-evaluate changing weather conditions.

Comment:

Pilots are not charge of weather prevision and observation. The provision of meteorological products is a task of the MET providers, In addition, meteo products are evolving.

Proposal:

Delete AMC2 OPS.GEN.185. Stick to EU-OPS provisions.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.190.B Take-off conditions p. 174

comment *5271* comment by: *Graham HALLETT*

AMC OPS.GEN.190.B

This is completely pointless and again shows a complete lack of understanding of balloon operations. This must perforce be a hand-held anemometer, since balloon operations can take place from any suitable location, rather than fixed locations, such as aerodromes. A hand held anemometer will provide an indication of the windspeed at just over two metres above ground, within the wind shadow of any suitable shelter which the prudent pilot will have selected. A balloon is 30 metres or more tall. Any balloonist with sufficient experience to be a pilot in command will be able to gauge whether the wind at 2 metres high is acceptable or not. Of more importance is the wind just above the ground, into which the balloon is launching, which will not be revealed by an anemometer

comment *5354* comment by: *Danish Balloon Organisation*

We suggest the following wording:

At the take-off site an anemometer or other suitable wind assessment equipment should be provided by the operator

Justification: Pi-balls (small helium filled balloons) give a more accurate wind assessment possibility.

comment *7541* comment by: *Pascal JOUBERT*

Most of take-off sites are protected: glades, in the trough of valley … So a take-off site anemometer is only appropriate for the beginning of inflation. This is not a guarantee of the in-flight wind.

Does air duct is an appropriate anemometer?

comment *7651* comment by: *European Balloon Corporation*

Most of take-off sites are protected: glades, in the trough of valley … So a take-off site anemometer is only appropriate for the beginning of inflation. This is not a guarantee of the in-flight wind.

Does air duct is an appropriate anemometer? If you use an anemometer at what height of the ground will you measure the wind ? The anemometer should be calibrated.

Completely overruled : remove

The only reliable meteorologic source of weather information is the nearest airport

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.195 Approach and landing conditions p. 174

comment *893* comment by: *KLM*

FATO suitability

what does suitability mean here; it should be defined or in terms and definitions specified what suitability means and comprises.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.200 Commencement and continuation of approach p. 175

comment *94* comment by: *Air Southwest*

Paragraph 2. CMV is the converted met visibility not the reported visibility. The sentence needs re-writing "...by converting the reported visibility into CMV

....."

comment 95 comment by: *Air Southwest*

Paragraph 3. Semantics perhaps, but MDA cannot be referenced to aerodrome elevation. To be correct, the first part of of paragraph 3 should read: "If the MDH is greater than 500ft or the MDA is greater than aerodrome elevation plus 500ft ....."

The last sentence could be looked at also.

comment 96 comment by: *Air Southwest*

Paragraph 4. EU-OPS 1.405(f) states that the touchdown RVR is always 'controlling.' I don't see any advantage to be gained by replacing this word with "prevailing over the other RVR values." Why use 6 words when 1 is more than adequate!

comment 566 comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.200:

ECA requests clarification:

What about a "CAT IIIb no DH", what is minimum RVR for that approach?

comment 652 comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.200(4):change text as follows:

4. The touchdown zone RVR is always prevailing over the other RVR values. If reported and relevant, the mid point and stop end RVR are also controlling. The minimum RVR should be at least:

a. 125 m for the mid-point; or

b. the RVR required for the touchdown zone; and

c. 75 m for the stop-end.

For aeroplanes equipped with a rollout guidance or control system, the minimum RVR value for the mid-point is 75 m. 'Relevant' means that part of the runway used during the high speed phase of the landing down to a speed of approximately 60 knots.

For instrument approach and landing operations, aerodrome operating minima below 800 m visibility should not be authorized unless RVR information is provided.

Justification:

This paragraph is in line with ICAO Annex 6 and should be taken into account.

comment *1099* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Condor suggests to keep the rule according to EU OPS 1.405 (e)
which means the landing can be completed even if MDA +500 < RVR
provided that the required visual reference is established at the DA/H
or MDA/H and is maintained.

comment *2700* comment by: *AOPA-Sweden*

Another point where the author only thinks about major airline and airports, even that the context is relevant to GA-operations, but RVR is not used at non-tower airports. The majority of take-offs are from non-tower airports

comment *3197* comment by: *AEA*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *3479* comment by: *M Wilson-NetJets*

Original text:

(4) The touchdown zone RVR is always prevailing over the other RVR values. If reported and relevant, the mid point and stop end RVR are also controlling. The minimum RVR should be at least:

a. 125 m for the mid-point; or

b. the RVR required for the touchdown zone; and

c. 75 m for the stop-end. For aeroplanes equipped with a rollout guidance or control system, the minimum RVR value for the mid-point is 75 m. 'Relevant' means that part of the runway used during the high speed phase of the landing down to a speed of approximately 60 knots.

Suggested new text:

4. **The touchdown zone RVR always be at or above that required for landing.**

5. Minimum mid-point RVR, if reported and relevant, shall be the higher of:

(i) RVR required for the touchdown zone;

(ii) 125m or , for aeroplanes equipped with a rollout guidance or control system, 75 m.

6. Minimum stop-end RVR, if reported and relevant, shall be the higher of:

(i) RVR required for the touchdown zone;

(ii) 75m.

'Relevant' means that part of the runway used during the high speed phase of the landing down to a speed of approximately 60 knots.

Comment/suggestion:

The original text had many different interpretations. A clearer text might improve that.

comment *3728* comment by: *AUSTRIAN Airlines*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *4383* comment by: *KLM*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *4764* comment by: *TAP Portugal*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *4801* comment by: *British Airways Flight Operations*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS 1.405. This requirement should be hard law and not AMC.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4989* comment by: *Deutsche Lufthansa AG*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continued below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *5232* comment by: *Virgin Atlantic Airways*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If reported and relevant, the mid point and stop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continued below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *5553* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

4. The touchdown zone RVR is always prevailing over the other RVR values. If report and relevant, the mid point and stoop end RVR are also controlling:

a. 125m for the mid-point or

b. The RVR required for the touchdown zone and

c. 75m for the stop-end

Comment:

This requirement is not fully in line with EU-OPS 1.405 (Commencement and continuation of approach) since the reference of EU-OPS 1.405(e) (the approach may be continue below DA/H or MDA/H and the landing may be completed provided the required visual reference is established at the DA/H or MDA/H and is maintained) is missing.

Proposal:

Realign with EU-OPS

comment *5906* comment by: *ERA*

European Regions Airline Association Comment

Paragraph 3.

ERA members are seeking clarification of this paragraph as MDA(H) implies that the principle only applies to non-precision instrument approaches. This paragraph needs a revision to the wording.

comment *7301* comment by: *ANE (Air Nostrum) OPS QM*

Paragraph 3.

We are seeking clarification of this paragraph as MDA(H) implies that the principle only applies to nonprecision instrument approaches.

This paragraph needs a revision to the wording.

comment *7608* comment by: *AOPA UK*

Another point where the author only thinks about major airline and airports, even that the context is relevant to GA-operations, RVR is not used at typical aiIiields.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC1 OPS.GEN.205 Fuel and oil supply p. 175

comment *769* comment by: *EHOC*

General

It would appear that there is a reverse of the intent signalled in the Explanatory Text; in this AMC is contained the objective requirement for fuel planning whilst the rule contains the prescriptive requirement. It is not clear how this can be described as a method of compliance.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC3 OPS.GEN.205 Fuel and oil supply p. 176

comment *1026* comment by: *EUROCOPTER*

This AMC has be renamed **AMC1 OPS.COM.205** because it is applicable to "Commercial Operations other than CAT". In parallel a new paragraph OPS.COM.205 has to be created.

Reference is made to AMC4 OPS.GEN.205.H but this AMC does not exist.

comment *1600* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

1.

Proposal : « Notwithstanding AMC3 OPS.GEN.205.A and AMC4 OPS.GEN.205.H for flights remaining within 25 NM of the aerodrome/operating site of departure and with operating flight crew **and workers needed for the mission** on board only, reserve fuel should not be less than: … for helicopters, 10 minutes fuel at best range speed"

Reason : For specific aerial works (e.g. Human External Cargo with linemen), helicopters shall have the power for hover-out-of-ground-effect one-engine-inoperative. Weight must be reduced as low as possible especially when operating in mountains at a high altitude.

comment *2084* comment by: *Airbus S.A.S.*

Reference to AMC3 OPS.GEN.205.A and AMC4 OPS.GEN.205.H are not valid, as these AMCs do not exist.

comment *3448* comment by: *Elaine Allan Monarch*

Page No.

176

Ref No.

NPA 2009 – 02b AMC OR OPS GEN 205

Summary of EASA Proposed Requirement:

Fire fighting facilities to be positioned so as to be available immediately in the event of a fire.

Comment:

Is this in line with current requirements or an additional need?

Justification:

Clarification required as to the purpose of this information. Will it be a requirement when refuelling with passengers on board that fire services are in attendance. Have airports been advised of this, do they have the resource available.

Proposed Text (if applicable)

comment *5050* comment by: *SNEH Organisation representing all french commercial helicopters operators*

1.

Proposal : "notwithstanding AMC3 OPS.GEN.205.A and AMC 4 OPS.GEN.205.H for flights remaining within 25NM of the aerodrome/operating site of departure and with operating flight crew **and workers needed for the mission** on board only, reserve fuel should not be less than : ... for helicopters, 10 minutes fuel at best range speed"

Reason : For specific aerial works (e.g. HEC), helicopters shall have the power for hover-out-of-ground-effect one-engine-inoperative. Weight must be reduced as ow as possible especially when operating in mountains at a high altitude.

comment *5937* comment by: *DGAC*

(1) refers to AMC3 OPS.GEN.205.A and AMC4 OPS.GEN.205.H which do not exist

comment *6480* comment by: *DGAC*

Proposal:

Add:

"...with operating flight crew **and workers needed for the mission** on board only..."

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC4 OPS.GEN.205 Fuel and oil supply p. 176

comment *1027* comment by: *EUROCOPTER*

This AMC has to be renamed AMC2 OPS.COM.205 because applicable to "Commercial Operations other than CAT".

In parallel a new paragraph OPS.COM.205 has to be created.

comment *5273* comment by: *Graham HALLETT*

AMC4 OPS.GEN.205.

This AMC appears to seek to show compliance with something that isn't in the regulations.

For balloons, OPS.GEN.205 merely requires that a balloon has a certain amount of reserve fuel. Any balloon refuelling procedures are the same , be it private, commercial or CAT. This AMC seems excessively proscriptive.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - AMC OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking p. 176-177

comment *653* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.210(1)(b)(i): change as follows and add point xi. under b.:

1. Whenever applicable, the following precautions should be taken:

a. Fire fighting facilities of the appropriate scale should be ~~**positioned so as to be immediately**~~ available **and ready for use during re-fuelling** ~~**in the event of a fire**~~, when using operating sites;

b. For aeroplanes:

i. One qualified person should remain at a specified location during fuelling operations with passengers on board. This qualified person should be capable of handling emergency procedures concerning fire protection and fire-fighting, handling communications ~~**and initiating**~~ and directing an evacuation **initiated by the pilot in command**;

[...]

xi. There should be qualified persons on-board the aircraft able to control passengers and manage the aircraft systems needed to enable timely disembarkation or the emergency evacuation of passengers should the need arise. When flight crew are not present there shall be procedures defined to ensure that properly trained and qualified individuals are present able to carry out communications required to alert emergency services in the event of either a hazardous or an emergency situation arising.

Justification:

It is paramount to highlight that an evacuation should only be ordered by the pilot-in-command or any other crew member under the authority of him/her. This is consistent with paragraph 7.c. of Annex IV to regulation (EC) No 216/2008.

comment *654* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.210(2): change as follows:

2. When re/defuelling with passengers on board, ground servicing activities and work inside the aircraft, such as catering and cleaning, should be ~~**conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed**~~ **suspended until the re/defueling has finished**.

Justification:

Allowing activities like cleaning or catering while re/defueling with pax on board poses a significant risk in the event of an evacuation. The (cleaning/catering) staff is not familiar with evacuation procedures and the equipment used for these activities may impede the conduct of a safe evacuation.

comment *884* comment by: *Condor Flugdienst GmbH - FRA HO/R*

We suggest prohibition of Defuelling with PAX on board, embarking or disembarking.

Reason: ICAO 9137, Part I, §16.3.3.

comment *1561* comment by: *Luftfahrt-Bundesamt*

Such impotant things like precautions to be taken when refuelling with passengers on board should NOT be defined in the AMC-Material but in the accordant paragraph of the Implementing Rule!

comment *1731* comment by: *claire.amos*

Point b. vii states 'sufficient' qualified personnel....

Who would be considered to be sufficiently qualified in these circumstances? Clarification required.

comment *1732* comment by: *claire.amos*

Point 3

Clarification is required so each operator is clear as to whether they are required to follow this process or not. This could be interpreted differently by different NAA's thus leading to inconsistency across Europe.

comment *2065* comment by: *claire.amos*

1.a.

Question; Should be qualified by a risk assessment indicating need?

comment *2085* comment by: *Airbus S.A.S.*

In AMC OPS.GEN.210, Subparagraph 1 (b)(vii), the extent of the word "sufficient" is not clear.

More detailed provision should be provided.

comment *2343* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

"ground area to remain free of obstacles" implies that unless otherwise stated that stairs could be/are considered obstacles.

Proposal:

This does not preclude the use of stairs.

comment *2344* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

The title is referring to "Refuelling" only, while the contents also deal with "Defuelling".

Proposal:

The title should be corrected to "Re/Defuelling to avoid any misunderstanding

comment *2406* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

1.a. Could be interpreted that Fire fighting facilities should be available in immediate attendance. This is not current legislative practice, but may be required by individual Aerodromes.

Proposal: This should be re-worded to permit Fire fighting facilities [Fire Guard] on alert /standby at their base to satisfy this requirement

comment *2701* comment by: *AOPA-Sweden*

Indeed,it says "whenever applicable", but it should also be stated that is for commercial operations. To fuel up a small GA-aircraft is about the same to fuel up an automobile, there is no such a requirements for that and regular

auto-gasoline is more inflammable.

comment 3030 comment by: *Thomas Cook Airlines*

Comment:

Clarification required as to the purpose of including this information. Is it to become a requirement when refuelling with passengers on board that fire services are to be in attendance. Have airports been advised of this requirement and do they have the ability to provide such cover?

comment 3198 comment by: *AEA*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment 3199 comment by: *AEA*

Relevant Text:

1.b. ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Comment:

Paragraph 1 b ii seems to duplicate the requirement of OPS.GEN.210 b 2 although with a different wording. The wording in the AMC is correctly reflecting EU-OPS whereas the wording in the IR is different/wrong (ref previous comment #3198).

Proposal:

Delete one of the references and ensure a complete realignment with EU-OPS.

comment *3488* comment by: *UK CAA*

Page No: 176

Paragraph No:

AMC OPS.GEN.210

Comment:

Refuelling or de-fuelling with AVGAS or wide-cut fuels, with passengers embarking, on board or disembarking, is not allowed under CAT (OPS.CAT.210) but not mentioned under the GEN rules. There is a description of wide-cut fuels at GM1 OPS.GEN.210 but this does not support any text within the GEN section. Within ICAO Annex 6 Pt II and III Section III, recommendations are made regarding fuelling with such fuels. It is therefore suggested that the AMC be amended to reflect these recommendations for operations other than CAT.

Justification:

To provide best practice, recognise the ICAO recommendations and to improve safety of operations for other than CAT by adding text to the AMC.

Proposed Text (if applicable):

GENERAL

1. For operations other than Commercial Air Transport, refuelling/de-fuelling with AVGAS or wide-cut fuels, or when a mixture of these fuels might occur, should be avoided when passengers are embarking, on board or disembarking.

2. (Renumber subsequent paragraphs)

comment *3730* comment by: *AUSTRIAN Airlines*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment *3853* comment by: *M Wilson-NetJets*

Original text:

AMC OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking

GENERAL

1. Whenever applicable, the following precautions should be taken:

a. Fire fighting facilities of the appropriate scale should be positioned so as to be immediately available in the event of a fire, when using operating sites;

b. For aeroplanes:

i. One qualified person should remain at a specified location during fuelling operations with passengers on board. This qualified person should be capable of handling emergency procedures concerning fire protection and fire-fighting, handling communications and initiating and directing an evacuation;

ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Suggested new text:

AMC OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking

GENERAL

1. Whenever applicable, the following precautions should be taken:

a. Fire fighting facilities of the appropriate scale should be positioned so as to be immediately available in the event of a fire, when using operating sites;

b. For aeroplanes:

i. One qualified person should remain at a specified location during fuelling operations with passengers on board. This qualified person should be capable of handling emergency procedures concerning fire protection and fire-fighting, handling communications and initiating and directing an evacuation;

ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane **(if available);**

Comment/suggestion:

Two way intercom systems are not available on all aeroplane types. Therefore, the words "if available" should be added.

comment *3856* comment by: *AUSTRIAN Airlines*

Relevant Text:

1.b. ii. A two-way communication should be established and should remain

available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Comment:

Paragraph 1 b ii seems to duplicate the requirement of OPS.GEN.210 b 2 although with a different wording. The wording in the AMC is correctly reflecting EU-OPS whereas the wording in the IR is different/wrong (ref previous comment #3198).

Proposal:

Delete one of the references and ensure a complete realignment with EU-OPS.

comment *4308* comment by: *Civil Aviation Authority of Norway*

Comment:

Refuelling or de-fuelling with AVGAS or wide-cut fuels, with passengers embarking, on board or disembarking, is not allowed under CAT (OPS.CAT.210) but not mentioned under the GEN rules. There is a description of wide-cut fuels at GM1 OPS.GEN.210 but this does not support any text within the GEN section. Within ICAO Annex 6 Pt II and III Section III, recommendations are made regarding fuelling with such fuels. It is therefore suggested that the AMC be amended to reflect these recommendations for operations other than CAT.

Justification:

To provide best practice, recognise the ICAO recommendations and to improve safety of operations for other than CAT by adding text to the AMC.

Proposed Text

(if applicable):

GENERAL

1. For operations other than Commercial Air Transport, refuelling/de-fuelling with AVGAS or wide-cut fuels, or when a mixture of these fuels might occur, should be avoided when passengers are embarking, on board or disembarking.

2. *(Renumber subsequent paragraphs)*

comment *4384* comment by: *KLM*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This

EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment *4416* comment by: *KLM*

Relevant Text:

1.b. ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Comment:

Paragraph 1 b ii seems to duplicate the requirement of OPS.GEN.210 b 2 although with a different wording. The wording in the AMC is correctly reflecting EU-OPS whereas the wording in the IR is different/wrong (ref previous comment #3198).

Proposal:

Delete one of the references and ensure a complete realignment with EU-OPS.

comment *4766* comment by: *TAP Portugal*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment *4767* comment by: *TAP Portugal*

Relevant Text:

1.b. ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Comment:

Paragraph 1 b ii seems to duplicate the requirement of OPS.GEN.210 b 2 although with a different wording. The wording in the AMC is correctly reflecting EU-OPS whereas the wording in the IR is different/wrong (ref previous comment #3198).

Proposal:

Delete one of the references and ensure a complete realignment with EU-OPS.

comment *4773* comment by: *Virgin Atlantic Airways*

Relevant Text:

"Sufficient qualified personnel or the minimum required number of cabin crew, as applicable, should be on board and be prepared for an immediate emergency evacuation;"

Comment:

There is no guidance provided on:

(a) The definition of 'sufficient' or 'qualified personnel'.

I. Can 'sufficient' be more or less than the minimum required cabin crew?

II. Are 'qualified personnel' other than operating cabin crew?

III. How is 'qualified' determined, i.e. what training/checking is required?

(b) Under what circumstances would 'or' be applicable?

Proposed Text:

~~Sufficient qualified personnel or t~~ The minimum required number of cabin crew, ~~as applicable,~~ should be on board and be prepared for an immediate emergency evacuation;"

comment *4990* comment by: *Deutsche Lufthansa AG*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This

EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment *4991* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1.b. ii. A two-way communication should be established and should remain available by the aeroplane's inter-communication system or other suitable means between the personnel involved in the operation supervising the refuelling and the pilot-in-command or other qualified personnel on board the aeroplane;

Comment:

Paragraph 1 b ii seems to duplicate the requirement of OPS.GEN.210 b 2 although with a different wording. The wording in the AMC is correctly reflecting EU-OPS whereas the wording in the IR is different/wrong (ref previous comment #3198).

Proposal:

Delete one of the references and ensure a complete realignment with EU-OPS.

comment *5115* comment by: *Elaine Allan Monarch*

Page No.

176

Ref No.

NPA 2009 – 2b AMC.OPS.GEN.210

Page 176 of 464

Summary of EASA Proposed Requirement:

Whenever applicable, the following precautions should be taken:

1. vii Sufficient qualified personnel or the minimum required number of cabin crew as applicable, should be on board and be prepared for an immediate emergency evacuation;

Comment:

Who is classified as sufficient qualified personnel and when would be applicable.

Justification:

Clarification is required.

Proposed Text (if applicable)

Remove text **"sufficient qualified"** and **"as applicable"**

comment *5554* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

2. When re/de-fuelling with passengers on board, ground servicing activities and worked inside the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

Comment:

This paragraph seems to imply that during (de)fueling activities all doors need to be unobstructed while EU-OPS is talking about the most practical and expeditious means available without mentioning un-obstruction of doors. This EASA proposal would mean that no catering trucks would be allowed to be connected to the aircraft during (de)fuelling activities and would lead to extra ground-time of the aircraft (and associated costs) because no parallel loading may take place. We fail to see the safety justification for this new/changed requirement. We therefore urge EASA to realign with EU-OPS.

Proposal:

Realign with EU-OPS without any changes to the wording

comment *5655* comment by: *Deutsche Lufthansa AG*

Relevant text:

2nd last para

"When re/**de**fuelling with passengers on board, ..."

Comment:

Defuelling with pax on board prohibited acc. ICAO for safety reasons (many aircraft types can be defuelled by gravity only (i.e. opening of low lying valve) with no external possibility to stop fuel flow in case of emergency (contrary to refuelling, where fuel truck has "deadman control" switch). Defuelling is anyway a very seldom event.

Proposal:

"When r**ef**uelling with passengers on board, ..."

comment *6499* comment by: *Ryanair*

Comment

(vii) - The proposal to have a full cabin crew complement on a stationary aircraft not operating under its own power is excessive and has no basis in operational experience or safety.

Proposal

Sufficient qualified personnel or one cabin crew member per 50 passengers or part thereof should be onboard and be prepared for an immediate emergency evacuation.

comment *7003* comment by: *IACA International Air Carrier Association*

1.a

Could be interpreted that Fire fighting facilities should be available in immediate attendance. This is not current legislative practice, but may be required by individual Aerodromes. This should be re-worded to permit Fire fighting facilities [Fire Guard] on alert /standby to satisfy this requirement.

comment *7006* comment by: *IACA International Air Carrier Association*

1.b.ix.

Does "Ground area to remain free of obstacles" exclude the use of stairs ?

comment *7009* comment by: *IACA International Air Carrier Association*

The title is referring to "refuelling" only, while the contents also deal with "defuelling". Therefore, EASA should correct the title to Re/Defuelling to avoid any misunderstanding.

EASA should prohibit "Defuelling with passengers on board, embarking or disembarking". Reason: ICAO Doc.9137 Part 1 Paragraph 16.3.3.

comment *7327* comment by: *new European Helicopter Association*

1.c. vi. "The ground area beneath the exits intended for emergency evacuation and slide deployment areas should be kept clear" remove: .."and slide deployment areas" : generally helicopters are not fitted with slides.

comment *7383* comment by: *ETF*

Add: vii. Sufficient qualified personnel or **not below** the minimum required number of cabin crew, as applicable, should be on board and be prepared for an immediate emergency evacuation;

Reason: Sufficient qualified personnel may be understood as below the minimum required.

comment *7609* comment by: *AOPA UK*

Indeed, it says "whenever applicable", but it should also be stated that this is for commercial operations. To fuel a small GA-aircraft is about the same to fuel

an automobile, there is no such requirement for that and regular auto-gasoline is more flammable.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM1 OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking p. 177-178

comment *489* comment by: *EHOC*

General

There is no objective rule in General to deal with this subject (there is OPS.CAT.210); neither in this text nor in the GEN.210 rule, is there a prohibition on re/defuelling when passengers are present.

OPS.GEN.210 should be amended to include the prohibition (see the comment on OPS.GEN.210) and this text should point to it.

comment *885* comment by: *Condor Flugdienst GmbH - FRA HO/R*

We suggest prohibition of Defuelling with PAX on board, embarking or disembarking.

Reason: ICAO 9137, Part I, §16.3.3.

comment *2343* ☐ comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

"ground area to remain free of obstacles" implies that unless otherwise stated that stairs could be/are considered obstacles.

Proposal:

This does not preclude the use of stairs.

comment *7011* comment by: *IACA International Air Carrier Association*

The title is referring to "refuelling" only, while the contents also deal with "defuelling". Therefore, EASA should correct the title to Re/Defuelling to avoid any misunderstanding.

EASA should prohibit "Defuelling with passengers on board, embarking or disembarking". Reason: ICAO Doc.9137 Part 1 Paragraph 16.3.3.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM2 OPS.GEN.210 Refuelling with passengers embarking, on board or p. 178-179

disembarking

comment *1193* comment by: *CAA-NL*

GM2 OPS.GEN.210 3. c.

Comment: This text should be clarified to make clear that the requirements for the carriage of dangerous goods apply to fuel being transported.

Justification: The intent of the current text is not clear.

Proposed Text (if applicable):

"c. Transport~~ation~~ in, on or under the aircraft (and the applicable requirements for the carriage of dangerous goods by air) "

comment *1429* comment by: *International Air Transport Association*

GM2 OPS.GEN.210 3. c.

The intent of the reference in this point to "Transportation in, on or under the aircraft (dangerous goods)" is unclear. Any transport/carriage of fuel classified as dangerous goods, unless inside the aircraft fuel tanks as fuel for the means of propulsion, must be in accordance with the provsions of the ICAO Technical instructions.

comment *2000* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

This text should be clarified to make clear that the requirements for the carriage of dangerous goods apply to fuel being transported.

Comment:

The intent of the current text is not clear.

Proposal:

"c. Transport~~ation~~ in, on or under the aircraft (and the applicable requirements for the carriage of dangerous goods by air) "

comment *3489* comment by: *UK CAA*

Page No: 179

Paragraph No:

GM2 OPS.GEN.210 3. c.

Comment:

This text should be clarified to make clear that the requirements for the carriage of dangerous goods apply to fuel being transported.

Justification:

The intent of the current text is not clear.

Proposed Text (if applicable):

"c. Transport~~ation~~ in, on or under the aircraft (and the applicable requirements for the carriage of dangerous goods by air) "

comment *6588* comment by: *Finnish CAA*

Paragraph No: GM2 OPS.GEN.210 3. c.

Comment: This text should be clarified to make clear that the requirements for the carriage of dangerous goods apply to fuel being transported.

Justification: The intent of the current text is not clear.

Proposed Text (if applicable):

"c. Transport~~ation~~ in, on or under the aircraft (and the applicable requirements for the carriage of dangerous goods by air) "

comment *7014* comment by: *IACA International Air Carrier Association*

The title is referring to "refuelling" only, while the contents also deal with "defuelling". Therefore, EASA should correct the title to Re/Defuelling to avoid any misunderstanding.

EASA should prohibit "Defuelling with passengers on board, embarking or disembarking". Reason: ICAO Doc.9137 Part 1 Paragraph 16.3.3.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM3 OPS.GEN.210 Refuelling with passengers embarking, on board or disembarking p. 179

comment *3200* comment by: *AEA*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *3731* comment by: *AUSTRIAN Airlines*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *4417* comment by: *KLM*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *4770* comment by: *TAP Portugal*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *4808* comment by: *British Airways Flight Operations*

Relevant Text:

ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference to ICAO Annex 14 in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that it should not be used to limit or regulate the operations of aeroplanes.

Proposal:

Delete GM3 OPS.GEN.210

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4992* comment by: *Deutsche Lufthansa AG*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *5235* comment by: *Virgin Atlantic Airways*

Relevant Text:

ICAO Annex 14 - Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *5555* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

{ref} ICAO Annex 14 Aerodromes

Comment:

OPS.GEN.210 does not deal with the design of aerodromes and therefore this reference in the OPS rules is not appropriate. The preamble of ICAO Annex 14 clearly states that Annex 14 does not address flight operations.

Proposal:

Delete GM3 OPS.GEN.210

comment *7016* comment by: *IACA International Air Carrier Association*

The title is referring to "refuelling" only, while the contents also deal with "defuelling". Therefore, EASA should correct the title to Re/Defuelling to avoid any misunderstanding.

EASA should prohibit "Defuelling with passengers on board, embarking or disembarking". Reason: ICAO Doc.9137 Part 1 Paragraph 16.3.3.

B. II. Draft Decision - Part-OPS - Subpart A - Section II - GM OPS.GEN.220.B Operational limitations - balloons p. 179

comment *6572* comment by: *Volker Loeschhorn*

There a more reasons for balloons landings during night than emercency landings:

1. Landings during the night that are dangerous:

Landings due to unattended weather situations, also called safety landings - unexpected thunderstorms, change of wind direction or speed towards the sea or to borders of countries that could not be overflown

2. Landings the night that are not dangerous:

For example, a balloon is flying towards the sun, and so the sight is not good to detect powerlines. So it will be better to wait for the sunset, and made then the landing. It could happen you have to overfly a forest, and you are some minutes to late... now do all the paperwork for an emercency landing - wherefor?

Other situation: The wind is calming down. You are over a forest, you have had the landing field in sight during the daylight, but you are fighting half an hour for the last fifty meters to reach it, your ground crew is already on the landing field, and you are shure that there are no obstacles - is that really an emercency situation?

Future: Perhaps there will be development for nightvision systems that allows also safe night landings - why to fix a limitation?

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC1 OPS.GEN.305 Weighing p. 180

comment *1484* comment by: *Airbus*

In AMC1 OPS.GEN.305 § 2, read "maximum structural landing mass" instead of "maximum landing mass".

Reason: consistency with other sections (e.g. AMC2 OPS.GEN.305.A § 1.a)

comment *1640* comment by: *Luftfahrt-Bundesamt*

Add: …..with an approved mass controll programme

comment *5358* comment by: *Danish Balloon Organisation*

We suggest that 5 years be used as limitation in para 1.

Justification: 5 years are today used in accordance with Part M.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC2 OPS.GEN.305 Weighing p. 180-181

comment *1486* comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM OPS.GEN.305 Weighing p. 181

comment *729* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.305.A: change as follows: delete:

~~**GM OPS.GEN.305.A Weighing**~~

~~**MAXIMUM STRUCTURAL LANDING MASS AEROPLANE**~~

~~**Maximum Structural Landing Mass is the maximum permissible total aeroplane mass upon landing under normal circumstances.**~~

Justification:

This definition shall be transferred into OPS.GEN.010. Furthermore, OPS.GEN.305.A doesn't exist !

comment *5939* comment by: *DGAC*

Why is the definition of maximum structural landing mass not in the paragraph "Definitions" : OPS.GEN.010 or GM.OPS.GEN.010 ?

This definition is repeated also in AMC1.OPS.CAT.10 "Definitions".

All the definitions contained in this NPA should be located in one single paragraph.

comment *6960* comment by: *Christian Hölzle*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC OPS.GEN.310(a)(1) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 181

comment *490* comment by: *EHOC*

General

This text is almost totally hidden from view buried as it is the text about dry operating mass. It might be less obscure if it were spit into two parts the second of which could be the CREW MASSES:

"DRY OPERATING MASS

To calculate the dry operating mass and the associated CG of the aircraft, the operator should take into account the mass of all operating items and crew members, and the influence of their position on the aircraft CG.

"CREW OPERATING MASSES

Crew operating masses should be established by weighing or using the standard masses of 85 kg for flight and technical crew members and 75 kg for cabin crew members, including hand baggage. Account shall be taken of any additional baggage. On flights where crew masses, including hand baggage, are expected to exceed the standard crew masses, the actual mass of the crew should be determined by weighing."

comment *841* comment by: *Reto Ruesch*

Mass values for passenger, when the number of passenger seats available is less than 6 for helicopters.

This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.A grandfather right shall apply to older aircrafts like EC130B4-AW119.

comment *1311* comment by: *Air-Glaciers (pf)*

Mass values for pax : This is also required for COM (and may also be required

for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4

comment *1805* comment by: *Heli Gotthard AG Erstfeld*

AMC2 Ops Gen 310 Mass values for passenger, when the number of passenger seats available is less than 6 for helicopters

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1882* comment by: *SHA (AS)*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1952* comment by: *Berner Oberländer Helikopter AG BOHAG*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2732* comment by: *Austro Control GmbH*

Generally it must be mentioned that the weight of 85/75 kg differences between the kind of job of crew members. In reality this implies a hidden difference between male flight deck and female cabin crew.

By analogy to passenger weight and for genderman reasons there should be a distinction between male/female crew members and not between flight/cabin crew members.

comment *2800* comment by: *M Wilson-NetJets*

Original text:

AMC OPS.GEN.310(a)(1) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial

operations

DRY OPERATING MASS

To calculate the dry operating mass and the associated CG of the aircraft, the operator should take into account the mass of all operating items and crew members, and the influence of their position on the aircraft CG. This should be done by weighing or using the standard masses of 85 kg for flight and technical crew members and 75 kg for cabin crew members, including hand baggage. Account shall be taken of any additional baggage. On flights where crew masses, including hand baggage, are expected to exceed the standard crew masses, the actual mass of the crew should be determined by weighing.

Suggested new text:

No suggested text

Comment/suggestion:

This paragraph requires to take into account the exceedance of standard crew masses. This has serious implications for the quicksheet and keeping track of crewmember weight.

comment *6998* comment by: *Swiss Helicopter Group*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *7048* comment by: *Eliticino SA*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC1 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 181

comment *2940* comment by: *Pascal DREER*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *3999* comment by: *HDM Luftrettung gGmbH*

AMC2 OPS GEN 310:

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6382* comment by: *Trans Héli (pf)*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC2 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 181-184

comment *491* comment by: *EHOC*

Paragraph 5.

This text (which concatenates the two original elements) serves only to confuse the issue and appears to include an element of forecast; it is suggested that the text is amended to:

"5. On any flight identified as carrying a significant number of passengers whose masses, including hand baggage, are expected to exceed the standard passenger mass, an operator must determine the actual mass of such passengers by weighing or by adding an adequate mass increment.

6. If standard mass values for checked baggage are used and a significant number of passengers check in baggage that is expected to exceed the standard baggage mass, an operator must determine the actual mass of such baggage by weighing or by adding an adequate mass increment."

comment *1137* comment by: *Heli Gotthard*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1203* comment by: *Stefan Huber*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *1260* comment by: *Air Zermatt*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2037* comment by: *Heliswiss AG, Belp*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2157* comment by: *Dirk Hatebur*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2170* comment by: *Heliswiss*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2173* comment by: *Heliswiss NV*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7

pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2437* comment by: *Jan Brühlmann*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2471* comment by: *Catherine Nussbaumer*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2568* comment by: *Walter Mayer, Heliswiss*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *2801* comment by: *M Wilson-NetJets*

Original text:

1. When a. the number of passenger seats available is:

i. less than **10** for aeroplanes; or

ii. less than 6 for helicopters; or

b. the number of passengers is less than 11 for balloons, passenger mass may be calculated on the basis of a statement by, or on behalf of, each passenger, adding to it a predetermined mass to account for hand baggage and clothing. The predetermined mass for hand baggage and clothing should be established by the operator on the basis of studies relevant to his particular operation. In any case, it should not be less than:

i. 4 kg for clothing; and

ii. 6 kg for hand baggage.

The passengers' stated mass and the mass of passengers' clothing and hand baggage should be **checked** prior to boarding and adjusted, if necessary.

Suggested new text:

1. When
a. the number of passenger seats available is:

i. less than **19** for aeroplanes; or

ii. less than 6 for helicopters; or

b. the number of passengers is less than 11 for balloons, passenger mass may be calculated on the basis of a statement by, or on behalf of, each passenger, adding to it a predetermined mass to account for hand baggage and clothing. The predetermined mass for hand baggage and clothing should be established by the operator on the basis of studies relevant to his particular operation. In any case, it should not be less than:

i. 4 kg for clothing; and

ii. 6 kg for hand baggage.

The passengers' stated mass and the mass of passengers' clothing and hand baggage should be **visually verified** prior to boarding and adjusted, if necessary.

Comment/suggestion:

"….should be checked prior to boarding…." the word "checked" can be interpreted in many ways, more specific guidance is required. Furthermore, this should also be able for commercial operations.

The 10 seats available should be adjusted to 14 to include larger business aeroplane types (preferably to 19 but this would create a separate class of its own)

comment *2856* comment by: *Philipp Peterhans*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *3171* comment by: *Axel Ockelmann + Manfred Poggensee Commercial Balloon Operators Germany*

Concerning balloonflights Standard masses for clothing and handbaggage should be introduced, because mostly passengers leave their jackets in the retrievecar and their handbaggage is very light, because the duration of the flight is mostly only one hour.

In generell Nr. 1b) should be applicable for all balloon-sizes. Not only for balloons with less than 11 passengers.

Ask the swedish balloncompanys for more informations for balloons with more than 30 passengers!

comment *4124* comment by: *Benedikt SCHLEGEL*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *4561* comment by: *Christophe Baumann*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *5714* comment by: *Irish Aviation Authority*

Comment:

JAR-OPS 3.620 (g) states a standard baggage mass of 13 kgs for all types of helicopter flight with 20 or more seats. To facilitate the entry in the first column of the last row of the table should be amended to that stated below.

Proposed text:

All other and all helicopter operations.

comment *5716* comment by: *Irish Aviation Authority*

Comment:

JAR-OPS 3.620 (h) requires an operator to gain prior approval before using revised standard mass values. Amend the text as detailed below.

Proposed text:

……detailed weighing survey plan**, approved by the competent Authority,** and a reliable……

comment *5816* comment by: *Ph.Walker*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6160* comment by: *Hans MESSERLI*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden

to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6343* comment by: *Heliswiss International*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6507* comment by: *UK CAA*

Page No: 182

Paragraph No:

AMC2 OPS.GEN.310(a)(2) Table 2

Comment:

The alleviation which permits 6kg to be deducted from the figures in Table 2 is too restrictive and should be extended to all aeroplanes, including those in Table 1. Although the text reflects that in EU-OPS, the UK CAA believes it has always been unnecessarily restrictive and has written to the Commission seeking approval for a derogation against EU-OPS.

Justification:

There is no safety reason to restrict aeroplanes with 20 or more seats from deducting 6kg from the passenger mass values in the same way that smaller aeroplanes and all helicopters (including those with more than 20 seats) are permitted to. The larger an aeroplane, then less significant is the effect of any difference between the actual mass values of passengers' hand baggage and the assumed mass values included in Tables 1 and 2. If it is suitably safe for the deduction to be made on small aeroplanes, then it is certainly as safe, or even more so, to allow the same on larger aeroplanes.

There are currently some operations, with larger aeroplanes, where passengers are prohibited from carrying any hand baggage for operational reasons. In these cases, operators will be unnecessarily penalised by having to use a standard weight which is too high and therefore unrepresentative.

Proposed Text (if applicable):

On ~~aeroplane flights with 19 passenger seats or less and on all helicopter~~ flights where no hand baggage is carried in the cabin or where hand baggage is accounted for separately, 6 kg may be deducted from the figures in Table**s 1 and** 2 above.

comment *6630* comment by: *Heliswiss International*

Mass values for pax : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden

to the authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *7030* comment by: *IACA International Air Carrier Association*

Table 1

OK, same values as EU-OPS 1.620 "Holiday Charter".

comment *7391* comment by: *ETF*

Comment: The details on passenger classification from OPS 1.607 is missing.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC4 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 184-185

comment *492* comment by: *EHOC*

Paragraph 1.b.

Editorial: as in the original the text should be 'weighed' and not 'weighted'.

comment *1486* comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

comment *5956* comment by: *Irish Aviation Authority*

Comment:

Appendix 1 to JAR-OPS 3.620(h) paragraph c) 2 & 3 are the same as the EU-OPS requirement for aeroplanes. Hence amend subparagraph 3 b) and 3 c) to read aircraft not aeroplane as detailed below.

Proposed text:

b. On **aircraft** with 20 or more passenger seats, these averages should apply as revised standard male and female mass values. c. On smaller **aircraft**, the following increments should be added to the average passenger mass to obtain the revised standard mass values:

Table 1 of AMC4 OPS.GEN.310(a)(2) Mass and balance system

Number of passenger seats	Required mass increment
1 – 5	16 kg
6 – 9	8 kg
10 – 19	4 kg

Alternatively, all adult revised standard (average) mass values may be applied on **aircraft** with 30 or more passenger seats. Revised standard (average) checked baggage mass values are applicable to aircraft with 20 or more passenger seats.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM1 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 186

comment *1486* ☐ comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM2 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 186-189

comment *104* comment by: *Air Southwest*

Is it intended to include all this statistical analysis in the final document? Whilst it is appreciated that it is only guidance material (GM) it is difficult to see what is the practical use of this information. It is also appreciated that IEM OPS 1.620(g) contained this analysis method it is suggested that perhaps this information should be in another specific document and a reference provided in this section Of Part OPS to that document.

comment *1486* ☐ comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM3 OPS.GEN.310(a)(2) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 190-191

comment *1486* ☐ comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC OPS.GEN.310(a)(7) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 192

comment *1486* ☐ comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

comment *1493* comment by: *Airbus*

Is it always true that "passengers should be evenly distributed in the cabin"? Required distribution of passengers may depend on particular aircraft type, cabin configuration, fuel load, cargo load…

The text in the existing regulation, Appendix 1 to OPS 1.605, paragraph (d), should be adopted.

comment *2404* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

There is no definition of 'worst case'. There have to be reasonable assumptions -Boeing and Airbus curtail the trim envelope around **reasonable assumptions.** [A worst case could be all passengers forward or aft queuing for the toilets but this is highly unlikely]

Proposal:

Use the Boeing/Airbus terminology based upon reasonable assumptions.

comment *3210* comment by: *AEA*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

comment *3735* comment by: *AUSTRIAN Airlines*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

comment *4418* comment by: *KLM*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS

(Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

comment *4772* comment by: *TAP Portugal*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

comment *4810* comment by: *British Airways Flight Operations*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4993* comment by: *Deutsche Lufthansa AG*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1.605 paragraph d 2

comment *5556* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

CG limits - operational CG envelope – commercial air transport

*'Operator procedures should fully account for the **worst case variation** of CG travel during flight caused by passengers/crew movement and fuel consumption/transfer*

Comment:

This requirement (reference to worst case variant) is different from EU-OPS (Appendix 1 to EU-OPS 1.605 para d 2 which states that there is a need to take account for the extreme variation which according to the manufacturers' mass and balance manual does not mean the worst case scenario). Such a requirement would be impractical and it could have significant impact on flight operations.

Proposal:

Realign with the exact wording of Appendix 1 to EU-OPS 1,605 paragraph d 2

comment *7033* comment by: *IACA International Air Carrier Association*

There is no definition of 'worst case'. There have to be reasonable assumptions -Boeing and Airbus curtail the trim envelope around reasonable assumptions. A worst case could be all passengers forward or aft queuing for the toilets but this is highly unlikely.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM OPS.GEN.310(a)(7) Mass and balance system - complex motor-powered p. 192-193

aircraft used in non-commercial operations and aircraft used in commercial operations

comment *1486* ☐ comment by: *Airbus*

The subtitles of these AMC and GM show that they are applicable to aircraft used in commercial air transport only. One may wonder why these AMC/GM are located in AMC/GM Subpart A (General operating and flight rules) instead of Subpart B (Commercial Air Transport).

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC OPS.GEN.310(a)(8) and (b) Mass and balance system - complex motor-powered aircraft used in non-commercial operations and aircraft used in commercial operations p. 193-194

comment *493* comment by: *EHOC*

Paragraph 6.

It would appear that on-board systems are not covered explicitly; the following text should be added to the AMC:

"On-board mass and balance systems may be used as a primary source for despatch."

comment *730* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.310(a)(8) and (b): Transfer to IR (OPS.GEN.310) except points 3 and 6.

Justification:

These requirements are vital for flight safety and shall not be subject to interpretation.

comment *731* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.310(a)(8) and (b): Reintroduce requirement of Appendix 1 to OPS 1.625 (d) :

Datalink. When mass and balance documentation is sent to aeroplanes via datalink, a copy of the final mass and balance documentation as accepted by the commander must be available on the ground.

Justification:

Maybe better inserted into AMC OR.OPS.030.MLR.

comment *3211* comment by: *AEA*

Relevant Text:
paragraph 3
Comment:
Editorial: There are two paragraphs 3
Proposal:
change 2nd para. 3 into para. 4

comment *3737* comment by: *AUSTRIAN Airlines*

Relevant Text:
paragraph 3
Comment:
Editorial: There are two paragraphs 3
Proposal:
change 2nd para. 3 into para. 4

comment *4573* comment by: *KLM*

Relevant Text:
paragraph 3
Comment:
Editorial: There are two paragraphs 3
Proposal:
change 2nd para. 3 into para. 4

comment *4774* comment by: *TAP Portugal*

Relevant Text:
paragraph 3
Comment:
Editorial: There are two paragraphs 3
Proposal:
change 2nd para. 3 into para. 4

comment *4994* comment by: *Deutsche Lufthansa AG*

Relevant Text:

paragraph 3

Comment:

Editorial: There are two paragraphs 3

Proposal:

change 2nd para. 3 into para. 4

comment *5238* comment by: *Virgin Atlantic Airways*

Comment:

There are two paragraphs numbered 3

comment *5557* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

paragraph 3

Comment:

Editorial: There are two paragraphs 3

Proposal:

change 2nd para. 3 into para. 4

comment *5940* comment by: *DGAC*

Proposal: Insert a new 2. and renumber the following paragraphs accordingly:

2. Subject to the approval of the competent authority, an operator may omit some of this Data from the mass and balance documentation.

3 ~~2~~. For Performance Class B

Justification: The provision of Subparagraph (a)(1)(ii) of Appendix 1 to EUOPS/JAROPS 1/3.625 has been omitted with no justification in the explanatory note. It should therefore be reintroduced :

(3) and (3) : there are two paragraphs (3)

(6): What does "via data" mean ?

comment *5955* comment by: *Irish Aviation Authority*

Comments:

Incorrect paragraph numbering, there are 2 paragraph "3"s.

Appendix 1 to JAR-OPS 3.625, paragraph c) permits the use of approved onboard mass and balance systems. This has been omitted and an additional

subparagraph 9 needs to be added as detailed below.

Proposed text:

9. On-board mass and balance systems. An operator must obtain the approval of the Authority if he wishes to use an on-board mass and balance computer system as a primary source for despatch.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC OPS.GEN.315.B(b) Performance - general p. 194

comment *5135* comment by: *UK CAA*

Page No: 194

Paragraph No:

GM OPS.GEN.315.B(b)

Comment:

Balloon pilots should be permitted to determine the suitability of a site in a congested area using criteria pre-determined by the competent authority.

Justification:

Requiring the competent authority to carry out a site inspection and issue an approval is too onerous and restrictive on the industry.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC1 OPS.GEN.320.A(a) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 194-195

comment *445* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.GEN.320.A(a): change as follows:

4. the runway slope in the direction of take-off**, including the effects of non-linear runway slope** ;

Justification:

Runway slope definitions are not unambiguous. As take-off performance may have an acceleration phase and a deceleration phase, concave or convex runway slope may have a detrimental effect on aircraft performance, although the slope figure (depending upon the calculation method) may evaluate to zero or close to zero. State-of-the art requires the inclusion of these non-linear effects on take-off performance.

comment *457* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.GEN.320.A(a): include current text under AMC1 OPS.GEN.320.A(3) under OPS.GEN.320.A or OPS.GEN.315

3. the runway surface condition and the type of runway surface;

Justification:

The list under proposed AMC1 OPS.GEN.320.A(a) is either a consequence of physics or agreed upon for many years (headwind/tailwind). The list does not need the flexibility of AMC material and should be included in OPS.GEN.320.A. As the list is partially or completely repeated for other phases of flight, further improvement and simplification of the regulation could be achieved by moving the list to OPS.GEN.315.

comment *1777* comment by: *claire.amos*

Point 3

Type of runway surface?

comment *3869* comment by: *M Wilson-NetJets*

Original text:

(5) not more than 50% of the reported head-wind component or not less than 150% of the reported tailwind component; and

Suggested new text:

No suggested text

Comment/suggestion:

Better clarification is required to include or not include forecasted/expected gusts in the performance calculation.

comment *5943* comment by: *DGAC*

This paragraph applies to CMPA used in non commercial operations but (6) refers to AMC OPS.CAT.A.316(a)(4) which is for CAT operations only. Performance classes A and C are not applicable for non CAT operations because the performances classes definition is in CAT subpart.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC2 OPS.GEN.320.A(a) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 195

comment *5944* comment by: *DGAC*

Proposal:

Clarify "best information available"

Justification:

As such the wording is a bit vague and loose…

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM1 OPS.GEN.320.A(a) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 195

comment *3492* comment by: *UK CAA*

Page No: 195 of 464

Paragraph No:

AMC2 OPS.GEN.320.A(a)

Comment:

The operation of complex motor-powered aeroplanes on contaminated runways should only be based on appropriate performance data that has been subject to oversight approval of some form.

Justification:

Relying on the use of "the best information available" is potentially too hazardous for complex motor-powered aeroplanes.

Proposed Text (if applicable):

Wet and contaminated runway performance data, if made available by the manufacturer, should be taken into account. If such data is not made available, the operator should account for wet and contaminated runway conditions by using the best information available**, acceptable to the Member State**.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - AMC1 OPS.GEN.320.A(b) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 195

comment *514* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.GEN.320.A(b): Upgrade to OPS.GEN:

Justification:

In line with the original phraseology used in EU-OPS 1.495(f) requiring that an operator shall establish contingency procedures AMC status is inappropriate and the requirement should be move to the rule.

comment *1720* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.GEN.320.A(b): Move text to OPS.GEN.320.A(c)

The proposed text under AMC1 OPS.GEN.320.A(b) is an essential safety requirement and does not need the flexibility of AMC material and should be moved to the rule as a new paragraph OPS.GEN.320.A(c)

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM1 OPS.GEN.320.A(b) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 195-196

comment *5945* comment by: *DGAC*

The title is "Take-off" but this paragraph concerns also landing.

B. II. Draft Decision - Part-OPS - Subpart A - Section III - GM2 OPS.GEN.320.A(b) Take-off - complex motor-powered aeroplanes used in non- commercial operations and aeroplanes used in commercial operations p. 196

comment *5946* comment by: *DGAC*

For the adequate margin at take-off, the paragraph refers to ICAO annex 6 part 1 (international commercial air transport operations) although it concerns non commercial operations with CMPA.

It is not sufficient to refer to an ICAO annex : the regulation should clearly state what is the required margin for take-off with CMPA in non commercial operations and commercial operations.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.400(b) Instruments and equipments - General p. 197

comment *3213* comment by: *AEA*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *3745* comment by: *AUSTRIAN Airlines*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4576* comment by: *KLM*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4775* comment by: *TAP Portugal*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4995* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *5240* comment by: *Virgin Atlantic Airways*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation.

Proposal:

Realign with EU-OPS 1.630

comment *5558* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The equipment approval in OPS.GEN.400(b) means that the equipment should have an authorization or an approval in accordance with Part-21 (e.g. ETSO)

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM1 OPS.GEN.400(c) Instruments and equipments - General p. 197

comment *2340* comment by: *Austro Control GmbH*

General comment:

there is some disagreementwith AMC.OPS.GEN.405(a)(4) where it is stated that CRD's need some other kind of approval.

comment *3214* comment by: *AEA*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *3746* comment by: *AUSTRIAN Airlines*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4580* comment by: *KLM*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4776* comment by: *TAP Portugal*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *4996* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *5243* comment by: *Virgin Atlantic Airways*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS

implementation

Proposal:

Realign with EU-OPS 1.630

comment *5559* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Non-approved equipment

Comment:

This requirement and the full reference to Part-21 is not in line with EU-OPS 1.630 which refers to ETSO standard but also includes certain alleviations from this requirement in particular for equipment and instruments complying with design and performance specifications other than ETSO on the date of EU-OPS implementation

Proposal:

Realign with EU-OPS 1.630

comment *5964* comment by: *DGAC*

8. : Cut "GM OPS.GEN.400(e) Instruments and equipments - General " at the end of bullet number 8 and paste it at the beginning of page 198 (as a title for paragraph "ACCESSIBILITY AND POSITIONING OF INSTRUMENTS AND EQUIPMENT ")

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM2 OPS.GEN.400(c) Instruments and equipments - General p. 197-198

comment *47* comment by: *George Knight*

"ACCESSIBILITY AND POSITIONING OF INSTRUMENTS AND EQUIPMENT

This requirement implies that whenever an instrument is required in an aircraft operated in a multi-crew environment, the instrument needs to be visible from each flight crew station."

This is not sensible guidance in all aircraft – in particular training aircraft with tandem seating. Replication should be an acceptable alternative.

comment *350* comment by: *ECA - European Cockpit Association*

Comment: editorial change:

8. Sea anchors and equipment for mooring.~~GM OPS.GEN.400(e) Instruments and equipments - General~~

GM OPS.GEN.400(e) Instruments and equipments - General

ACCESSIBILITY AND POSITIONING OF INSTRUMENTS AND EQUIPMENT This requirement implies that whenever an instrument is required in an aircraft operated in a multi-crew environment, the instrument needs to be visible from each flight crew station.

comment *1742* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *4862* comment by: *IAOPA Europe*

If the proposal to accept a PLB to satisfy the ELT requirement then the PLB should be added to this list since a portable PLB should not be subject to a Part-21 approval.

Of course the PLB should still be approved by Caspass-Sarsat

comment *5966* comment by: *DGAC*

This paragraph misses its title which remained attached to the end of previous paragraph (GM2 OPS.GEN.400(c) Instruments and equipments – General)

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.405(a)(1) Equipment for all aircraft p. 198

comment *4778* comment by: *TAP Portugal*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist

passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *5736* comment by: *AS Miller*

OPS.GEN.405.Equipment for all aircraft

"...(1) except in the case of aerobatic flights...."

AMC.OP.GEN.405(a)(1) Equipment for all aircraft

Aerobatic aircraft are not the only ones to experience frequent, alternating, flight loads during normal operations. Launching gliders into lee wave system can require the tug aircraft to repeatedly climb and descend in the extremely turbulent air associated with strong air flows in the lee of mountains. Once off tow, the glider can climb in the smooth higher air, but the tug immediately returns for a further dose.

Proposal *change the wording in the IR to: "(1) except in the case of aerobatic, and other flights as approved by NAAs, at least one ....."*

and the AMC to:

2. For aerobatic, and other flights as approved by NAAs, the hand fire extinguishers may become a hazard due to frequent, alternating, flight loads.

comment *5970* comment by: *DGAC*

1. The GM is not the proper place to give the rational for the provision requiring hand fire extinguisher. Further more composite materials can be found in any part of any aircraft. Proposal : delete paragraph 1.

2. The GM is not the proper place to give the rational for the provision exempting hand fire extinguisher for aerobatic flights.

Proposal : Delete paragraph 2 and put a definition of aerobatic flights in OPS.GEN.010 Definitions "Any flights including manoeuvres other than…"

comment *6323* comment by: *Aero-Club of Switzerland*

We propose: 1. A hand fire extinguisher is mandatory on all powered aircraft with more than seven seats.

On other aircraft the carriage of fire extinguishers may be voluntary.

Justification: Fires can never be exluded in case of an accident or incident. We know, however, the risks of operating a powder fire extinguisher in flight: There will be instant IMC.

2. Onboard of aircraft performing aerobatic flights hand fire extinguishers may left on ground.

Justification: They may become a hazard due to high g-loads.

comment *7436* comment by: *European Sailplane Manufacturers*

A hand fire extinguisher is comple useless or even dangerous in the typically small environment of a glider.

Also there is no history of frequent accidents with fires for sailplanes.

The manufacturers oppose required installation of fire extinguishers for sailplanes.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.405(a)(2) Equipment for all aircraft p. 198

comment *3216* comment by: *AEA*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *3494* comment by: *UK CAA*

Page No: 198

Paragraph No:

AMC OPS.GEN.405(a)(2)

Comment:

This AMC should be Rule Material and incorporated into OPS.GEN.545 relating to cabin crew seats.

Delete AMC.OPS.GEN(a)(2).

Justification:

Inappropriate AMC material.

Proposed Text (if applicable):

OPS.GEN.545

Cabin Crew Seats

(a) Each seat for the minimum required cabin crew member shall be forward or rearward facing within 15° of the longitudinal axis of the aircraft.

(b) Seats for the minimum required cabin crew members shall be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

comment *3748* comment by: *AUSTRIAN Airlines*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *4583* comment by: *KLM*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *4818* comment by: *British Airways Flight Operations*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730(a)(6). It would have a huge impact in relation to Type III exits which cannot be justified. This proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to revert to the wording of EU-OPS

Proposal:

Change thie paragraph to: Seats for cabin crew members located near required floor level emergency exits except that, if the emergency evacuation of passengers would be enhanced by seating cabin crew members elsewhere, other locations are acceptable. Such seats shall be forward or rearward facing within 15° of the longitudinal axis of the aeroplane.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4997* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *5560* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Seats for the minimum required cabin crew members should be located close to the emergency exits and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Comment:

This new requirement is different from EU-OPS 1.730 a 6. It would have a

huge impact in relation to Type III exits which cannot be justified. This trade union (ETF) proposal was discussed in-depth within the JAA which concluded that such a proposal cannot be justified on safety grounds. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS and realign with EU-OPS 1.730 a 6

comment *5913* comment by: *ERA*

European Regions Airline Association Comment

SEATS FOR MINIMUM REQUIRED CABIN CREW

Seats for the minimum required cabin crew members should be **located close to the emergency exits** and where cabin crew members can best assist passengers in the event of an emergency evacuation.

The ERA Directorate would like to change the above text and

reference:

OPS 1.730

Seats, seat safety belts, harnesses and child restraint devices

(a) An operator shall not operate an aeroplane unless it is equipped with:

(…)

6. seats for cabin crew members located near required floor level emergency exits except that, if the emergency evacuation of passengers would be enhanced by seating cabin crew members elsewhere, other locations are acceptable.

Therefore, please change the current text to read:

SEATS FOR MINIMUM REQUIRED CABIN CREW:

Seats for the minimum required cabin crew members should be **located near required floor level emergency exits** and where cabin crew members can best assist passengers in the event of an emergency evacuation.

comment *7303* comment by: *ANE (Air Nostrum) OPS QM*

SEATS FOR MINIMUM REQUIRED CABIN CREW

Seats for the minimum required cabin crew members should be **located close to the emergency exits** and where cabin crew members can best assist passengers in the event of an emergency evacuation.

Reference:

OPS 1.730

Seats, seat safety belts, harnesses and child restraint devices

(a) An operator shall not operate an aeroplane unless it is equipped with:

(…)

6. seats for cabin crew members ***located near required floor level***

emergency exits *except that, if the emergency evacuation of passengers would be enhanced by seating cabin crew members elsewhere, other locations are acceptable.*

We therefore request to change the text as follows:

AMC OPS.GEN.405(a)(2) Equipment for all aircraft

SEATS FOR MINIMUM REQUIRED CABIN CREW:

Seats for the minimum required cabin crew members should be **located near required floor level emergency exits** and where cabin crew members can best assist passengers in the event of an emergency evacuation.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.405(a)(4) Equipment for all aircraft p. 198-200

comment *1743* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *2373* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial:

1.b. should say ... Paragraph 2. below

comment *2521* comment by: *Royal Aeronautical Society*

The word "RESTRAIN" that occurs twice in the heading should be "RESTRAINT".

comment *2703* comment by: *AOPA-Sweden*

"Should" shall be interpreted as "should", because a lot of older aircraft has an instrument indicating in mph and also some few older, usually annex 2 ones, over 2,000 kg indicating in km/h.

comment

2967 comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial:

1.b. It complies with paragraph ~~(b)~~ (2) below.

comment

3217 comment by: *AEA*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment

3493 comment by: *UK CAA*

Page No: 198

Paragraph No:

GM OPS.GEN.400(e) Instruments and Equipment – General

Comment:

The title has been attached to GM OPS.GEN.400(c) paragraph 8.

Justification:

Formatting error

Proposed Text (if applicable):

GM2 OPS.GEN.400(c) Instruments and equipments - General

LIST OF NON-APPROVED EQUIPMENT

The following items are typical examples of equipment which do not need an equipment approval:

1. Electric torch;
2. 2. Accurate time piece;
3. 3. Child restraint devices
4. 4. Chart holder;
5. 5. First aid kits;

6. 6. Megaphones;

7. 7. Survival and signalling equipment;

8. Sea anchors and equipment for mooring.~~*GM OPS.GEN. 400(e) Instruments and equipments - General*~~

GM OPS.GEN. 400(e) Instruments and equipments - General

comment *3495* comment by: *UK CAA*

Page No: 198

Paragraph No:

AMC OPS.GEN.405(a)(4)

Comment:

Spelling corrections in heading

Justification:

Editorial

Proposed Text (if applicable):

RESTRAIN***T*** DEVICES FOR PERSON***S*** YOUNGER THAN 24 MONTHS - CHILD RESTRAIN***T*** DEVICES (CRD)

1. A child restraint device (CRD) is considered to be acceptable if:

comment *3750* comment by: *AUSTRIAN Airlines*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment *4585* comment by: *KLM*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of

standards as they evolved

comment *4779* comment by: *TAP Portugal*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment *4792* comment by: *Virgin Atlantic Airways*

Relevant Text:

1. Typo in heading. 'Restrain' should be 'Restraint'.
2. "1b: It complies with paragraph (b) below."

Comment:

There are two paragraphs (b) below, i.e. 2b and 3b.

Comparing the text to ACJ OPS1.730(a)(3), it seems that the text should read as in 'proposed text' below.

Note: Typo in heading: 'Restrain' should be 'Restraint'.

Proposed Text:

1. 'Restrain' should be 'Restraint'.
2. "1b: It complies with paragraph 2 below."

comment *4812* comment by: *Virgin Atlantic Airways*

Relevant Text:

"3d. …….An aisle passenger seat or a cross aisle passenger seat is not recommended. Other locations may be acceptable provided the access of neighbour passengers to the nearest aisle is not obstructed by the CRD. "

Comment:

Cross-aisle seats with a bulkhead immediately in front are the normal locations for baby bassinette positions and so often requested by passengers with CRDs.

I can see a case for CRDs not being in cross-aisles that are directly between exits i.e. without a bulkhead, as these form part of the evacuation route. Unless there is anyone safety case that I am missing, I propose…….

Proposed Text:

"…….An aisle passenger seat or a ~~cross-aisle~~ passenger seat in a cross-aisle

that forms part of the evacuation route to exits is not recommended. Other locations may be acceptable provided the access of neighbour passengers to the nearest aisle is not obstructed by the CRD. ”

comment *4998* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment *5118* comment by: *Elaine Allan Monarch*

Page No. 199

Ref No. NPA 2009 – 02b OPS.GEN.405 (a) 4 page 199 of 464.

Summary of EASA Proposed Requirement:

Restraint devices for persons younger than 24 months- child restraint devices (CRD)

3. d An aisle seat or a cross aisle passenger seat is not recommended. Other locations may be acceptable provided the access of neighbour passengers to the nearest aisle is not obstructed by the CRD.

Comment:

Cross aisle seats with a bulkhead in front but ones that do not form part of an evacuation route are popular for families with CRDs. They do not disturb passengers in front and have slightly more legroom.

Justification:

Any aisle that form part of an evacuation route should be clear of obstructions such as CRDs. However not all cross aisle seats are evacuation routes.

Proposed Text (if applicable)

An aisle seat or cross- aisle passengers seat **that form part of the evacuation route** is not recommended**.**

Other locations may be acceptable provided the access of neighbour passengers to the nearest aisle in not obstructed by the CRD.

comment *5561* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment *5919* comment by: *ERA*

European Regions Airline Association Comment

There is a typo in sub paragraph 1. b.

Therefore, request to change the text as follows:

b. It complies with **paragraph (2) below**.

comment *5974* comment by: *DGAC*

The text of (1)(b) is not accurate. The CRD should not only comply with (b) of either of paragraphs 2, 3, 4 & 5 but should comply with all the provisions. Replace (1)(b) by "It complies with paragraph**s (2), (3), (4) & (5) below**".

comment *6858* comment by: *Icelandair*

Relevant Text:

AMC OPS.GEN.405(a)(4)

Comment:

Some of the referred standards for child restraint devices are evolving and would therefore better be placed in guidance material

Proposal:

Downgrade some of the standards to guidance material to allow updates of standards as they evolved

comment *7040* comment by: *IACA International Air Carrier Association*

1.b.

Does EASA mean "paragraph 2. Below" instead to "paragraph (b)" ?

comment *7304* comment by: *ANE (Air Nostrum) OPS QM*

There is a typo in sub paragraph 1. b.

Therefore, request to change the text as follows:

b. It complies with paragraph (2) below

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410(a)(2) Flight instruments and equipment - VFR flights p. 200

comment *494* comment by: *EHOC*

General

There is compliance methods here for two areas of operation - carried over to CAT as described in AMC OPS.CAT.410:

"All AMCs to OPS.GEN.410 and OPS.GEN.415 should be used to show compliance with OPS.CAT.410 and OPS.CAT.415 as applicable."

However, the method of compliance contained here covers only: non-complex non-commercial; and complex motor-powered aircraft. What applies to all other type of operation?

comment *3496* comment by: *UK CAA*

Page No: 200

Paragraph No:

AMC OPS.GEN.410(a)(2)

Comment:

The text describes methods of compliance for two areas of operation - carried over to CAT as described in AMC OPS.CAT.410: "All AMCs to OPS.GEN.410 and OPS.GEN.415 should be used to show compliance with OPS.CAT.410 and OPS.CAT.415 as applicable."

However, the method of compliance contained covers only: non-complex non-commercial; and complex motor-powered aircraft.

All other types of operation need to be addressed; additional text to be developed as necessary.

Justification:

Clarification

comment *3698* comment by: *Civil Aviation Authority of Norway*

Comment:

The text describes methods of compliance for two areas of operation - carried over to CAT as described in AMC OPS.CAT.410: "All AMCs to OPS.GEN.410 and OPS.GEN.415 should be used to show compliance with OPS.CAT.410 and OPS.CAT.415 as applicable."

However, the method of compliance contained here covers only: non-complex non-commercial; and complex motor-powered aircraft.

What applies to all other types of operation?

Justification:

Clarification

comment *5875* comment by: *Danish Powerflying Union*

We also find use of a wrist watch displaying hours, minutes and seconds sufficient for operating other than complex motor-powered aircrafts on VFR flights.

comment *6556* comment by: *Sloane Helicopters Ltd*

AMC OPS.GEN.410(a)(4)

A number of helicopters are fitted with ASI calibrated in MPH. This could lead to confusion and danger of speed exceedance and conflict the aircraft's manual.

comment *6574* comment by: *Baden-Württembergischer Luftfahrtverband*

AMC OPS.GEN.410(a)(2)

Wording in the NPA

1. For other than complex motor-powered aircraft not involved in commercial operations, a means of measuring and displaying the time in hours, minutes and seconds may be a wrist watch capable of the same functions.

Our proposal

Keep this wording

Issue with current wording

We support this regulation

Rationale

Many especially small aircraft and sailplanes do not have clocks built into the panel often due to space limitations. Since pilots usually carry wrist watches a second clock in the panel would be an unnecessary.

comment *7439* comment by: *European Sailplane Manufacturers*

For tapical sailplane operations even requiring only a wrist watch showing not only the hours and minutes but also the seconds is too onerous because it is not needed.

Opposed by the manufacturers.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410(a)(3) Flight instruments and equipment - VFR flights p. 200

comment *351* comment by: *ECA - European Cockpit Association*

Comment: change as follows:

2. In the case of sailplanes **,** ~~**and**~~ balloons **and aerobatic aeroplanes,** calibration in metres (m) is acceptable.

comment *1389* comment by: *Royal Danish Aeroclub*

We see no real reason to prohibit altimeters for VFR-flights to display in meters or feet.

The text should be changed to "...calibrated in feet (ft) or meters (m)...".

Paragraph 2. should be deleted.

comment *1454* comment by: *R Spiers*

AMC OPS.GEN.410(a)(4)

Calibration of ASI in MPH (miles per hour) should be an acceptable AMC for a non complex helicopter, especially in non commercial flight

Reason

A number of helicopters (e.g. Bell Jet Ranger) are fitted with ASI calibrated in MPH. This references air speeds given in the Pilot Operating Handbook. There is no safety case to change the helicopter's equipment and manual. Not to allow a MPH ASI would be dangerous, as confusion could arise between knots and MPH, and limitation speeds could be exceeded, creating danger.

Suggested Text:

AMC OPS.GEN.410(a)(4)

CALIBRATION OF THE INSTRUMENT INDICATING AIR SPEED – SAILPLANES, AEROPLANES AND HELICOPTERS

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certified take-off mass below 2000 kg, and other non-complex aeroplanes and helicopters with a maximum certified take-off mass below 2000 kg, calibration in kilometres (km) per hour or statute miles (mph) per hour is acceptable.

comment *2702* comment by: *AOPA-Sweden*

This part cannot be applicable on third country aircraft, because if you change the altimeter from hg/inch to hectopascals, the aircraft is not airworthy anymore by the originator. "Should" shall be interpreted as "should"

comment *5876* comment by: *Danish Powerflying Union*

We see no reason to demand pressure altitude to be displayed in feet (ft) only.

We suggest following text:

The instrument measuring and displaying pressure altitiude should be calibrated in feet (ft) **or meters (m)**, with a sub-scale....

comment *6098* comment by: *DGAC*

Proposal:

Add "3. In case of flight remaining outside of controlled areas, a non ajustable altimeter is acceptable."

comment *6575* comment by: *Baden-Württembergischer Luftfahrtverband*

AMC OPS.GEN.410(a)(3)

Wording in the NPA

1. The instrument measuring and displaying pressure altitude should be calibrated in feet (ft), with a sub-scale setting, calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight.

2. In the case of sailplanes and balloons, calibration in metres (m) is acceptable.

Our proposal

2. In the case of sailplanes and balloons and other than complex motor-powered aeroplanes with a maximum certificated take-off mass below 2 000 kg, calibration in metres (m) is acceptable

Issue with current wording

It is usefull if tow planes have the same altitude indication as the towed sailplanes

Rationale

Aeroplanes mainly used for sailplane towing are often equipped with altitude measuring instruments calibrated in meters to match the instruments in the sailplanes. We strongly support the option to have instruments calibrated in meters since this is the usual instrumentation for all sailplanes in Germany. This change aligns this rule with AMC OPS.GEN.410(a)(4).

comment *7442* comment by: *European Sailplane Manufacturers*

For sailplanes calibration in metres or feet is accepted.

We consider this also being true for all type of VFR operations.

comment *7610* comment by: *AOPA UK*

(a)(3)1 This part cannot be applicable on third country. aircraft, because if you change the altimeter from hg/inch to hectopascals, the aircraft is not airworthy anymore by the originator. "Should" shall be interpreted as "should"

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410(a)(4) Flight instruments and equipment - VFR flights p. 200

comment *1365* comment by: *Helicopter Club of Great Britain*

Page 200

AMC OPS.GEN.410(a)(4)

Calibration of ASI in Miles Per Hour should be an acceptable AMC for a non complex helicopter, especially in non commercial flight

Reason

Many helicopters (e.g. Bell Jet Ranger) are fitted with ASI calibrated in MPH. This references air speeds given in the Pilot Operating Handbook. There is no safety case to change the helicopter's equipment and manual. Not to allow a MPH ASI would be dangerous, as confusion could arise between knots and MPH, and limitation speeds could be exceeded, creating danger.

Suggested Text:

AMC OPS.GEN.410(a)(4)

CALIBRATION OF THE INSTRUMENT INDICATING AIR SPEED – SAILPLANES, AEROPLANES AND HELICOPTERS

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certified take-off mass below 2000 kg, and other non-complex aeroplanes and helicopters with a maximum certified take-off mass below 2000 kg, calibration in kilometres (km) per hour or statute miles (mph) per hour is acceptable.

comment *1419* comment by: *Royal Danish Aeroclub*

There is no reason not to use air speed indicators displaying kilometers or knots for all VFR flights.

Knots is not neccessary as long as the limitations placards show the limitations in the same unit and the speed indicator shows the speed limitations.

comment *1442* comment by: *Mike Pascall*

Page 200

AMC OPS.GEN.410(a)(4)

Calibration of ASI in Miles Per Hour should be an acceptable AMC for a non

complex helicopter, especially in non commercial flight

Reason

Many helicopters (e.g. Bell Jet Ranger) are fitted with ASI calibrated in MPH. This references air speeds given in the Pilot Operating Handbook. There is no safety case to change the helicopter's equipment and manual. Not to allow a MPH ASI would be dangerous, as confusion could arise between knots and MPH, and limitation speeds could be exceeded, creating danger.

Suggested Text:

AMC OPS.GEN.410(a)(4)

CALIBRATION OF THE INSTRUMENT INDICATING AIR SPEED – SAILPLANES, AEROPLANES AND HELICOPTERS

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certified take-off mass below 2000 kg, and other non-complex aeroplanes and helicopters with a maximum certified take-off mass below 2000 kg, calibration in kilometres (km) per hour or statute miles (mph) per hour is acceptable.

comment *1529* comment by: *Chris Fox*

Many older light helicopters are ftted with ASI's calibrated in statue Miles Per Hour, and the associated Flight Manual limitations are given in M.P.H.

There is no basis for requiring these aircraft to change their ASI's, and indeed it could cause additional hazards due to confusion between Flight Manual limits in given in MPH and instruments reading knots.

Where already fitted and appropriately certified, continued use of ASI's calibrated in M.P.H. should be permitted.

comment *1670* comment by: *JSLEE*

Page 200

AMC Ops. Gen.410(a)(4)

The proposal to replace ASI calibrated in MPH.

I can only assume this a tongue in the cheek suggestion by EUC bureaucrats. What does it achieve? There are thousands of fixed wing aircraft fitted with MPH ASI'S why are they not required to change. An aircraft fitted with an ASI calibrated in MPH has an operator's handbook which contains the aircraft performance figures which are calculated in MPH and are issued by the manufacturer and can only be changed by them. Are ESEA going to pay the manufacturers to amend them? What if the manufacturer no longer exists?

The fact that the proposal excludes those helicopters fitted with ASI'S calibrated in KPH it is clearly aimed at non main land European manufactured helicopter's which is at least prejudicial.

comment *1760* comment by: *Richard Dawson*

(d)(1)(i)

There is no reason to standardise on knots. Many helicopters e.g. Jetrangers use different units and these are supported by the operating documentation. This would require new instruments for no benefit.

comment *1873* comment by: *Aeromega*

Why should airspeed indicators have to be calibrated in knots. Many ASI's are currebntly calibrated in MPH they are no less safe providing pilots are aware of the units in use. This requirement simply increases the cost of compliance with no increase in safety. It cannot be justified.

comment *2414* comment by: *Denis Ferranti Meters*

AMC.OPS.GEN410.(A)(4)

States that ASI should be calibrated in Kt or Kms.

This rule has no provision for MPH marking which some older helicopters have. It is disproportionate to expect owners to change the ASI purely to fall into line with a law requiring a pointless recalibration which changes nothing other than the frustration level of an owner. It is also costly.

Recommendation: Allow the rule to include MPH as a calibration on the ASI

comment *2620* comment by: *John Matchett*

There is no benefit in changing calibration of ASI in mph when pilots are rated accordingly. Such a change could prove dangerous for a pilot who has never used any other form of ASI measurement.

comment *2704* comment by: *AOPA-Sweden*

"Should" shall be interpreted as "should", because a lot of older aircraft has an instrument indicating in mph and also some few older, usually annex 2 ones, over 2,000 kg indicating in km/h.

comment *3437* comment by: *Peter Waldron*

The calibration of the Air Speed Indicator in MPH should be acceptable for a non complex helicopter and especially those involved in non commercial flight.

Those helicopters already fitted with ASI in MPH refer to the Pilot Operating Manual with air speeds provided. There can be no case to change the helicopter's equipment and manual. If necessitated, this could be dangerous and may cause confusion between knots and MPH.

Therefore calibration in Kilometres (km) per hour or statute miles (mph) per

hour should be acceptable.

comment *4863* comment by: *IAOPA Europe*

Calibration in mph should also be accepted - particularly for aeroplanes other than complex motor-powered aeroplanes. This calibration the standard in some older GA aircraft imported from the US.

comment *5317* comment by: *Light Aircraft Association UK*

This AMC should be altered to allow airspeed indicators to be in miles per hour if the operators' manual gives limitations in these units, for non-complex aircraft.

comment *5348* comment by: *European Private Helicopter Alliance*

Page 200

AMC OPS.GEN.410(a)(4)

Calibration of ASI in Miles Per Hour should be an acceptable AMC for a non complex helicopter, especially in non commercial flight

Reason

Many helicopters (e.g. Bell Jet Ranger) are fitted with ASI calibrated in MPH. This references air speeds given in the Pilot Operating Handbook. There is no safety case to change the helicopter's equipment and manual. Not to allow a MPH ASI would be dangerous, as confusion could arise between knots and MPH, and limitation speeds could be exceeded, creating danger.

Suggested Text:

AMC OPS.GEN.410(a)(4)

CALIBRATION OF THE INSTRUMENT INDICATING AIR SPEED – SAILPLANES, AEROPLANES AND HELICOPTERS

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certified take-off mass below 2000 kg, and other non-complex aeroplanes and helicopters with a maximum certified take-off mass below 2000 kg, calibration in kilometres (km) per hour or statute miles (mph) per hour is acceptable.

comment *5877* comment by: *Danish Powerflying Union*

Air Speed indication in miles per hours should also be accepted for other than complex motor-powered aeroplanes.

comment *6469* comment by: *George Heritage*

410(a) (4) - Quite unnecessary and badly thought-out.

comment *6576* comment by: *Baden-Württembergischer Luftfahrtverband*

AMC OPS.GEN.410(a)(4)

Wording in the NPA

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certificated take-off mass below 2 000 kg and aeroplanes other than complex motor-powered aeroplanes with a maximum certificated take-off mass below 2 000 kg, calibration in kilometres (km) per hour is acceptable.

Our proposal

We strongly support this wording especially also the inclusion of aeroplanes.

Issue with current wording

None

Rationale

All sailplanes in Germany are equipped with speed indicators calibrated in km/h. Especially tow planes are often also equipped with speed indicators calibrated in km/h to match the indication in the towed sailplane.

comment *6774* comment by: *Clive Morrell*

'Air Speed Indicators should be calibrated in knots (kts)'

Comment; There are many light aircraft, including he licopters, with Air Speed Indicators calibrated in Miles per Hour. This is particularly the case with aircraft of US manufacture.

It would be very expensive to change these ASI s with all the associated extra work of amending limitations and flight manuals etc. Such changes could also be positively dangerous.

Light aircraft have been flying in European airspace for decades with MPH calibrated Air Speed Indicators with no problems. Why change now?

comment *6839* comment by: *EFLEVA*

The EFLEVA notes that the AMC must be changed to allow, for non-complex aircraft, airspeed indicators to be calibrated in miles per hour if the operators manual uses these units.

comment *7182* comment by: *Paul Monahan*

AMC OPS.GEN.410(a)(4). I object to this proposal. Not to allow calibration of ASI in mph would be confusing and very dangerous.

comment *7270* comment by: *DHV*

AMC OPS.GEN.410(a)(4)

Calibration of ASI in Miles Per Hour should be an acceptable AMC for a non complex helicopter, especially in non commercial flight

Reason

Many helicopters (e.g. Bell Jet Ranger) are fitted with ASI calibrated in MPH. This references air speeds given in the Pilot Operating Handbook. There is no safety case to change the helicopter's equipment and manual. Not to allow a MPH ASI would be dangerous, as confusion could arise between knots and MPH, and limitation speeds could be exceeded, creating danger.

Suggested Text:

AMC OPS.GEN.410(a)(4)

CALIBRATION OF THE INSTRUMENT INDICATING AIR SPEED – SAILPLANES, AEROPLANES AND HELICOPTERS

The instrument indicating air speed should be calibrated in knots (kt). In the case of sailplanes with a maximum certified take-off mass below 2000 kg, and other non-complex aeroplanes and helicopters with a maximum certified take-off mass below 2000 kg, calibration in kilometres (km) per hour or statute miles (mph) per hour is acceptable.

comment *7416* comment by: *DAvid Monks*

Aviation standard IAS and TAS units are nauticle miles therefore calibration in MPH is not required.

comment *7503* comment by: *David George*

AMC.OPS.GEN.410 a4:-

"The instrument indicating airspeed should be calibrated in knots (kt)."

A number of helicopters have airspeed indicators that are calibrated in miles per hour and the reference speeds in their Pilot's Operating Handbooks are also in miles per hour. There is no safety case for this proposal - indeed, I believe it would lead to confusion and would increase the chance of operating limitations being exceeded.

comment *7611* comment by: *AOPA UK*

"Should" shall be interpreted as "should", because a lot of older aircraft has an instrument indicating in mph and also some few older, usually annex 2 ones, over 2,000 kg indicating in km/h.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC p. 200

OPS.GEN.410(b)(3) Flight instruments and equipment - VFR flights

comment *2313* comment by: *Ravenair*

Operator Comment on NPA 2009-02b

NPA 2009-02b contains the following statement, about which we make the representations below:

'AMC OPS.GEN.410(b)(3) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights

ALTIMETERS - AEROPLANES

The altimeters of aeroplanes operating VFR flights when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, and of IFR flights, should have counter drum-pointer or equivalent presentation.'

Cheshire Flying Services Limited Trading as Ravenair EU-OPS 1 AOC GB 1071. Aircraft types: MEP Class including PA23 Aztec, PA34 Seneca, PN68 Partenavia.

We hold exemption Exemption No F 0017: in respect of OPS 1.652 (c) Counter Drum Pointer Presentation, issued by the UK CAA.

Our company has held an exemption issued by the UK CAA since we became a JAROPS-1 operator. Our MEP fleet of aircraft (9 in total) have 3-Pointer Presentation Altimeters fitted. The exemption was granted on the basis that an acceptable safety case was submitted to the UK CAA.

The MEP aircraft that are operated have a restriction placed on them in the Operations Manual that they are not permitted to be operated above FL100. The aircraft operate both Public Transport (PT) /Commercial Air Transport (CAT), Aerial Work (AW) (Flight Training) and Privately.

In the past we had asked the UK CAA to check the MOR Safety Database to generate events that have occurred as a consequence of 3 pointer altimeters being used in aircraft restricted to operations below FL100. No such events were held in the database.

We note that the JAR-OPS1 / EUOPS-1 is only applicable to AOC operators who perform CAT flying. Therefore any other operations, private, aerial work which would include all types of aerial platform (helicopters, gliders, light aircraft) do not have the requirement to have Counter Drum presentations. This differs from other requirements such as Transponder type, approval requirements for RVSM/MNPS etc. As this mix of aircraft/traffic would see aircraft operated with differing altimeter equipment it cannot therefore be seen by the Agency as a significant safety issue. It could be argued that some MEP aircraft could be operated above FL100 with oxygen systems fitted as is offered in some AFM's. From commercial operations that we have knowledge of it is unlikely that such systems are fitted. Even if operators fit oxygen systems to MEP aircraft, this would place similar operations to ours into the 'rarely' above FL100 category as opposed to the 'never' above FL100 category, which is as per the research we have performed on commercial helicopter operations. The Agency is likely to refrain from requiring helicopters to fit Counter Drum presentations, as they 'rarely' fly above FL100.

NPA 2009-02A Paragraph 80 contains the following:

'The implementing rules do not require helicopters to be equipped with a counter drum pointer altimeter because it was not required in JAROPS 3. The justification given by the former JAA Helicopter SubSectorial Team (HSST) was that it is questionable whether the ICAO Standard is sustainable for helicopters operating predominantly below Flight Level (FL) 100.'

Another option for the Agency is to specify that any operator wishing to avail itself of an exemption must prohibit flight above FL100 in its Operations Manual. There are similar prohibitions on flight above FL80 for non-BRNAV equipped aircraft already, and above FL280 for non-RVSM equipped aircraft, so such a system of level restrictions is already in operation and accepted by operators and the legislative, and is entirely workable.

All of our aircraft have two of the same type of altimeter fitted, not one three pointer and one counter drum as some aircraft have.

The majority of our MEP operations are conducted in VFR conditions. Flight training, Survey flying.

Commercial considerations exist in the procurement, modification process and EASA/National fees, aircraft downtime and labour and pilot training. The lead time required is lengthy and as an operator we would be commercially unable to commit to the cost of the project without knowing the outcome of EASA/EUOPS decision. Due to our fleet size we estimate that retrofit of this type of equipment would cost in the region of 150,000.00 GBP to 175,000.00 GBP depending on the equipment, EASA/National Fees and exchange rates.

The types of aircraft operated continue to provide vital support to customers who include governments, environmental organisations, health authorities, financial community and afford access to aerodromes where larger aircraft cannot be operated.

comment *3497* comment by: *UK CAA*

Page No: 200

Paragraph No:

Title - AMC OPS.GEN.410(b)(3)

Comment:

Incorrect reference.

Justification:

Incorrect reference.

Proposed Text (if applicable):

AMC OPS.GEN.410~~(b)~~***(a)***(3)

comment *3498* comment by: *UK CAA*

Page No: 200

Paragraph No:

AMC OPS.GEN.410(b)(3) and OPS.GEN.415(a)

Comment:

Although this reflects the requirement in EU-OPS, the UK CAA has consistently argued that this is not a reasonable requirement. Only when an aeroplane with a three pointer type altimeter flies above 10,000 feet is there any possibility of confusion being caused by the third pointer (which displays units of tens of thousands of feet). Therefore, the undoubted safety benefit of a counter drum-pointer altimeter only comes into effect when an aircraft flies above 10,000 feet. If an aeroplane is subject to an operational limit whereby it does not fly above 10,000 feet, altimeters other than those with a counter drum-pointer indicator would provide the pilot with an equivalent presentation to that achieved with a counter drum-pointer altimeter. A safety level equivalent to that attained by OPS 1.652(c) would be achieved.

The requirement for a counter drum-pointer display altimeter to be be restricted to pressurised aeroplane conducting operations above 10,000 feet. Below 10,000 feet with unpressurised aeroplanes a three-pointer display is acceptable.

Justification:

Inappropriate Requirement.

Proposed Text (if applicable):

ALTIMETERS - AEROPLANES

(a) The altimeters of aeroplanes operating VFR flights when the ~~aircraft~~ ***aeroplanes*** cannot be maintained in a desired attitude without reference to one or more flight instruments, and of IFR flights, should have counter drum-pointer or equivalent presentation.

(b) Notwithstanding (a), unpressurised aeroplanes operating below 10,000 feet may be equipped with a three-pointer display altimeter.

comment *4472* comment by: *Directflight Limited*

NPA 2009-2b.

AMC OPS.GEN.410(b)(3) and OPS.GEN.415(a) Flight instruments and equipment – VFR flights and flight instruments and equipment – VFR night flights and IFR flights.

ALTIMETERS - AEROPLANES

It is unclear what is meant by "aeroplanes operating VFR flights when the aircraft cannot be maintained in the desired attitude without reference to one or more flight instruments". Are not all flight instruments used on all flights to a greater or lesser degree in order to maintain and refine the desired attitude?

Are these flights (whatever they are) together with IFR flights demonstrably safer when operating below 10,000 ft with counter drum-pointer altimeters than with either three pointer or counter drum altimeters?

Should there be a provision (alternative AMC?) for flights below 10,000 ft to operate with three pointer or counter drum altimeters?

comment *4925* comment by: *IAOPA Europe*

The requirement for counter drum-pointer for all aircraft operating IFR and and for VFR flight when the aircraft cannot be maintained in desired attitude without reference to one or more flight instruments is absolutely unacceptable for non-complex GA aircraft.

Most of these aircraft are unpressurised and therefore always operated below 10.000 ft because of oxygen requirements and there is therefore no safety gain in a counter drum-pointer. Helicopters are exempted from this requirement for the same reason.

This requirement would require the majority of the GA fleet operating IFR to ahve their altimters exchanged. The cost of this would be very significant with no safety benefit.

comment *5267* comment by: *DGAC*

Proposal : Renumber this AMC as follows :

"AMC OPS.GEN.410~~(b)~~**(a)**(3) and OPS.GEN.415(a)".

Justification: it is not (b)(3) of OPS.GEN.410 that deals with altimeters but (a)(3).

comment *5279* comment by: *DGAC*

Proposal:

Add: "Non-pressurized aeroplanes with a maximum take-off weight of 5700 kg or less, certificated with a single pilot crew, and operated at altitudes of less than 10000 ft, can be equipped with other than counter drum-pointer altimeter in designated airspace with approval of the competent authority."

Justification:

The 10000ft operating limit reduces the risk of misreading of the altimeter. And the installation of a new altimeter is very costly for small operators that operate at low altitudes in low traffic airspace.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410(b)(4) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights p. 201

comment *352* comment by: *ECA - European Cockpit Association*

Comment: change as follows as the whole text refers to limitations for helicopters:

AMC OPS.GEN.410**.H**(b)(4) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights

comment *817* comment by: *Lukas KISTLER*

In my opinion this AMC is unnecessary and can be ommited. It is not necessary to define how a stabilised heading is technically achieved.

comment *926* comment by: *REGA*

This AMC is unnecessary and can be omitted. It is not necessary to define how a stabilized heading is technically achieved.

comment *2328* comment by: *Ravenair*

Operator Comment on NPA 2009-02b

NPA 2009-02b contains the following statement, about which we make the representations below:

'AMC OPS.GEN.410(b)(3) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights

ALTIMETERS - AEROPLANES

The altimeters of aeroplanes operating VFR flights when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, and of IFR flights, should have counter drum-pointer or equivalent presentation.'

Cheshire Flying Services Limited Trading as Ravenair EU-OPS 1 AOC GB 1071. Aircraft types: MEP Class including PA23 Aztec, PA34 Seneca, PN68 Partenavia.

We hold exemption Exemption No F 0017: in respect of OPS 1.652 (c) Counter Drum Pointer Presentation, issued by the UK CAA.

Our company has held an exemption issued by the UK CAA since we became a JAROPS-1 operator. Our MEP fleet of aircraft (9 in total) have 3-Pointer Presentation Altimeters fitted. The exemption was granted on the basis that an acceptable safety case was submitted to the UK CAA.

The MEP aircraft that are operated have a restriction placed on them in the Operations Manual that they are not permitted to be operated above FL100. The aircraft operate both Public Transport (PT) /Commercial Air Transport (CAT), Aerial Work (AW) (Flight Training) and Privately.

In the past we had asked the UK CAA to check the MOR Safety Database to generate events that have occurred as a consequence of 3 pointer altimeters being used in aircraft restricted to operations below FL100. No such events were held in the database.

We note that the JAR-OPS1 / EUOPS-1 is only applicable to AOC operators who perform CAT flying. Therefore any other operations, private, aerial work which would include all types of aerial platform (helicopters, gliders, light aircraft) do not have the requirement to have Counter Drum presentations. This differs from other requirements such as Transponder type, approval requirements for RVSM/MNPS etc. As this mix of aircraft/traffic would see aircraft operated with differing altimeter equipment it cannot therefore be seen by the Agency as a significant safety issue. It could be argued that some MEP aircraft could be

operated above FL100 with oxygen systems fitted as is offered in some AFM's. From commercial operations that we have knowledge of it is unlikely that such systems are fitted. Even if operators fit oxygen systems to MEP aircraft, this would place similar operations to ours into the 'rarely' above FL100 category as opposed to the 'never' above FL100 category, which is as per the research we have performed on commercial helicopter operations. The Agency is likely to refrain from requiring helicopters to fit Counter Drum presentations, as they 'rarely' fly above FL100.

NPA 2009-02A Paragraph 80 contains the following:

'The implementing rules do not require helicopters to be equipped with a counter drum pointer altimeter because it was not required in JAROPS 3. The justification given by the former JAA Helicopter SubSectorial Team (HSST) was that it is questionable whether the ICAO Standard is sustainable for helicopters operating predominantly below Flight Level (FL) 100.'

Another option for the Agency is to specify that any operator wishing to avail itself of an exemption must prohibit flight above FL100 in its Operations Manual. There are similar prohibitions on flight above FL80 for non-BRNAV equipped aircraft already, and above FL280 for non-RVSM equipped aircraft, so such a system of level restrictions is already in operation and accepted by operators and the legislative, and is entirely workable.

All of our aircraft have two of the same type of altimeter fitted, not one three pointer and one counter drum as some aircraft have.

The majority of our MEP operations are conducted in VFR conditions. Flight training, Survey flying.

Commercial considerations exist in the procurement, modification process and EASA/National fees, aircraft downtime and labour and pilot training. The lead time required is lengthy and as an operator we would be commercially unable to commit to the cost of the project without knowing the outcome of EASA/EUOPS decision. Due to our fleet size we estimate that retrofit of this type of equipment would cost in the region of 150,000.00 GBP to 175,000.00 GBP depending on the equipment, EASA/National Fees and exchange rates.

The types of aircraft operated continue to provide vital support to customers who include governments, environmental organisations, health authorities, financial community and afford access to aerodromes where larger aircraft cannot be operated.

comment *3499* comment by: *UK CAA*

Page No: 201

Paragraph No:

AMC OPS.GEN.410(b)(4)

Comment:

The text indicates equipment standards in excess of ICAO Annex 6 Part III, Section III requirements for heading indicators.

Justification:

Requirement is disproportionate.

Proposed Text (if applicable):

HEADING INDICATOR - HELICOPTERS

Stabilised heading should be achieved ~~for VFR flights~~ by a gyroscopic direction indicator~~, whereas for IFR flights, this should be achieved through~~ ***which may be*** a magnetic gyroscopic direction indicator.

comment *3697* comment by: *Civil Aviation Authority of Norway*

Comment:

The text indicates equipment standards above both ICAO Annex 6 Part III, Section III requirements for heading indicators.

Justification:

Proportionate requirements

Proposed Text

(if applicable):

HEADING INDICATOR - HELICOPTERS

Stabilised heading should be achieved ~~for VFR flights~~ by a gyroscopic direction indicator~~, whereas for IFR flights, this should be achieved through~~ ***which may be*** a magnetic gyroscopic direction indicator.

comment *5042* comment by: *HDM Luftrettung gGmbH*

Clarify : indicators, selectors but information may be from the same source

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410 and OPS.GEN.415 Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights p. 201

comment *1869* comment by: *John Houseman*

I believe that these proposal are not necessary. They would be prohibitively expensive for home built and flown helicopters. Private Pilots and owners of home built helicopters are fully aware of the risks of flying their aircraft and take sensible and affordable precautions.

comment *7225* comment by: *Ryanair*

Change the to that in 1. line 3

comment *7652* comment by: *European Balloon Corporation*

(d) 2

Replace '2 miles (approximately 3.22 km)' by '3 km (1,6 NM)'

Justification: Wrong international system unit: the requirement is using US miles. This should be written in metres and aeronautical miles may be converted in brackets.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.410(c) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights p. 201

comment *3500* comment by: *UK CAA*

Page No: 201

Paragraph No:

AMC OPS.GEN.410(c) & OPS.GEN 415(a)

Comment:

Neither OPS.GEN.410(c) nor 415(a) has a reference to duplicate instruments and therefore no link to a rule.

Justification:

The AMC must be linked to the rules.

Proposed Text (if applicable):

OPS.GEN.410(c)

AEROPLANES AND HELICOPTERS IN MULTI-PILOT OPERATIONS

(c) Whenever two pilots are required for the operation ***and whenever duplicate instruments are required***, aeroplanes and helicopters shall be equipped with an additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), (b)(3) and (b)(4).

comment *3811* comment by: *Civil Aviation Authority of Norway*

Comment:

Neither OPS.GEN.410(c) nor 415(a) has a reference to duplicate instruments and therefore no link to a rule.

Justification:

The AMC must be linked to the rules.

Proposed Text

(if applicable):

OPS.GEN.410(c)

AEROPLANES AND HELICOPTERS IN MULTI-PILOT OPERATIONS

(c) Whenever two pilots are required for the operation, aeroplanes and

helicopters shall be equipped with an additional separate means of indicating (a)(3), (a)(4), (b)(1), (b)(2), (b)(3) and (b)(4) ***which can be achieved by duplicate instruments***.

comment *3914* comment by: *FOM ANWB MAA*

AMC OPS.GEN.410(c) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights

MULTI-PILOT OPERATIONS - DUPLICATE INSTRUMENTS - AEROPLANES AND HELICOPTERS

Duplicate instruments include separate displays for each pilot and separate selectors or other associated equipment where appropriate.

Clarify : indicators, selectors but information may be from the same source

comment *4276* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Clarify : indicators, selectors but information may be from the same source

comment *5334* comment by: *ALFA-HELICOPTER*

Clarify : indicators, selectors but information may be from the same source.

comment *5664* comment by: *ADAC Luftrettung GmbH*

Clarify : indicators, selectors but information may be from the same source

comment *5840* comment by: *Norsk Luftambulanse*

Clarify : indicators, selectors but information may be from the same source

comment *6204* comment by: *HSD Hubschrauber Sonder Dienst*

This AMC needs clarification on selectors and wether the source of the indicators have to be independent.

comment *7204* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.GEN.410(c) and OPS.GEN.415(a) Flight instruments and equipment - VFR flights and flight instruments and equipment - VFR night flights and IFR flights

MULTI-PILOT OPERATIONS - DUPLICATE INSTRUMENTS - AEROPLANES AND HELICOPTERS

Duplicate instruments include separate displays for each pilot and separate selectors or other associated equipment where appropriate.

Clarify: Indicators, selectors, but information may be from the same source

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.415(a)(1) Flight instruments and equipment - VFR night flights and IFR flights p. 201

comment *2705* comment by: *AOPA-Sweden*

This part cannot be applicable on third country aircraft, because if you change the OAT-meter from Fahrenheit to Celsius, the aircraft is not airworthy anymore by the originator. "Should" shall be interpreted as "should"

comment *7612* comment by: *AOPA UK*

This part cannot be applicable on third country (1) aircraft, because if you change the OAT-meter from Fahrenheit to Celsius, the aircraft is not airworthy anymore by the originator. "Should" shall be interpreted as "should"

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.415(a)(5) Flight instruments and equipment - VFR night flights and IFR flights p. 201

comment *2706* comment by: *AOPA-Sweden*

An EFB (class not mentioned) can not be the only way to show compliance.

comment *7613* comment by: *AOPA UK*

The list should be repeated here, there shouldn't be required to purchase ICAO-documents too.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.415.H(a)(6) Flight instruments and equipment - VFR night flights and IFR flights p. 202

comment *945* comment by: *Aersud*

Comment

It is better to substitute the word "trainable" with "swivelling" because more understandable.

Proposal

Change:

The landing light should be ~~trainable~~ *swivelling*, at least in the vertical plane.

Note

Priority: **L**

comment *1366* comment by: *Helicopter Club of Great Britain*

Page 202

AMC OPS.GEN.415.H (a)(6)

Many light helicopters are fitted with two or more fixed emergency landing lights, and not a steerable light. These fixed lights illuminate the area of ground in front of the helicopter, and the light beam can be moved by moving the helicopter with the flight controls.

Reason

A steerable light is complex, heavy and costly and is unsuited to many light helicopters.

Many UK helicopters, especially Robinson Helicopters, are already fitted with such additional fixed lights, which provide broad spread adequate illumination. Such fixed lights should be an AMC for non complex helicopters in private flight.

Suggested text:

AMC OPS.GEN.415.H (a)(6)

LANDING LIGHT – HELICOPTERS

The landing light should be trainable, at least in the vertical plane, or alternatively, for non complex helicopters, two or more fixed lights arranged to provide a broad spread of light in front of and below the helicopter.

comment *1443* comment by: *Mike Pascall*

Page 202

AMC OPS.GEN.415.H (a)(6)

Many light helicopters are fitted with two or more fixed emergency landing lights, and not a steerable light. These fixed lights illuminate the area of ground in front of the helicopter, and the light beam can be moved by moving the helicopter with the flight controls.

Reason

A steerable light is complex, heavy and costly and is unsuited to many light helicopters.

Many UK helicopters, especially Robinson Helicopters, are already fitted with such additional fixed lights, which provide broad spread adequate illumination. Such fixed lights should be an AMC for non complex helicopters in private flight.

Suggested text:

AMC OPS.GEN.415.H (a)(6)

LANDING LIGHT – HELICOPTERS

The landing light should be trainable, at least in the vertical plane, or alternatively, for non complex helicopters, two or more fixed lights arranged to provide a broad spread of light in front of and below the helicopter.

comment *1455* comment by: *R Spiers*

AMC OPS.GEN.415.H (a)(6)

Object Reason

A trainable light on a light helicopter would be complex, heavy and costly to install. A number of UK helicopters, especially Robinson Helicopters, are fitted with additional fixed lights. These provide a good spread of llight. Such fixed lights should be an AMC for non complex helicopters in private flight.

Suggested text:

AMC OPS.GEN.415.H (a)(6)

LANDING LIGHT – HELICOPTERS

The landing light should be trainable, at least in the vertical plane, or alternatively, for non complex helicopters, two or more fixed lights arranged to provide a broad spread of light in front of and below the helicopter.

comment *1671* comment by: *JSLEE*

Page 202

AMC OPS.Gen.415H(a)(6)

Proposal Landing Lights Helicopters

It is unreasonable to insist on a pilot operated movable landing light when many helicopters such as mine are already fitted with emergency "Flares" for use at night and two Fixed Landing Lights. Of my 1500 hours of helicopter flying only 20 hours have been at night. Once again the capital and installation cost for fitting a external movable landing light cannot be justified when for 30 years the emergency flares and fixed lights have met the UK CAA requirements.

It may not be possible to fit a movable light to some helicopters, which can be operated by the pilot whilst using both hands to control the helicopter. In any case it will be a very expensive modification and may require CAA approval with associated costs. Very few private helicopter pilots fly at night and those that do, fly helicopters already fitted with an existing UK CAA approved emergency landing lights.

The cost of fitting pilot operated movable landing light will be expensive, will

increase the weight and increase drag, hence a decrease in performance.

comment *1781* comment by: *Chris Fox*

Light helicopters used for night VFR operations are rarely fitted with a trainable landing light. In particular, Robinson helicopters are fitted with fixed lights that illuminate a wide area, and are perfectly adequate for private operations.

Trainable landing lights are heavy, complex and expensive. It is disproportionate to require them for private VFR operations at night in simple helicopters.

comment *1874* comment by: *Aeromega*

It is not practical to fit trainable landing lights on small helicopters such as the R22. This means that night qualifications would have to be conducted on larger more expensive types. There would be an increased cost to operators and CPL (H) students which could not be justified. If this requirement is to remain it should only apply to aircraft used to landing at unlit/off airfied sites.

comment *1923* comment by: *Tony Castro*

In my case - Hughes 500 there is only one type of steerable light that is very large , expensive and will add drag, increasing fuel comsumption, polution, noise, etc and so on..... Fixed lights are much simpler and relatively affordable. By all means demand a pair but Playing around with a steerable light could result in loss of orientation and certain crash !! Keep things simple and they work better.

comment *1987* comment by: *Helifly (UK) Ltd*

Objection to AMC OPS.GEN.415.H a6

A steerable light is a complex and heavy item to have to retrofit to a light helicopter. Standard night kit for a Robinson R44 includes two landing lights angled differently to give good forward visibility as well as two high power emergency lights. By angling the aircraft using the flight controls an acceptable spread of light can be achieved without the need for a complex steerable lighting unit.

Once again the proposal is heavy handed for non-complex light helicopters; would be difficult to implement without causing significant mass and balance implications, would be expensive and is disproportionate within the context of private operations.

comment *2250* comment by: *Patrick Wilkinson*

This is an unnecessary requirement. My R44 helicopter is equipped with fixed

landing lights and two powerful emergency lights for night flight. The cost of a moveable light is unjustified. It brings no benefits and and is both impractical and useless in single pilot night operations.

comment *2258* comment by: *Ian MACDONALD*

Trainable lights are unnecessary and potentially dangerous. Many light helicopters currently carry 2 fixed lights for landing at night which is perfectly adequate. During final approach the pilot is already coordinating Collective, Throttle, Cyclic and Pedals against a fixed sight picture. the increased workload plus the possibility of loosing sight of an already predetermined landing site due to movement of the light is dangerous.

comment *2623* comment by: *John Matchett*

Steerable landing lights are an unwelcome distraction for the pilot

of a small helicopter attempting a difficult autorotation.

All attention needs to be directed to flying the aircraft.

comment *2808* comment by: *Ed Sturmer*

Trainable landing light expensive and unnecessary and dangerous to operate in small helicopter in VFR single crew. Present light satisfactory.

comment *3031* comment by: *Richard Dawson*

Robinson R44's (and indeed most light helicopters) do not have a a trainable light built into their original design nor are they retrofittable. They are however fitted with two landing lights positioned at different angles to give two vertical angles of light. Additionally, many are also fitted with fixed emergency lights which point ahead of the helicopter. By moving the aircraft the pilot can adjust where the lights point.

A steerable light would be impractical to fit and operate from the perspective of the single private pilot, even if one was available and was certified (which there is not).

No requirement, other than for a landing light, should be included in the regulations.

comment *3443* comment by: *Peter Waldron*

A lot of light helicopters already have two or more fixed emergency landing lights and not a steerable light. The fixed lights are able to illuminate the ground to the front of the helicopter and can be moved as the helicopter is moved with the flight controls.

Many UK helicopters such as the Robinsons are already fitted with additional lights which can provide broad spread illumination. A steerable light is complex as well as heavy and costly to install.

Fixed lights should be an AMC for non complex helicopters in private use.

comment *5350* comment by: *European Private Helicopter Alliance*

Page 202

AMC OPS.GEN.415.H (a)(6)

Many light helicopters are fitted with two or more fixed emergency landing lights, and not a steerable light. These fixed lights illuminate the area of ground in front of the helicopter, and the light beam can be moved by moving the helicopter with the flight controls.

Reason

A steerable light is complex, heavy and costly and is unsuited to many light helicopters.

Many EU helicopters, especially Robinson Helicopters, are already fitted with such additional fixed lights, which provide broad spread adequate illumination. Such fixed lights should be an AMC for non complex helicopters in private flight.

Suggested text:

AMC OPS.GEN.415.H (a)(6)

LANDING LIGHT – HELICOPTERS

The landing light should be trainable, at least in the vertical plane, or alternatively, for non complex helicopters, two or more fixed lights arranged to provide a broad spread of light in front of and below the helicopter.

comment *5691* comment by: *DON BURT*

Fitting a trainable landing light would be expensive and difficult. It would also neccesitate the re-balancing of the aircraft. Equally if there is only yhe pilot on board it would impossible to operate bearing i n mind it would normally be used when landing when both arms and both feet are occupied with maneouvring the aircraft.

comment *6471* comment by: *George Heritage*

Quite unnecessary - reinventing the wheel!

comment *6557* comment by: *Sloane Helicopters Ltd*

AMC OPS.GEN.415.H (a)(6)

A steerable light is complex and expensive and not suited to many light

helicopters.Some helicopters are already fitted with additional lights, which provide adequate illumination. Therefore these should be an AMC for non complex helicopters in private flight.

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight.

Suggested Text:

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard

comment *6776* comment by: *Clive Morrell*

'Helicopters should be fitted with a trainable landing light'

Comment; A steerable landing light is expensive, heavy and complicated. It is also not possible to fit one in some small helicopters. An alternative would be to have two or more lights suitably adjusted as is widely the case at the present time.

Two or more fixed landing lights should be acceptable for non complex helicopters.

comment *7184* comment by: *Paul Monahan*

I object to this proposal. A steerable light is expensive and heavy and is unsuited to many helis.

comment *7271* comment by: *DHV*

AMC OPS.GEN.415.H (a)(6)

Many light helicopters are fitted with two or more fixed emergency landing lights, and not a steerable light. These fixed lights illuminate the area of ground in front of the helicopter, and the light beam can be moved by moving the helicopter with the flight controls.

Reason

A steerable light is complex, heavy and costly and is unsuited to many light helicopters.

Many UK helicopters, especially Robinson Helicopters, are already fitted with such additional fixed lights, which provide broad spread adequate illumination. Such fixed lights should be an AMC for non complex helicopters in private flight.

Suggested text:

AMC OPS.GEN.415.H (a)(6)

LANDING LIGHT – HELICOPTERS

The landing light should be trainable, at least in the vertical plane, or

alternatively, for non complex helicopters, two or more fixed lights arranged to provide a broad spread of light in front of and below the helicopter.

comment *7490* comment by: *Arno Glover*

The fitment of ELT for private, non-commercial aircraft and helicopters should be discretionary – again there is no reason to discriminate between private helicopters and fixed wing aircraft.

Please note that there is no current UK CAA requirement for private non commercial aircraft to be fitted with ELT – rather it would be more than acceptable for crews and passengers to carry a Personal Locator Beacon.

comment *7504* comment by: *David George*

AMC.OPS.GEN.415 H a6:-

"The landing light should be trainable, at least in the vertical plane."

"Trainable" landing lights are extremely expensive, heavy and complicated. Also, it is not practically possible to fit them to most light helicopters. However, in UK, single engined helicopters used for night operations are normally fitted with two, or more, fixed emergency landing lights in addition to the standard equipment landing lights. These provide adequate light in the event of an emergency at night.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.415(b) Flight instruments and equipment - VFR night flights and IFR flights p. 202

comment *100* comment by: *EUROCOPTER*

It is too restrictive to impose EFB as the only published AMC. Classical charts on chart holders should be also acceptable. Moreover the installation requirement of the chart illumination currently in the IR should be transferred into the AMC.

Wording modifications proposal:

*CHART ~~**HOLDER**~~ **DISPLAY***

*~~An~~ Acceptable means of compliance with the chart holder **display** requirement would be **either to use a chart holder or to** display a pre-composed chart on an Electronic Flight Bag (EFB).*

The chart holder, when used, should be located so that the chart can be illuminated for night operations.

comment *1367* comment by: *Helicopter Club of Great Britain*

Page 202

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard

comment *1444* comment by: *Mike Pascall*

Page 202

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard

comment *1456* comment by: *R Spiers*

AMC OPS.GEN.415.(b)

A knee pad illuminated either by an internal light, or aircraft spot lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard

comment *2809* comment by: *Ed Sturmer*

Small helicopters VFR night chart holder. Impractical, expensive and unnecessary.

Experience and statistics show no safety benefit to this proposal.

comment *3032* comment by: *Richard Dawson*

I would propose that the requirement should also allow for a pre-composed chart to be illuminated within the cockpit or on the pilots knee. The illumination would be at the pilot's discretion.

It would be to onerous to expect the pilot of a non-complex private helicopter to purchase a dedicated EFB.

comment *3444* comment by: *Peter Waldron*

An AMC for all non complex aircraft in non commercial flight is a knee pad illuminated either by internal lighting or aircraft pin point lighting.

In respect of the chart holder requirement it should be acceptable to display a pre-composed chart on an Electronic Flight Bag or in non complex aircraft an illuminated knee board.

comment *3916* comment by: *FOM ANWB MAA*

AMC OPS.GEN.415(b) Flight instruments and equipment - ~~VFR night flights and~~ IFR flights

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB).

Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *4277* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

RMK: Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *4420* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *5123* comment by: *peter barker*

Please see my comments above.

I have now spent three hours reading the proposals - your system has timed out twice whilst I have been trying to make comments.

Your system compounds this problem by restricting 'cutting and pasting' - whilst being fine, I am sure, for a 'professional' comment, it is a nightmare otherwise.

So... will you please append all the HCGB comments as appropriate to my my file.

Thank you.

Peter Barker.

comment *5352* comment by: *ALFA-HELICOPTER*

Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *5353* comment by: *European Private Helicopter Alliance*

Page 202

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard.

comment *5665* comment by: *ADAC Luftrettung GmbH*

Why is a chartholder required for VFR night flights?

RMK: Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *5841* comment by: *Norsk Luftambulanse*

RMK: Chart holder is not a requirement for VFR night operations in JAR-OPS 3.

comment *6216* comment by: *HSD Hubschrauber Sonder Dienst*

A chart holder is not a requirement for VFR-night operation in JAR-OPS 3 and should be removed here.

comment *6473* comment by: *George Heritage*

Not necessary

comment *6558* comment by: *Sloane Helicopters Ltd*

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard

comment *7186* comment by: *Paul Monahan*

I object to this proposal.

comment *7206* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.GEN.415(b) Flight instruments and equipment - ~~VFR night flights and~~ IFR flights

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB).

Chart holder is not a requirement for VFR night operations in JAR-OPS 3 and should be removed here.

comment *7272* comment by: *DHV*

AMC OPS.GEN.415.(b)

A knee pad illuminated either by internal lighting, or aircraft pinpoint lighting should be an AMC for all non complex aircraft in non commercial flight..

Suggested Text:

CHART HOLDER

An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB), or in non complex aircraft, an illuminated kneeboard.

comment *7505* comment by: *David George*

AMC.OPS.GEN.415 b:-

"An acceptable means of compliance with the chart holder requirement would be to display a pre-composed chart on an Electronic Flight Bag (EFB)."

I suggest that an acceptable means of compliance with the chart holder

requirement would be an illuminated kneeboard.

comment *7614* comment by: *AOPA UK*

An EFB (class not mentioned) can not be the only way to show compliance

comment *7634* comment by: *Cirrus Design Corporation*

Besides an Electronic Flight Bag (EFB) another source of chart data could be onboard systems such as charts shown on a Multi Function Display (MFD). These displays have already been shown to have sufficiently high reliability such that paperless cockpits have been permitted. The reliability of a MFD is better than the reliability of a pilot remembering to carry current charts. Cirrus recommends onboard chart systems also be added to this AMC as an alternative to of a cockpit chart holder.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.415(d) Flight instruments and equipment - VFR night flights and IFR flights p. 202

comment *7420* comment by: *DAvid Monks*

415 H

A steerable light is not practicle in a non complex helicopter nor has any safety benefit. Landing lights with a good spread are sufficient and can be directed by flight control.

comment *7542* comment by: *Pascal JOUBERT*

Replace '2 miles (approximately 3.22 km)' by '3 km (1,6 NM)'

Justification: Wrong international system unit: the requirement is using US miles. This should be written in metres and aeronautical miles may be converted in brackets.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.420(e) Flights over water p. 202

comment *5693* comment by: *DON BURT*

As life jackets would be stored in the space below the seat in a R44 it would not accessable when the occupant is sitting with his/her seatbelt fastened.

It should therefore be the pilots discretion that life jackets are worn at all times.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.420(a)-(e) Flights over water p. 202

comment *1641* comment by: *Luftfahrt-Bundesamt*

In our view, the text of GM OPS.GEN 420 8a)-(e) needs to be incorporated in the rule, as it is the case in EU-OPS. The text has clear rule character.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.420(a), (d) and (f) Flights over water p. 202

comment *5761* comment by: *Aero-Club of Switzerland*

Please indicate all relevant details here!

Justification: We prefer to read this here as you did with other paragraphs from external sources. We do not like the idea of looking after these elements in a second book.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.420(a), (d) and (g) Flights over water p. 202-203

comment *1744* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *2707* comment by: *AOPA-Sweden*

The equipment should be repeated here, there shouldn't be required to purchase ICAO-documents too.

comment *3045* comment by: *AEA*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to commercial aeroplane operations

Replace d) by c)

comment *3752* comment by: *AUSTRIAN Airlines*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to commercial aeroplane operations

Replace d) by c)

comment *4589* comment by: *KLM*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to commercial aeroplane operations

Replace d) by c)

comment *4780* comment by: *TAP Portugal*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to commercial aeroplane operations

Replace d) by c)

comment *4999* comment by: *Deutsche Lufthansa AG*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to commercial aeroplane operations

Replace d) by c)

comment *5564* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

It is our understanding that this requirement does not apply to commercial aeroplane operations. It would be impractical

The header of this AMC tailored to helicopters and seaplanes/sailplanes and there is therefore probably an editorial error. This should read AMC OPS GEN 420 (c) (in stead of (d)) as paragraph 2 cannot be complied with for aeroplanes other than sailplanes and seaplanes.

Proposal:

Clarification needed to make clear that this requirement does not apply to

commercial aeroplane operations

Replace d) by c)

comment *7615* comment by: *AOPA UK*

The equipment should be repeated here, there shouldn't be required to purchase ICAOdocuments too.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.420(f) Flights over water p. 203

comment *579* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.420(f)(1):

ECA requests clarification:

What is a remote control deployable life raft and why does one need to carry them?

comment *946* comment by: *Aersud*

Comment

With this request you will stop the flight over water of the major parts of the helicopters fleet present in Europe. In general helicopters of the 3 tons class and less have not physically the space to improve a remote control for the deployment of the life rafts (R22, R44, MD500, EC120, AS350, AW119, *Schweitzer 300, etc.)*. In general these helicopter, that brings less than 6 passengers carry only 1 life raft directly in the cabin. We propose to follow the "CS 27.1415 Ditching equipment" where it is clearly written that "Each raft and each life preserver must be approved and must be installed so that **it is readily available to the crew and passengers**" and not deployable by remote control.

Proposal

Change:

1. When only one (1) life raft is carried, it shall be readily available to the crew and passengers;

2. For more than one (1) life raft carried, at least 50% ~~of the life raft carried~~ should be deployable by remote control.

3. Rafts which are not deployable by remote control and which have a mass of more than 40 kg should be equipped with some means of mechanically assisted deployment.

Note

Priority: **H**

comment *1368* comment by: *Helicopter Club of Great Britain*

Page 203

AMC OPS.GEN.420(f) Life Rafts

Most pilots who have space in their helicopter would choose to carry a life raft. However for private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft. The rule needs to be proportionate.

Reason

The practical benefit of life raft carriage in small helicopters depends on whether or not the crew and passengers have time to deploy it correctly. It is of doubtful value in an unexpected ditching, but can be very useful in a precautionary ditching, e.g. should a helicopter run short of fuel. In many helicopters, when carrying just 1 or 2 people, it would have to be carried in the back seat, and would be inaccessible during an emergency. Most 2 seat helicopters do not have the physical space or available weight capacity to carry a life raft, and if the pilot is alone, it would have to be placed next to him, and restrained so as not to interfere with the flying controls. Such carriage creates a risk, both of interference with the helicopter controls in it’s passive state and the risk of uncommanded inflation and the subsequent large inflated obstruction in the cockpit. A 4 place life raft can cost approx. €1500, weigh 12Kg and occupy a space 30 x 60 x 15cm.

Automatically deployable life rafts are technically impossible in non complex helicopters, and such a rule is not proportionate.

For private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft.

Suggested Text

AMC OPS.GEN.420(f) Life Rafts

LIFE-SAVING RAFTS – COMPLEX HELICOPTERS

comment *1445* comment by: *Mike Pascall*

Page 203

AMC OPS.GEN.420(f) Life Rafts

Most pilots who have space in their helicopter would choose to carry a life raft. However for private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft. The rule needs to be proportionate.

Reason

The practical benefit of life raft carriage in small helicopters depends on whether or not the crew and passengers have time to deploy it correctly. It is of doubtful value in an unexpected ditching, but can be very useful in a precautionary ditching, e.g. should a helicopter run short of fuel. In many helicopters, when carrying just 1 or 2 people, it would have to be carried in the back seat, and would be inaccessible during an emergency. Most 2 seat helicopters do not have the physical space or available weight capacity to carry a life raft, and if the pilot is alone, it would have to be placed next to him, and restrained so as not to interfere with the flying controls. Such carriage creates

a risk, both of interference with the helicopter controls in it's passive state and the risk of uncommanded inflation and the subsequent large inflated obstruction in the cockpit. A 4 place life raft can cost approx. €1500, weigh 12Kg and occupy a space 30 x 60 x 15cm.

Automatically deployable life rafts are technically impossible in non complex helicopters, and such a rule is not proportionate.

For private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft.

Suggested Text

AMC OPS.GEN.420(f) Life Rafts

LIFE-SAVING RAFTS – COMPLEX HELICOPTERS

comment *1457* comment by: *R Spiers*

AMC OPS.GEN.420(f) Life Rafts

Where space available most helicopter pilots would choose to carry a life raft. Unfortuantely in most non complex helicopters used for private flights this is easy to do and should be left to the pilot to chose.

Reason

The value of a life raft in small helicopters is dependent on the crew being able to deploy it at the time of a ditching. It is likely that is a small helicopter it will not be possible to safetly extract a liferaft from back seat position and inflate. An automatic deployment mechanism would potential cause more injury that the ditching event itself. Finding a safe location to store such as device on a small helicopter would be probably create risks regarding centre of gavity and out of balance conditions.

Automatically deployable life rafts are technically impossible in non complex helicopters, and such a rule is not proportionate.

For private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft.

Suggested Text

AMC OPS.GEN.420(f) Life Rafts

LIFE-SAVING RAFTS – COMPLEX HELICOPTERS

comment *1672* comment by: *JSLEE*

Page 203

AMC OPS.GEN. 420(f) Life Rafts

The proposal is that a helicopter should carry a life raft for flights over water more than 3 minutes from land if there is space to do so.

What is the definition of "if there is space to do so?"

An R22 with two on board does not have room, but with a pilot only it does have room. A Bell 206 with five on board does not have room.

Is the definition of enough space depending on the pay load carried and at the discretion of the pilot? The carrying of a life raft in all small helicopters including a B206 is impractical, unless there is space in the rear with a passenger.

Where is it suggested that a life raft is stowed in a R22 with a pilot and a passenger? On the passengers lap? Or maybe he or she could sit on it. The same problem would exist in almost any small helicopter.

When flying solo where would I stow one in a B206? On the co-pilots seat? Where it may come loose and interfere with the controls? On the back seats where it cannot be reached?

What if it accidentally inflates?

Let us consider what happens in the event of a landing on water with or without passengers and floatation equipment. When do you deploy the life raft assuming you can reach it? After the perfect landing you are unlikely to make as you have never been able to practice force landings on water and the helicopter will probably have rolled over. The life raft trapping the passenger on whose lap it has been stowed or it is so secured the sole pilot has not got time to release it.

Perhaps the passenger if there is one can drop the life raft in the approach to land?

If it is the type that inflates on contact with the water, where will it be after the evacuation? It could well be beyond reach due to winds tide etc. If does not inflate

I hope the ELT is not attached.

The numbers of private helicopters that have had to make a landing on water over the last 30 years have been 5 and to my knowledge no one has died as a result. It should be left to the pilot discretion when to carry a life raft on a private flight, in my experience most pilots already

Take into consideration the risks when flying over water and carry a life raft if they have space and the means to deploy it.

Experience tells us to minimise the time over water in a single engine aircraft. The proposal should be. To make it compulsory to wear a life jacket at all times when flying more than 10 minutes from land. This would allow an aircraft including helicopters to cross places like the Thames estuary, The Wash and the islands in Scotland without having to wear a life jacket.

comment *1782* comment by: *Chris Fox*

It is not clear to me from this text whether the intent of the NPA is to require the carriage of life rafts in ALL helicopters for over-water flights.

On the worst-case assumption that it is the intention:

In light helicopters it is hard to see where a life raft could be stowed in flight and still be accessible in an emergency. In an R22, for example, the only possible stowage is on the second seat, with attendant risks of interference with the controls - particularly in the case of inadvertent deployment. It would also make two-person flights over water impossible.

In slightly larger helicopters such as the Robinson R44, the liferaft would most probably be stowed on a rear seat, again blocking a passenger seat and

unlikely to be readily accessible in an emergency.

This requirement is disproportionate for simple helicopters operated privately.

comment *1875* comment by: *Aeromega*

The carriage of a life raft in a small helicopter is more likely to interfere with exiting a ditched aircraft and therefore more likely to lead to fatalities. What evidence is there of passengers who have survived the impact of a ditching subsequently escaping the helicopter only to perish due to no life raft being carried. I do not believe there are any statistics to make the case.

comment *1991* comment by: *Helifly (UK) Ltd*

Objection to AMC OPS.GEN.420 f

Once again, by including non-complex light helicopters in the same class as their twin-engined IFR brothers EASA is proposing regulations that cannot be complied with.

Automatic life rafts are not feasable in light helicopters and this proposal is therefore not propotionate.

Carriage of a life raft should be down to the pilot when the machine is being operated privately. In many cases the only place to stow the raft would not be accesable to the pilot / passengers in the event of a ditching. In most 2 seat light helicopters there would be no space to carry a raft.

comment *2810* comment by: *Ed Sturmer*

Small helicopters have no room for life rafts!

comment *3033* comment by: *Richard Dawson*

This regulation would not work for non-complex private helicopters such as my R44. It is not possible to fit a remotely deployable life raft on a R44. If it were, the cost would be significant for 1 hour over water per annum. We usually carry a liferaft on the passenger seat and its deployment is subject to the pilot or passengers retaining and launching it successfully on ditching.

The pilot should have discretion about whether to carry a liferaft on board the aircraft as they may not have the capacity to carry a liferaft (R22) at all.

comment *3259* comment by: *Suffolk Helicopters*

Comment

Life rafts are totally impractical for light helicopters, add weight and take up room (of which there wouldn't be any in 2 seaters) multi seat helicopters would

effcetively be reduced to two seaters if forced to carry a life raft.

The extra weight would reduce range and endurance and lead to excessive fuel consumption.

A solo pilot on a long trip over water might choose to carry a life raft but in most cases life jackets and PLBs would provide the level of safety required.

comment *3447* comment by: *Peter Waldron*

In non-complex private flight helicopters it should be the pilot's decision wheter or not to carry a life raft. This rule should be proportionate.

A 4 place life raft can cost 1500 Euros with a weight of 12kg and would take up a space of 30 x 60 x15 cm. Clearly this could create a risk both in terms of space and obstruction with the cockpit.

comment *5355* comment by: *European Private Helicopter Alliance*

Page 203

AMC OPS.GEN.420(f) Life Rafts

Most pilots who have space in their helicopter would choose to carry a life raft. However for private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft. The rule needs to be proportionate.

Reason

The practical benefit of life raft carriage in small helicopters depends on whether or not the crew and passengers have time to deploy it correctly. It is of doubtful value in an unexpected ditching, but can be very useful in a precautionary ditching, e.g. should a helicopter run short of fuel. In many helicopters, when carrying just 1 or 2 people, it would have to be carried in the back seat, and would be inaccessible during an emergency. Most 2 seat helicopters do not have the physical space or available weight capacity to carry a life raft, and if the pilot is alone, it would have to be placed next to him, and restrained so as not to interfere with the flying controls. Such carriage creates a risk, both of interference with the helicopter controls in it’s passive state and the risk of uncommanded inflation and the subsequent large inflated obstruction in the cockpit. A 4 place life raft can cost approx. €1500, weigh 12Kg and occupy a space 30 x 60 x 15cm.

Automatically deployable life rafts are technically impossible in non complex helicopters, and such a rule is not proportionate.

For private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft.

Suggested Text

AMC OPS.GEN.420(f) Life Rafts

LIFE-SAVING RAFTS – COMPLEX HELICOPTERS

comment *5696* comment by: *DON BURT*

How can 50% be automatically deployed by remote control when only one raft is carried.

comment *5894* comment by: *Michael Taylor*

It is impractical to carry a life raft in a four seat light helicopter such as the Robinson R44, when all four seats are occupied. I believe that the safety record of the helicopter should be relied upon for the tiny percentage of the time that the helicopter is operated over water. I would estimate that less than 0.3% of the flight hours per year involve over water operation.

comment *6475* comment by: *George Heritage*

Light and non-complex helicopters do not have space and they would interfere with the controls.

comment *6559* comment by: *Sloane Helicopters Ltd*

AMC OPS.GEN.420(f) Life Rafts

The decision to carry a liferaft in a non-complex privately operated helicopter should rest with the pilot. For example, the Robinson R22 would be impractical and possibly dangerous to have a liferaft in the cockpit. Similarly it would prove difficult to achieve in some other types (R44) as it would require the pilot to re-enter a ditched aircraft to retrieve the liferaft. This would be a dangerous act.

comment *6905* comment by: *Luftsport-Verband Bayern*

…life rafts…

Die bei Meisterschaften und damit im nichtgewerblichen Bereich genutzten Hubschrauber haben nur teilweise genügend Platz, um einen „life raft" an Bord mitzuführen. Es sollte je nach Flugplanung…vom verantwortlichen Luftfahrzeugführer entschieden werden, ob diese Ausrüstung mitgeführt wird. Daher bitte "nur" als Empfehlung vorsehen.

comment *7188* comment by: *Paul Monahan*

I object to this proposal as it need to be proportionate. It should be the choice of the pilot to carry a life raft or not.

comment *7274* comment by: *DHV*

AMC OPS.GEN.420(f) Life Rafts

Most pilots who have space in their helicopter would choose to carry a life raft. However for private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft. The rule needs to be proportionate.

Reason

The practical benefit of life raft carriage in small helicopters depends on whether or not the crew and passengers have time to deploy it correctly. It is of doubtful value in an unexpected ditching, but can be very useful in a precautionary ditching, e.g. should a helicopter run short of fuel. In many helicopters, when carrying just 1 or 2 people, it would have to be carried in the back seat, and would be inaccessible during an emergency. Most 2 seat helicopters do not have the physical space or available weight capacity to carry a life raft, and if the pilot is alone, it would have to be placed next to him, and restrained so as not to interfere with the flying controls. Such carriage creates a risk, both of interference with the helicopter controls in it's passive state and the risk of uncommanded inflation and the subsequent large inflated obstruction in the cockpit. A 4 place life raft can cost approx. €1500, weigh 12Kg and occupy a space 30 x 60 x 15cm.

Automatically deployable life rafts are technically impossible in non complex helicopters, and such a rule is not proportionate.

For private flights in non-complex helicopters it should be left to the pilot's free choice whether or not to carry a life raft.

Suggested Text

AMC OPS.GEN.420(f) Life Rafts

LIFE-SAVING RAFTS – COMPLEX HELICOPTERS

comment *7491* comment by: *Arno Glover*

With to the requirement to carry a life raft in helicopters this should be discretionary In addition the rules need to be proportionate.

The requirement of carrying a life raft small helicopters will be dictated on whether or not the occupants of the aircraft will have time to deploy it correctly.

Automatically deployable life rafts are technically impossible in non complex helicopters.

comment *7506* comment by: *David George*

AMC.OPS.GEN.420 f:-

"1. At least 50% of the life rafts carried should be deployable by remote control. 2. Rafts which are not deployable by remote control and which have a mass of more than 40 kg should be equipped with some means of mechanically assisted deployment."

It is not possible to install life rafts deployable by remote control in small helicopters.

There are a number of views regarding the carriage of life rafts in small helicopters for over water flights. In a two seat helicopter, the life raft would have to be strapped into the passenger area and there are obvious risks associated with this - not least an uncommanded inflation of the life raft in the small cockpit area. In a four seat helicopter, carrying one or two people, the life raft could be stowed on the rear seat. However, in an emergency, I doubt that it could be deployed correctly.

I would suggest that both pilot and passengers should always put on life jackets prior to departure for an over water flight but that the carriage of life rafts should not be mandatory.

comment *7525* comment by: *Deutscher Aero Club E.V.*

... life rafts ...

Die bei unseren Meisterschaften genutzten Hubschrauber haben nur teilweise genügend Platz,um eine "life raft" an Bord mitzuführen. Es solte je nach Flugplanung ... vom verantwortlichen Luftfahrzeugführer entschieden werden,ob diese Ausrüstung mitgeführt wird.Also eine Empfehlung!

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.420(h) Flights over water p. 203

comment *2708* comment by: *AOPA-Sweden*

See AOPA-S comments above. Not such a requirement today for small GA-aircraft.

comment *7616* comment by: *AOPA UK*

No such requirements today for small GA-aircraft.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.425.H Ditching - Helicopters p. 203

comment *1369* comment by: *Helicopter Club of Great Britain*

Page 203

GM OPS.GEN.425.H

For non complex helicopters in non commercial flight, the floatation requirement should be satisfied with an AMC of wearing a life jacket.

Reason

As detailed previously, there is no greater risk to helicopters than to fixed wing

aircraft. However it is difficult for the pilot and passengers to put on the life jacket in flight in a short time. Therefore passenger floatation should be ensured by wearing a life jacket, donned prior to departure on an over water flight.

Suggested Text

GM OPS.GEN.425.H

EMERGENCY FLOATATION EQUIPMENT

This requirement can be satisfied for private flights by all persons on board the helicopter wearing a lifejacket whilst the helicopter is more than 10 minutes flying time from land.

comment *1446* comment by: *Mike Pascall*

Page 203

GM OPS.GEN.425.H

For non complex helicopters in non commercial flight, the floatation requirement should be satisfied with an AMC of wearing a life jacket.

Reason

As detailed previously, there is no greater risk to helicopters than to fixed wing aircraft. However it is difficult for the pilot and passengers to put on the life jacket in flight in a short time. Therefore passenger floatation should be ensured by wearing a life jacket, donned prior to departure on an over water flight.

Suggested Text

GM OPS.GEN.425.H

EMERGENCY FLOATATION EQUIPMENT

This requirement can be satisfied for private flights by all persons on board the helicopter wearing a lifejacket whilst the helicopter is more than 10 minutes flying time from land.

comment *1488* comment by: *Dorian Walker*

dear sirs,

the use of floats on any light helicopter is absured unless the sea conditions are compleatly flat, light helicopters do not have the endurance for any long term flight, let along over water,the addinal weight and air flow puts strain on the machine while being used over the ground, nobody spends time over the sea, the 3x robinson r 44 that i have owned have done over 3,000 hours and have spent 5% 150 hours over the sea with out incident, there is no president or reson to fit floats to a private helicopter,helicopters land softly unlike a plane

comment *1762* comment by: *EUROCOPTER*

Proposal: This GM is useless and should be deleted.

Justification: All operations in Performance Class 2 or 3 are exposed to a power unit failure; it is not the particular case of helicopters operated in Performance Class 2 and taking off or landing over water.

comment *2625* comment by: *John Matchett*

Many helicopters do not have space to carry a life raft or have time to deploy it successfully.

This could cause a fatality rather than save it. A good life jacket is normally sufficient.

comment *3034* comment by: *Richard Dawson*

A lifejacket should be worn by all crew and passengers in non-complex private helicopters where the time over water is ecpected to be more than 10 minutes - the regulation should require these to be fitted before departure of the helicopter as there is insufficient time and space in the event that a ditching would occur.

This is our standard practice.

comment *3451* comment by: *Peter Waldron*

There is no greater risk to helicopters than there is to fixed wing aircraft, although it can be awkward to put on a life jacket in a short time. It should be ensured that passengers wear a life jacket prior to departure on a flight over water.

With non-complex helicopters in non commercial flight the flotation requirement should be met with an AMC of wearing a life jacket.

comment *3501* comment by: *UK CAA*

Page No: 203

Paragraph No: GM OPS.GEN.425.H

Comment:

Additional information is required for operators of non-commercial helicopters.

The present text of the GM is considered superfluous and should be deleted.

Justification:

Supporting information for the proposed change to OPS.GEN.425.H. Deletion of superfluous guidance material.

Proposed Text (if applicable):

GM OPS.GEN.425.H Ditching - Helicopters

NON-COMMERCIAL HELICOPTERS INVOLVED IN OPERATIONS OVER WATER

Wherever possible, operators are strongly advised to apply the ditching requirements of OPS.GEN.425.H when flying over water.

~~PERFORMANCE CLASS 2 TAKE-OFF AND LANDING~~

~~Helicopters operated in Performance Class 2 and taking off or landing over water are exposed to a critical power unit failure.~~

comment *3700* comment by: *Civil Aviation Authority of Norway*

Comment:

Following the proposed change to OPS.GEN.425.H the Guidance Material has been reviewed and an addition to provide information to operators of non-commercial helicopters is proposed.

At the same time, the present text of the GM is considered superfluous and should be deleted.

Justification:

Supporting information for the proposed change to OPS.GEN.425.H.

Proposed Text

(if applicable):

GM OPS.GEN.425.H Ditching - Helicopters

NON-COMMERCIAL HELICOPTERS INVOLVED IN OPERATIONS OVER WATER

Wherever possible, operators are strongly advised to apply the ditching requirements of OPS.GEN.425.H when flying over water.

~~PERFORMANCE CLASS 2 TAKE-OFF AND LANDING~~

~~(b) Helicopters operated in Performance Class 2 and taking off or landing over water are exposed to a critical power unit failure.~~

comment *5361* comment by: *European Private Helicopter Alliance*

Page 203

AMC OPS.GEN.425.H

For non complex helicopters in non commercial flight, the floatation requirement should be satisfied with an AMC of wearing a life jacket.

Reason

As detailed previously, there is no greater risk to helicopters than to fixed wing aircraft. However it is difficult for the pilot and passengers to put on the life jacket in flight in a short time. Therefore passenger floatation should be ensured by wearing a life jacket, donned prior to departure on an over water flight.

.

Suggested Text

AMC OPS.GEN.425.H

EMERGENCY FLOATATION EQUIPMENT

This requirement can be satisfied for private flights by all persons on board the helicopter wearing a lifejacket whilst the helicopter is more than 10 minutes flying time from land.

comment *5635* comment by: *Stevens Construction Ltd*

To propose that they must have floats is completely unnecessary and impracticable as well as costly.

Modern helicopters and their engines are extremely reliable, to fit floats certainly will be no improvement in safety and in fact probably prove to cause more accidents, floats are bulky and make landing on uneven sites more hazardous and apparently only work in very calm water.

We urge you to please re-consider this proposal and not implement floats on Helicopters.

comment *6116* comment by: *Brian Cullen*

Regarding proposed new easa rules "OPS.GEN.425.H Ditching - Helicopters"

I wish to register my very strong view that it should NOT be mandatory to have floats fitted to light private helicopters.

I own a Robinson R44 and the cost of this would be out of all proportion to the risk. I would be unable to bring my aircraft to the UK as usual for it's annual CofA.

Helicopters should not be discriminated against private fixed wing aircraft.

In addition I do not consider there is a safety case for this proposal, in fact floats add a significant danger due to loss of performance and weight.

I hope this clearly ridiculous and unreasonable proposed rule will not be adopted.

comment *6560* comment by: *Sloane Helicopters Ltd*

GM OPS.GEN.425.H

The floatation requirement non-complex helicopters on private flights could be satisfied with an AMC of wearing a life jacket.

comment *6908* comment by: *Luftsport-Verband Bayern*

…emergency floatation equipment…

Das Mitführen und Tragen einer Schwimmweste pro Person an Bord sollte

genügen.

comment 7189 comment by: *Paul Monahan*

I object to this proposal.

comment 7276 comment by: *DHV*

AMC OPS.GEN.425.H

For non complex helicopters in non commercial flight, the floatation requirement should be satisfied with an AMC of wearing a life jacket.

Reason

As detailed previously, there is no greater risk to helicopters than to fixed wing aircraft. However it is difficult for the pilot and passengers to put on the life jacket in flight in a short time. Therefore passenger floatation should be ensured by wearing a life jacket, donned prior to departure on an over water flight.

Suggested Text

AMC OPS.GEN.425.H

EMERGENCY FLOATATION EQUIPMENT

This requirement can be satisfied for private flights by all persons on board the helicopter wearing a lifejacket whilst the helicopter is more than 10 minutes flying time from land.

comment 7421 comment by: *DAvid Monks*

Life jackets should suffice.

Thre is no greater risk to a helicopter thsn an aeroplane.

comment 7492 comment by: *Arno Glover*

For non complex helicopters in non commercial flight, the floatation requirement should be satisfied with the rule requiring the wearing a life jacket.

There is no greater risk to helicopters than to fixed wing aircraft.

comment 7493 comment by: *Arno Glover*

This requirement should be met for private flights by stating that all persons on board the helicopter wear a lifejacket.

comment *7526* comment by: *Deutscher Aero Club E.V.*

.. emergency floatation equipment

Das Mitföhren und Tragen einer Schwimmweste pro Person an Bord sollte genügen.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.430 Emergency Locator Transmitter (ELT) p. 203

comment *1447* comment by: *Mike Pascall*

Page 203

AMC OPS.GEN.430 ELT

For private flight, in non complex aircraft, carriage and wearing attached to the person a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

Reason

Both the UK CAA and the French DGAC are allowing this AMC under their current rules. As detailed previously, the PLB and ELT(S), with GPS location, are more effective in light aircraft and helicopters in locating survivors than an expensive and complex fixed ELT installation. It is not proportionate to demand expensive and complex fixed installations. It is more important to locate the survivors than to locate the aircraft.

Suggested Text

AMC3 OPS.GEN.430 ELT

For non-complex Aeroplanes and Helicopters in private flight the ELT fitment requirements may be satisfied by a person on board attaching a PLB or ELT(S), with GPS location information, to their person.

comment *1458* comment by: *R Spiers*

AMC OPS.GEN.430 ELT

For private flight, in non complex aircraft, the use of a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

Reason

Both the UK CAA and the French DGAC are allowing this AMC under their current rules. As detailed previously, the PLB and ELT(S), with GPS location, are more effective in light aircraft and helicopters in locating survivors than an expensive and complex fixed ELT installation. It is not proportionate to demand expensive and complex fixed installations. It is more important to locate the survivors than to locate the aircraft.

Suggested Text

AMC3 OPS.GEN.430 ELT

For non-complex Aeroplanes and Helicopters in private flight the ELT fitment requirements may be satisfied by a person on board attaching a PLB or ELT(S), with GPS location information, to their person.

comment *1490* comment by: *Dorian Walker*

an automatic elt is not required, in fact it is usless a light helicopters land softly and will have to be set of manually,many pilot now carry hand held or jacket atteched elt for use in europe,an automatic is a waste of money

comment *1993* comment by: *Helifly (UK) Ltd*

For a private flight the carriage / wearing of a PLB or ELT(S) with GPS information should be an acceptable alternative to a fixed ELT as it currently is for the French DGAC and the UK CAA.

comment *3051* comment by: *Richard Dawson*

For non-complex private helicopters, it would be sufficient for the pilot to wear a Portable Locating Beacon with GPS locator attached to their person. This approach has been adopted in France and in the UK. It is also much cheaper and more reliable than a fixed ELT which would sink with the helicopter, assuming one could be retrofitted.

comment *3218* comment by: *AEA*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *3457* comment by: *Peter Waldron*

It is not proportionate to demand expensive and complex fixed installations and is more important to find any possible survivors. Therefore the PLB or ELT with GPS information should be an alternative and would be more effective in light aircraft.

comment *3753* comment by: *AUSTRIAN Airlines*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *4594* comment by: *KLM*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *4782* comment by: *TAP Portugal*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *5000* comment by: *Deutsche Lufthansa AG*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *5565* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Morever we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *5762* comment by: *Aero-Club of Switzerland*

What about PLB? We ask the Agency to prepare provisions for the voluntary carriage of such a device.

Justification: We think that a PLB is an adequate device for crews flying aircraft at the lower end of the MTOM scale. After any mishap, PLB indicate where the occupants are and not where the wreckage is. As a matter of fact, it is much more important to locate the occupants of an aircraft than to find the aircraft itself.

comment *6225* comment by: *Virgin Atlantic Airways*

Relevant Text:

GM.OPS.GEN.430 ELT (Definition)

Comment:

The definition of an ELT should not be in guidance material. Moreover we do not understand why the type of ELT is AMC if the generic definition is only GM,

Proposal:

Delete GM.OPS.GEN.430

comment *6633* comment by: *KLM Cityhopper*

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'Batteries used in ELTs should be maintained according to the instructions from the manufacturer'

comment *7279* comment by: *DHV*

AMC OPS.GEN.430 ELT

For private flight, in non complex aircraft, carriage and wearing attached to the person a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

Reason

Both the UK CAA and the French DGAC are allowing this AMC under their current rules. As detailed previously, the PLB and ELT(S), with GPS location, are more effective in light aircraft and helicopters in locating survivors than an expensive and complex fixed ELT installation. It is not proportionate to demand expensive and complex fixed installations. It is more important to locate the survivors than to locate the aircraft.

Suggested Text

AMC3 OPS.GEN.430 ELT

For non-complex Aeroplanes and Helicopters in private flight the ELT fitment requirements may be satisfied by a person on board attaching a PLB or ELT(S), with GPS location information, to their person.

comment *7446* comment by: *European Sailplane Manufacturers*

The regulation sregarding ELTs do not really take into account the problems of ELT installations in sailplanes.

Such an installation should only be required in areas where search and rescue would be especially difficult.

The observation until today is that ELT are by far too expensive to be installed in all sailplanes or powered sailplanes and that outside such eas where search and rescue would be especially difficult the probability of unwanted activation of ELT is by far outweighting the benefit of an installed ELT.

comment *7494* comment by: *Arno Glover*

For private flight, in non complex aircraft, carriage and wearing attached to the person a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

For light Helicopters in private flight the ELT fitment requirements should be satisfied by a person on board attaching a PLB or ELT(S) to their person.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC1 OPS.GEN.430 Emergency Locator Transmitter (ELT) p. 203

comment *3219* comment by: *AEA*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the instructions from the manufacturer'***

comment *3502* comment by: *UK CAA*

Page No: 203

Paragraph No:

AMC1 OPS.GEN.430

Comment:

The AMC refers to a maintenance requirement and it is not linked to a Rule. There is no requirement in the Rule to have a battery.

Justification:

Inappropriate AMC.

Proposed Text (if applicable):

Delete AMC1 OPS.GEN.430.

~~**AMC1 OPS.GEN.430 Emergency Locator Transmitter (ELT)**~~

~~ELT BATTERIES – MOTOR-POWERED AIRCRAFT~~

~~Batteries used in the ELTs should be replaced (or recharged, if the battery is rechargeable) when the equipment has been in use for more than 1 cumulative hour, and also when 50% of their useful life (or for rechargeable, 50% of their useful life of charge), as established by the equipment manufacturer has expired. The new expiry date for the replacement (or recharged) battery should be legibly marked on the outside of the equipment. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.~~

comment *3754* comment by: *AUSTRIAN Airlines*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the***

instructions from the manufacturer'

comment *4596* comment by: *KLM*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the instructions from the manufacturer'***

comment *4785* comment by: *TAP Portugal*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the instructions from the manufacturer'***

comment *5001* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the instructions from the manufacturer'***

comment *5566* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'***Batteries used in ELTs should be maintained according to the instructions from the manufacturer'***

comment *5921* comment by: *ERA*

European Regions Airline Association Comment

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Propose to amend the text to read as:

'Batteries used in ELTs should be maintained according to the instructions from the manufacturer'

comment *6250* comment by: *Virgin Atlantic Airways*

Relevant Text:

AMC1 OPS.GEN.430 ELT Batteries

Comment:

This is a new requirement. It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through ops rules.

Proposal:

Amend the text to read as:

'Batteries used in ELTs should be maintained according to the instructions from the manufacturer'

comment *6561* comment by: *Sloane Helicopters Ltd*

AMC OPS.GEN.430 ELT

For private flights in non-complex aircraft it should not be mandatory to have an automatic system. AMC could be achieved by the carriage and wearing of a suitable Portable Locator Beacon (PLB) or ELT(S) with GPS information.

comment *6788* comment by: *Air Lloyd Deutsche Helicopter Service GmbH*

Dear Sirs,

the formulation (50% of there useful life) isn't totaly clear for us.

We use the KANNAD 406 AF and AF-Compact ELT's. According the Operation Manual (page: 105, date: 01/2008):

"The useful life time of batteries is twelve (12) years. To be in compliance with FAR regulations they have to replaced every six (6) years when 50 percent of there useful life has expired."

This expiring date is marked on the outside of the ELT. Does the formulation mean 50 % of 12 or 6 years? Because according the Operation Manual (page: 610, date: 01/2008):

"Battery replacement is mandatory:

after more than 1 hour of real transmission (cumulated duration);

before or on the battery expiration date;

after use in an emergency;

after an inadvertent activation of unknown duration."

The useful life time of ELT batteries is an essential part of the certification process. From our point of view no additional limitations are necessary as long as the operator follows the ELT Operation Manual.

Yours faithfully

Helmut Appelfeller

Flight Operation Manager

AIR LLOYD GmbH

comment *7306* comment by: *ANE (Air Nostrum) OPS QM*

It does not seem appropriate for an OPS rule since maintenance issues should not be addressed through OPS rules.

Propose to amend the text to read as:

'Batteries used in ELTs should be maintained according to the instructions from the manufacturer'

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC2 OPS.GEN.430 Emergency Locator Transmitter (ELT) p. 203-204

comment *1745* comment by: *Richard David Jordan*

We are in disagreement with the proposals for the following reasons:-

There is no safety case for the proposal.

Mechanical failure over water hasn't been a major reason for accidents in the past 20 years.

PPLH pilots have been flying over water without floats and without ELT for

many years. There is no good reason to change the current regulations.

Costs of altering small helicopters to fit this extra equipment is expensive (Euro 30,800 just to fit it) and the extra weight would reduce safety and would consume more fuel!

If a helicopter pilots should be fit to decide if they want to install expensive and complex extra equipment.

If a helicopter fitted with floats crashes into anything other than flat-calm water then it will sink and be lost.

comment *2251* comment by: *Patrick Wilkinson*

The fitment of a fixed ELT to sinlge engined light helicopters is inappropriate. A portable ELT is much more use. It stays with the person, not the aircraft, which in the case of helicopters, sink rapidly. Fixed ELTs do not always activate with soft autorotative water landings. The cost is not justified for no appreciable benefit.

comment *2709* comment by: *AOPA-Sweden*

A reference to an ICAO-document should not be in this rule, because a GA-pilot/owner doesn't have an access to them.

comment *3604* comment by: *PPL/IR Europe*

For non-commerical operations within European airspace, we believe that an additional paragraph should be added permitting the use of Personal Locator Beacons as a means of complying with OPS.GEN.430

We currently have an unsatisfactory situation where rules for PLBs/ELTs are not consistant across Europe, and cause some significant uncertainty and inconvenience for GA operators. In many cases, they depend on relatively obscure or temporary exemptions.

comment *5704* comment by: *DON BURT*

The requiremnt that a helicopter should have one fixed and one portable ELT is excessive. Bearing mind that most private flights are not over water or in areas when location is difficult an ELT(S) would seem to be sufficient and would be on an equal footing to light fixed wing aircraft.

comment *7617* comment by: *AOPA UK*

3 A reference to an ICAO-document should not be in this rule, because a GA-pilotlowner does not have an access to them.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.430.H(b)(2) Emergency Locator Transmitter (ELT) p. 204

comment *1370* comment by: *Helicopter Club of Great Britain*

Page 203

AMC OPS.GEN.430 ELT

For private flight, in non complex aircraft, carriage and wearing attached to the person a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

Reason

Both the UK CAA and the French DGAC are allowing this AMC under their current rules. As detailed previously, the PLB and ELT(S), with GPS location, are more effective in light aircraft and helicopters in locating survivors than an expensive and complex fixed ELT installation. It is not proportionate to demand expensive and complex fixed installations. It is more important to locate the survivors than to locate the aircraft.

Suggested Text

AMC3 OPS.GEN.430 ELT

For non-complex Aeroplanes and Helicopters in private flight the ELT fitment requirements may be satisfied by a person on board attaching a PLB or ELT(S), with GPS location information, to their person.

comment *1783* comment by: *Chris Fox*

As commented previously, the benefits of a fixed automatic ELT are questionable, particularly in the case of ditching.A Personal Locator Beacon (PLB) or ELT(S) is much more lightly to be effective in locating survivors.

The UK and French national authorities currently permit the use of a PLB in circumstances requiring an ELT for private flight. This should be continued.

comment *1901* comment by: *RCC*

the requirement does not make sence especialy as most helicopters float top down with floats

comment *2811* comment by: *Ed Sturmer*

Portable beacon better in Small helicopter operations.

comment *5371* comment by: *European Private Helicopter Alliance*

Page 203

AMC OPS.GEN.430 ELT

For private flight, in non complex aircraft, carriage and wearing attached to the person a Portable Locator Beacon (PLB) or ELT(S) with GPS information should be an alternative to the requirement that the aircraft to be fitted with an ELT.

Reason

Both the UK CAA and the French DGAC are allowing this AMC under their current rules. As detailed previously, the PLB and ELT(S), with GPS location, are more effective in light aircraft and helicopters in locating survivors than an expensive and complex fixed ELT installation. It is not proportionate to demand expensive and complex fixed installations. It is more important to locate the survivors than to locate the aircraft.

Suggested Text

AMC3 OPS.GEN.430 ELT

For non-complex Aeroplanes and Helicopters in private flight the ELT fitment requirements may be satisfied by a person on board attaching a PLB or ELT(S), with GPS location information, to their person.

comment *7191* comment by: *Paul Monahan*

I object to this proposal. It is more important to locate survivors than the aircraft.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.435 Survival equipment – Motor powered aircraft p. 204

comment *356* comment by: *ECA - European Cockpit Association*

Comment on GM.OPS.GEN.435,2: the second paragraph is redundant

2. Areas that are largely uninhabited and where:

a. The competent authority responsible for managing search and rescue has not published any information to confirm whether search and rescue would be or would not be especially difficult; and

b. The competent authority referred to in 1. does not, as a matter of policy, designate areas as being especially difficult for search and rescue.

comment *904* comment by: *KLM*

gm ops.gen.435 2.b.

How can an operator know the policy of the authority.

Most of the States that are known to be incapable of providing SAR do not publish anything on this.

This point has no meaning and therefore has to be deleted.

comment *1491* comment by: *Dorian Walker*

should all be left for the pilot in command to add and addinal safty equipment

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.435(a)(3) Survival equipment – Motor powered aircraft p. 204-205

comment *358* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.435(a)(3)3: this paragraph seems redundant:

3. If any item of equipment contained in the above list is already carried on board the aircraft in accordance with another requirement, there is no need for this to be duplicated.

comment *895* comment by: *Aero-Club of Switzerland*

Regarding b. the knife: Please state, that the knife is part of the equipment of the aircraft and that it shall not be carried by the crew or by passengers.

Justification: In doing so difficulties with controllers of all kinds can be avoided.

comment *2710* comment by: *AOPA-Sweden*

How to bring the knife end the "ice-saw" through "security"???

comment *4924* comment by: *Virgin Atlantic Airways*

Relevant Text:

AMC OPS.GEN.435(a)(3)

" 1a. 500 ml of water for each 4, or fraction of 4, persons on board;"

Comment:

1. Current EU-OPS survival equipment requirements (AMC OPS 1.835(c) - Survival Equipment) requires:-

a. 2 litres of drinkable water for each 50, or fraction of 50, persons on board provided in durable containers;

EASA.OPS OPS.GEN.435 requires 2 litres of water for every 16 persons on board. The new requirement represents a significant increase in the amount of water required to be carried. Currently for a typical long range wide body

aircraft, 16 litres of water needs to be carried. Under the proposed regulations 58 litres of water would be required resulting in an estimated additional fuel burn penalty of USD 3,000 pa for a typical long range aircraft.

What is the safety justification for this additional requirement?

VAA suggest an alternate means of compliance is included, for example water purification tablets

Proposed Text:

Do not change the existing requirement:-

AMC OPS.GEN.435(a)(3)

'2 litres of drinkable water for each 50, or fraction of 50, persons on board provided in durable containers.'

Or include alternate means of compliance:-

'A means of making sea water drinkable, for example water purification tablets capable of producing 500ml of water for each 4, or fraction of 4, persons on board'

comment *5120* comment by: *Elaine Allan Monarch*

Page No

. 205

Ref No.

NPA 2009 – 2b AMC. OPS. GEN.435(a) (3) page 205 of 464

Summary of EASA Proposed Requirement:

Additional survival equipment.

1.The following additional survival equipment should be carried when required:

a. 500 ml of water for each 4, or fraction of 4, persons onboard;

Comment:

AMC OPS.CAT.420.A (a) page 335 of 464

1.h states 100g of glucose tablets for each 4, or fraction of 4, persons in which the liferaft is designed to carry:

Ii states at least 2 litres of drinkable water provided in durable containers or means of making sea water drinkable or a combination of both; and

Justification:

Can clarification be provided as to which rule to follow.

Proposed Text (if applicable)

A means of supplying two litres of water for each 50, or fraction of 50, persons onboard.

Or

A means of supplying two litres of water for each 16, or fraction of 16, persons onboard.

comment *6105* comment by: *DGAC*

Define "Polar conditions"

comment *7579* ☐ comment by: *AOPA UK*

(a)(1)(i) Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *7580* ☐ comment by: *AOPA UK*

(c) Not an OPS-requirement, should be moved to Part 21! It is a requirement that is impossible to retro-fit on small GA airplanes.

comment *7618* comment by: *AOPA UK*

1.b.,2.b. How to bring the knife and the "ice-saw" through "security"???

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.440(a) High altitude flights - Oxygen p. 205

comment *48* comment by: *George Knight*

"Breathing oxygen should be provided by a quick donning mask."

Many sailplanes and other light aircraft operating at altitudes where oxygen is necessary use cannula instead of full masks at heights up to about 18,000' and facemasks at higher altitudes. These work well with Electronic Aviation Delivery Systems such as that supplied by market leader Mountain High. The rules should not exclude modern technology for sailplanes and light GA aircraft. Cannula should be permitted in such environments.

comment *1841* comment by: *Airbus SAS*

OPS.GEN.440(a) requires that – under specified conditions – breathing oxygen be supplied to crew and passengers without specifying the means to supply.

The related AMC reads: "Breathing oxygen should be provided by a quick donning-mask for the flight crew".

Airbus considers Quick donning masks inappropriate for use by passengers and cabin crew.

==> To clarify the AMC applicability for flight crew only, Airbus proposes to revise the AMC to read as follows:

"Breathing oxygen should be provided by a quick donning-mask for the flight

crew only."

==> Further, Airbus proposes to introduce into the AMC appropriate information for Cabin Crew and Passenger oxygen masks.

comment *2711* comment by: *AOPA-Sweden*

See AOPA-Sweden's comments on OPS.GEN.440

comment *3503* comment by: *UK CAA*

Page No: 205

Paragraph No:

AMC OPS.GEN.440(a)

Comment:

The AMC refers the reader to a GM OPS.COM for details of the requirement. Therefore, the content of GM OPS.CAT should be part of AMC OPS.GEN.

Justification:

Incorrect drafting of guidance material.

Proposed Text (if applicable):

AMC OPS.GEN.440(a) High altitude flights - Oxygen

BREATHING OXYGEN -

Breathing oxygen should be provided by a quick donning mask ~~(See GM OPS.CAT.440(b)(1)).~~

~~**GM OPS.CAT.440(b)(1) High altitude flights - Oxygen requirements - Motor powered aircraft**~~

~~QUICK DONNING MASKS~~

which:

1. can be placed on the face from its ready position, properly secured, sealed and supplying oxygen upon demand, with one hand and within five seconds and will thereafter remain in position, both hands being free;

2. can be donned without disturbing eye glasses and without delaying the flight crew member from proceeding with assigned emergency duties;

3. once donned, does not prevent immediate communication between the flight crew members and other crew members over the aircraft intercommunication system; and

4. does not inhibit radio communications.

comment *6118* comment by: *DGAC*

Proposal:

Complete subtitle to read:

"BREATHING OXYGEN - PRESSURIZED AIRCRAFT ABOVE 25000 FT"

Justification:

Quick donning masks are necessary for rapid decompression, which cannot happen in an unpressurized aircraft!!

This is also in line with ICAO requirements.

comment *7448* comment by: *European Sailplane Manufacturers*

The best and proven systems used on gliders often do not use quick donnings masks for very good reasons.

This wording is unsuitable for gliding operations.

comment *7578* ☐ comment by: *AOPA UK*

(a) Should be 12,500 ft just to be harmonized with most third country rules.

comment *7579* ☐ comment by: *AOPA UK*

(a)(1)(i) Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *7580* ☐ comment by: *AOPA UK*

(c) Not an OPS-requirement, should be moved to Part 21! It is a requirement that is impossible to retro-fit on small GA airplanes.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.440(a)(1)(i) High altitude flights - Oxygen p. 205

comment *3220* comment by: *AEA*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording.

comment *3755* comment by: *AUSTRIAN Airlines*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording.

comment *4600* comment by: *KLM*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording

comment *4788* comment by: *TAP Portugal*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording.

comment *5002* comment by: *Deutsche Lufthansa AG*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording.

comment *5025* comment by: *IAOPA Europe*

It cannot seriously be the intent to require cabin crew in order to use portable bottles of oxygen for non-commercial operations in non-complex aircraft.

comment *5567* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

...for the flight time between 10000 feet and 13000 feet....

Comment:

This wording is different from EU-OPS which referred to '**not exceeding'**

Proposal:

Stick to the EU-OPS wording.

comment *7578* ☐ comment by: *AOPA UK*

(a) Should be 12,500 ft just to be harmonized with most third country rules.

comment *7579* ☐ comment by: *AOPA UK*

(a)(1)(i) Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *7580* ☐ comment by: *AOPA UK*

(c) Not an OPS-requirement, should be moved to Part 21! It is a requirement that is impossible to retro-fit on small GA airplanes.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.440A(a)(2) High altitude flights - Oxygen p. 205

comment *775* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.440.A(a)(2) :

2. Maximum Operational Speed (VMO) or the airspeed approved in the AFM for emergency descent, (emergency descent data/charts established by the aeroplane manufacturer and published in the AFM, and/or AFM should be used to ensure uniform application of the option), whichever is the less;

Clarify: Shouldn´t it be calculated using the Va speed, as required when structural damage suspected on the emergency descent?

comment *7578* ☐ comment by: *AOPA UK*

(a) Should be 12,500 ft just to be harmonized with most third country rules.

comment *7579* ☐ comment by: *AOPA UK*

(a)(1)(i) Should be 12,500 ft and 14,000 ft respectively, according to above mentioned.

comment *7580* ☐ comment by: *AOPA UK*

(c) Not an OPS-requirement, should be moved to Part 21! It is a requirement that is impossible to retro-fit on small GA airplanes.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.440 High altitude flights - Oxygen p. 206

comment *3221* comment by: *AEA*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

comment *3756* comment by: *AUSTRIAN Airlines*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

comment *4604* comment by: *KLM*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

comment *4789* comment by: *TAP Portugal*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

comment *5003* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

comment *5568* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The high altitude flights concept is dealt with in detail in the ICAO Manual for Civil Aviation Medicine.

Comment:

This reference should be deleted due to the different approach taken in JAA and FAA rules which are more 'state of the art' that the outdated ICAO standards on oxygen

Proposal:

Delete GM OPS.GEN.440

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.450 Marking of break-in points p. 206

comment *2712* comment by: *AOPA-Sweden*

See AOPA-S's comments on OPS.GEN.450.

comment *3504* comment by: *UK CAA*

Page No: 206

Paragraph No: AMC OPS.GEN.450

Comment: This is a Rule not AMC material (ICAO Annex 6 Part II) which should be included in OPS.GEN.450.

Justification: This is a Rule not AMC material.

Proposed Text (if applicable):

If areas of the aircraft's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1 of OPS.GEN.450. ***The colour of the markings shall be red or yellow and, if necessary, shall be outlined in white to contrast with the background. If the corner markings are more than 2 m apart, intermediate lines 9 centimetres (cm) x 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.***

comment *7581* ☐ comment by: *AOPA UK*

Also not an OPS-requirement, please, keep design requirements within appropriate documents

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC1 OPS.GEN.455 First-aid kits p. 206

comment *1097* comment by: *David COURT*

No first Aid Kit contents listed for balloons.

comment *2713* comment by: *AOPA-Sweden*

Do not refer to documents, not available to the reader.

comment *5756* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

COMPLEX MOTOR-POWERED AIRCRAFT

1. First-Aid Kits (FAKs) should be equipped with appropriate and sufficient medications and instrumentation. However, these kits should be adapted by the operator according to the characteristics of the operation (scope of operation, flight duration, number and demographics of passengers etc.).

Comment:

FAKs for Complex motor-powered aircraft should not be allowed to be adapted to the characteristics of the operation. But no problem if the operator want to add some items.

Proposal (including ***new text***):

1. First-Aid Kits (FAKs) should be equipped with appropriate and sufficient medications and instrumentation. However, these kits ~~should be adapted~~ ***may be complemented*** by the operator according to the characteristics of the operation (scope of operation, flight duration, number and demographics of passengers etc.).

comment *7131* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Comment:

It might be inappropriate to refer only to one specific standard (Deutsche Industrie Norm, DIN) when giving an example of equipment meeting the objective of OPS.GEN.455.

Proposal:

First-Aid Kits (FAKs) according to DIN 13164, DIN 13157 ***or equivalent standard*** are considered to meet the objective of OPS.GEN.455.

comment *7449* comment by: *European Sailplane Manufacturers*

Installing a first aid kit in a sailplane cockpit is often not possible due to the tight space and also not helpful.

Wording not suitable for sailplanes.

comment *7619* comment by: *AOPA UK*

Do not refer to documents, which are not available to the reader.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC2 OPS.GEN.455 First-aid kits p. 206-207

comment *1504* comment by: *British Airways*

Comment:

The requirement at paragraph 2.d.vi for a 'bronchial dilator spray' is a new requirement and cannot be justified for inclusion in a first aid kit; such medication is appropriately included in the list for an Extended Medical Kit.

Justification:

A bronchial dilator is a prescription only medication and should not be included in the contents of a first aid kit.

Proposed text:

Delete paragraph 2.d.vi

comment *1506* comment by: *British Airways*

Comment:

Paragraph 2.c.v specifies the inclusion of a ground/air visual signal code for use by survivors. This is a historical item which has no relevance to safety in the modern era.

Justification:

The contents list for a first aid kit should only include items which add value and are relevant to current airline operations.

Proposed text:

Delete paragraph 2.c.v

comment *2351* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.b.vi states a requirement for a 'bronchial dilator spray' in the First Aid Kit (FAK);

Justification:

Bronchial dilators are a Prescription Only Medication (POM) (in the UK at least) and therefore inappropriate to be listed for inclusion of a First Aid Kit (FAK).

Proposal:

Delete 2.b.vi

comment *2358* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.a.xii states a requirement to carry IV cannulae (if IV fluids are carried in the FAK, a sufficient supply of IV cannulae should be stored there as well).

Justification:

In order to use IV cannulae other equipment is required (such as wipes, a tourniquet an appropriate IV dressing) which are included within the EMK requirements. IV cannulae should be carried in the Emergency Medical Kit only, on medical, security and safety grounds. It is inappropriate to house IV cannulae in a FAK.

Proposed text:

Delete 2.a.xii

comment *2734* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.b.vi states a requirement for a 'bronchial dilator spray' in the First Aid Kit (FAK);

Justification:

Bronchial dilators are a Prescription Only Medication (POM) (in the UK at least) and therefore inappropriate to be listed for inclusion of a First Aid Kit (FAK).

Proposal:

Delete 2.b.vi

comment *2735* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.a.xii states a requirement to carry IV cannulae (if IV fluids are carried in the FAK, a sufficient supply of IV cannulae should be stored there as well).

Justification:

In order to use IV cannulae other equipment is required (such as wipes, a tourniquet an appropriate IV dressing) which are included within the EMK requirements. IV cannulae should be carried in the Emergency Medical Kit only, on medical, security and safety grounds. It is inappropriate to house IV cannulae in a FAK.

Proposed text:

Delete 2.a.xii

comment *2968* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

The contents of the FAK have been amended and there is no justification.

Proposal:

Remove the amendment and Leave the contents "as is".

comment *3505* comment by: *UK CAA*

Page No: 207

Paragraph No:

AMC2.OPS.GEN.455 2. b. vi.

Comment:

Bronchial dilator spray is a prescription only medication.

Justification:

It is inappropriate for a prescription only medication to be included in a first aid kit.

Proposed Text (if applicable):

Delete 2. b. vi.

comment *3506* comment by: *UK CAA*

Page No: 207

Paragraph No:

AMC2.OPS.GEN.455 2. c. vi

Comment:

This requirement is obsolete.

Justification:

Ground/Air visual signal codes have no relevance to modern aircraft operations and has been removed from ICAO Amendment 169 which is effective from November 2009.

Proposed Text (if applicable):

Delete 2. c. v.

comment *7042* comment by: *IACA International Air Carrier Association*

Contents of "First Aid Kits" is enlarged compared to JAR-OPS 1.745 Section 2, without any justification. Leave the contents "as is".

comment *7068* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

We need some clarification on this item. Since, according to 1., " these kits should be adapted by the operator according to the characteristics of the operation", does it mean that the equipment and medications presented in 2. are recommended, and not required?

IV cannulae and bronchodilator are prescriptive items in some countries, such as USA. The requirement for all presented items may bring the necessity to make different FAKs available for the operators, depending on the country of operation. This will impose a severe burden on operators to have to control the configuration of the onboard FAK on a flight-by-flight basis.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM1 OPS.GEN.460(a) and (b) Airborne Collision Avoidance System (ACAS) II p. 207-208

comment *1775* comment by: *claire.amos*

Reference to source documents is an improvement.

comment *2522* comment by: *Royal Aeronautical Society*

The list of guidance material shown in GM1 was developed and published by the JAA in JAR-OPS 1 ACJ OPS 1.398 many years before ICAO published instructions for the operation of ACAS and training guidelines for pilots in PANS-OPS (Doc 8168). The text of GM2 had its origins in the JAA Temporary Guidance Leaflet 11 (which itself had been based upon Attachment E of ICAO State Letter AN 7/1.3.7.2-97/77, since superseded) and does not now accurately reflect current ICAO guidance. Subsequently, ICAO has published comprehensive instructions for the operation of ACAS and training guidelines for pilots in PANS-OPS, Volume I, Part III, Chapter 3 and Attachments A and B thereto with the specific intention that all pilots of aeroplanes and helicopters that are equipped with ACAS shall be taught and operate this equipment in accordance with *exactly the same instructions*. Note should be taken of ICAO Annex 6 Part II, Chapter 9, paragraph 9.1.2 that was designed to include pilots of aeroplanes whose operation would not necessarily be governed by an 'operations manual' (eg General Aviation). To address this omission in the NPA, and to retain the requirement that operators should specify identical procedures and training, the suggested replacement text below makes use of words published in the Annex 6 Part II Standard. References in the NPA GM2 to TCAS II Version 6.04A and to ACAS III are redundant.

The text of GM1 OPS.GEN.460 should be amended to read as follows:

GM1 OPS.GEN.460 Airborne Collision Avoidance System (ACAS) II

GENERAL

ACAS training programmes established to ensure that each pilot seated at the controls has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collisions should take into account GM2 OPS.GEN.460. This guidance material reflects the contents of Attachments A and B to ICAO PANS-OPS (Doc 8168), Volume I, Part III, Chapter 3.

ACAS operational procedures should take into account the following guidance material that reflects the contents of ICAO PANS-OPS (Doc 8168), Volume I, Part III, Chapter 3:

OPERATION OF AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS) EQUIPMENT

(insert the contents of ICAO PANS-OPS (Doc 8168), Volume I, Part III, Chapter 3, with the exception of Note 3 that follows paragraph 3.1.3 to that Chapter.)

comment *3222* comment by: *AEA*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

comment *3507* comment by: *UK CAA*

Page No: 215

Paragraph No:

GM2 OPS.GEN.460(a) and (b) 6 c. ii. D

Comment:

The final part of paragraph D reads "The change in vertical speed should be accomplished with an acceleration of approximately ¼ g (gravitational acceleration of 9.81 m/sec^{-2}).

To the non-technical reader this could be interpreted that g itself was actually 4 times 9.81. Furthermore the abbreviation used (m/sec^{-2}) is mathematically incorrect as acceleration is a change in velocity and is metres per second (velocity) per second (m.sec^{-2} or m/sec^{2}).

Justification:

Clarification and scientific exactitude.

Proposed Text (if applicable):

D. For corrective RAs, the response should be initiated in the proper direction within five seconds of the RA being displayed. The change in vertical speed should be accomplished with an acceleration of approximately ¼ g ~~(gravitational acceleration of 9.81 m/sec²);~~ ***(Where "1 g" is the acceleration due to the earth's gravity measured near the surface of the earth. An approximate average value of g is 9.81 metres per***

second per second (i.e. 9.81 m.sec^{-2})).

comment *3757* comment by: *AUSTRIAN Airlines*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

comment *4607* comment by: *KLM*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

comment *4791* comment by: *TAP Portugal*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

comment *5004* comment by: *Deutsche Lufthansa AG*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

comment *5569* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

This GM only refers to ICAO documents and is not useful. We suggest to delete it

Proposal:

Delete GM1 OPS.GEN.460(a) and (b)

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM2 OPS.GEN.460(a) and (b) Airborne Collision Avoidance System (ACAS) II p. 208-217

comment *361* comment by: *ECA - European Cockpit Association*

Comment on GM1.OPS.GEN.460(a) and (b) Section 7:

ECA does not recognize the figure of check airman:

b. The flight crew member's understanding of the manoeuvre training items should be assessed in a flight simulator equipped with an ACAS display and controls similar in appearance and operation to those in the aircraft the flight crew member will fly, and the results assessed by a qualified instructor, inspector~~**, or check airman**~~. The range of scenarios should include: corrective RAs; initial preventive RAs; maintain rate RAs; altitude crossing RAs; increase rate RAs; RA reversals; weakening RAs; and multi-threat encounters. The scenarios should also include demonstrations of the consequences of not responding to RAs, slow or late responses, and manoeuvring opposite to the direction called for by the displayed RA.

comment *628* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.460(a) and (b) (5)(b)(ii)(C): change as follows:

C. Use of the TA only mode. Objective: To verify that a flight crew member understands the appropriate times to select the TA only mode of operation and the limitations associated with using this mode. Criteria: The flight crew member should demonstrate the following:

1. Knowledge of the operator's guidance for the use of TA only;

2. Reasons for using this mode. **With an engine shut down, aircraft performance may be inadequate to correctly follow a potential CLIMB RA and the use of TA ONLY mode may be part of the engine-out procedure.** ~~**If TA only is not selected when an airport is conducting simultaneous operations from parallel runways separated by less than 1 200 ft, and to some intersecting runways, RAs can be expected.**~~ If for any reason TA ~~**only**~~ **ONLY** is not selected and an RA is received ~~**in these situations**~~, the response should **still endeavour to** comply with ~~**the operator's approved procedures**~~ **the RA as far as possible, and never to manoeuvre opposite to the sense of the posted RA**.

3. All TA aural annunciations are inhibited below 500 ft agl (1 000 ft agl for version 6.04A). As a result, TAs issued below 500 ft agl may not be noticed unless the TA display is included in the routine instrument scan.

Justification:

The detail of the ACAS training as shown in C.2 is outdated, even if may still be included in ICAO GM.

OPS.GEN.460 clearly states – in compliance with the current ICAO PANS-OPS –

that "ACAS … shall be used in normal conditions during flight in a mode that enables Resolution Advisories (RAs) …"

"Normal conditions" do include parallel runway operations, and these situations should no longer be promulgated as cases when to switch off RA. Switching to "TA ONLY" is restricted to "non-normal" or "abnormal" conditions in connection with technical malfunctions that might prevent correct compliance with RAs.

comment *2523* comment by: *Royal Aeronautical Society*

The list of guidance material shown in GM1 was developed and published by the JAA in JAR-OPS 1 ACJ OPS 1.398 many years before ICAO published instructions for the operation of ACAS and training guidelines for pilots in PANS-OPS (Doc 8168). The text of GM2 had its origins in the JAA Temporary Guidance Leaflet 11 (which itself had been based upon Attachment E of ICAO State Letter AN 7/1.3.7.2-97/77, since superseded) and does not now accurately reflect current ICAO guidance. Subsequently, ICAO has published comprehensive instructions for the operation of ACAS and training guidelines for pilots in PANS-OPS, Volume I, Part III, Chapter 3 and Attachments A and B thereto with the specific intention that all pilots of aeroplanes and helicopters that are equipped with ACAS shall be taught and operate this equipment in accordance with *exactly the same instructions*. Note should be taken of ICAO Annex 6 Part II, Chapter 9, paragraph 9.1.2 that was designed to include pilots of aeroplanes whose operation would not necessarily be governed by an 'operations manual' (eg General Aviation). To address this omission in the NPA, and to retain the requirement that operators should specify identical procedures and training, the suggested replacement text below makes use of words published in the Annex 6 Part II Standard. References in the NPA GM2 to TCAS II Version 6.04A and to ACAS III are redundant.

The text of GM2 OPS.GEN.460 should be amended to read as follows:

GM2 OPS.GEN.460 Airborne Collision Avoidance System (ACAS) II

ACAS TRAINING GUIDELINES FOR PILOTS

(insert as published the entire contents of Attachments A and B to ICAO PANS-OPS (Doc 8168), Volume I, Part III, Chapter 3, replacing the existing NPA texts. It should be noted that the replacement text is largely the same as that published in the NPA but includes revisions that reflect developments and changes introduced since the original JAA TGL 11 text was developed.)

comment *3223* comment by: *AEA*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *3224* comment by: *AEA*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***"

comment *3598* comment by: *William Eaton*

An ELT in a small helicopter (r22) would be useless if attached to the helicopter, as it would sink immediately. It would be far better to have one attached to the pilot or a suitably instructed crew member. I would suggest the pilot could also carry flairs.

I cannot see any need to replace an ASI if calibrated in MPH what so ever. If necessary a

Floats on r22s would mean that for most of the flying, which is over land) unnecessary weight would be carried and only of use on very calm water. However I suspect there is no emergency float system suitable for an r22.

History would sugest there is no need to have floats on small helicopters used for private flying.

In order for private helicopters to fly over water for periods of more that say 60 minutes with out floats and a fixed ELT, a provision of corridors could be established with regular radio transmissions and or a transponder being used?

In addition, if a life raft cannot be carried, the wearing of immersion suits could be encouraged in the months where the water temperature is low or the flight time over water exceeds 45 minutes.

As for night flight, the installation of a pilot movable landing light should only be allowed for pilots with three hands and possibly two brains . For goodness sake!

comment *3758* comment by: *AUSTRIAN Airlines*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *3857* comment by: *AUSTRIAN Airlines*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***"

comment *4609* comment by: *KLM*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *4612* comment by: *KLM*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***"

comment *4793* comment by: *TAP Portugal*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore

be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *4795* comment by: *TAP Portugal*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***

comment *5005* comment by: *Deutsche Lufthansa AG*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *5007* comment by: *Deutsche Lufthansa AG*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***"

comment *5570* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

ACAS Flight Crew Training Programmes

Comment:

This GM is not related to this regulation. It is not useful and should therefore be deleted. In-stead, this guidance material should be put in a separate booklet without a link to this rule.

Proposal:

Delete GM2 OPS.GEN.460(a) and (b)

comment *5571* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Too much detail and requirements.

Requirement to train the full range of scenario's over a two year period is very restrictive and does not comply with the spirit of the GM principle.

Proposal:

Change the requirement into; "***a number of critical scenario's should be trained over a certain period of time***"

comment *7044* comment by: *IACA International Air Carrier Association*

Extensive training programme material. Is this complexity justified ?

EASA uses "should", not "shall"(Guidance Material). If "shall" would be used, then the transition period needs to be extended.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM1 OPS.GEN.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes p. 217

comment *3225* comment by: *AEA*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC.

comment *3760* comment by: *AUSTRIAN Airlines*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B

equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC.

comment *4613* comment by: *KLM*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC.

comment *4796* comment by: *TAP Portugal*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC

comment *5008* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC.

comment *5572* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The minimum performance standards for TAWS Class A and TAWS Class B equipment are described in the Agency's ETSO-C151a

Comment:

The minimum performance standard should at least be defined in an AMC.

Proposal:

Upgrade to AMC.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM2 OPS.GEN.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes p. 217-224

comment *364* comment by: *ECA - European Cockpit Association*

Comment on GM2 OPS.GEN.465.A.3.a.ii.A.1:

"A. Surveillance:

1. The GPWS computer processes data supplied from an air data computer, a radio altimeter, an Instrument Landing System (ILS)/Microwave Landing System(MLS)/Multi-Mode (MM) receiver, a roll attitude sensor, and flap and gear selector position sensors."

Comment:

It should not sense the flap and gear selector position, but the actual position of the surfaces and of the landing gear.

comment *2524* comment by: *Royal Aeronautical Society*

On page 223 the subparagraph numbers in paragraph E should be '**1**' and '**2**', not '1' and 'ii', with the text of the second subparagraph aligned with that of the first. This whole paragraph is of critical importance since it specifies the **only** circumstances in which a 'pull-up' response to a TAWS *warning* may be replaced by that which is appropriate to a *caution*. Unless **both** criteria exist, the pilot should respond only with a manoeuvre that is appropriate for a warning. Consequently, each criterion must be linked with the other in the NPA text.

comment *3226* comment by: *AEA*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment *3229* comment by: *AEA*

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme. ~~*and they also should be recorded in the aircraft technical log:*~~

comment *3232* comment by: *AEA*

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment *3237* comment by: *AEA*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *3239* comment by: *AEA*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment *3761* comment by: *AUSTRIAN Airlines*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment *3859* comment by: *AUSTRIAN Airlines*

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme. ~~*and they also should be recorded in the aircraft technical log:*~~

comment *3860* comment by: *AUSTRIAN Airlines*

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment *3861* comment by: *AUSTRIAN Airlines*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *3863* comment by: *AUSTRIAN Airlines*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment *4614* comment by: *KLM*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment 4616 comment by: KLM

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme. ~~*and they also should be recorded in the aircraft technical log:*~~

comment 4622 comment by: KLM

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment 4624 comment by: KLM

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *4629* comment by: *KLM*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment *4798* comment by: *TAP Portugal*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment *4799* comment by: *TAP Portugal*

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme. ~~*and they also should be recorded in the aircraft technical log:*~~

comment *4800* comment by: *TAP Portugal*

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment *4802* comment by: *TAP Portugal*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *4805* comment by: *TAP Portugal*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment *5009* comment by: *Deutsche Lufthansa AG*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and

technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment *5010* comment by: *Deutsche Lufthansa AG*

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme.~~*and they also should be recorded in the aircraft technical log:*~~

comment *5011* comment by: *Deutsche Lufthansa AG*

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment *5012* comment by: *Deutsche Lufthansa AG*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *5013* comment by: *Deutsche Lufthansa AG*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment *5573* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Those GMs have nothing to do with the regulation. It's only informative and technical

Proposal:

Put it in a separate document (best practices, booklet, notice …)

comment *5574* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log:

Comment:

It does not make sense to report in the ATL as there's no technical problem. No MEL reference can be made.

Proposal:

Remove last part of sentence to result in;

f. ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme. ~~*and they also should be recorded in the aircraft technical log:*~~

comment *5575* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

Too much detail and requirements. It does not comply with the spirit of the GM principle.

Proposal:

Reduce to one paragraph as taken from 2 (b) ;

2. Scope b:

"No attempt is made to define how the training programme should be implemented. Instead, objectives are established to define the knowledge that a pilot operating a TAWS is expected to possess and the performance expected from a pilot who has completed TAWS training. "

comment *5576* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Text should be moved to an AMC

Proposal:

Move text to AMC OPS.GEN.465.A

comment *5577* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant text:

That TAWS warnings should never be ignored. However, the pilot's response may be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and

ii. it is immediately clear to the pilot that the aircraft is in no danger in respect of its configuration, proximity to terrain or current flight path.

Comment:

Editorial mistake? ii should be 2

Proposal:

Correct editorial: change ii) to 2)

comment 6526 comment by: IATA

That TAWS warnings should never be ignored. However, the pilot's response ma be limited to that which is appropriate for a caution, only if:

1. the aircraft is being operated by day in clear, visual conditions; and
2. it is immediately clear to the pilot that the aircraft is in no danger in respect

of its configuration, proximity to

terrain or current flight path.

Proposal:

Move text to AMC OPS.GEN.465.A

ii. Written reports. Written reports should be submitted in accordance with the operator's occurrence reporting scheme and they also should be recorded in the aircraft technical log

Comment:

There is no technical proplem which requires

an entry into the technical log.

Proposal:

Delete "and they also should be recorded in the aircraft technical log"

comment 7046 comment by: IACA International Air Carrier Association

Extensive training programme material. Is this complexity justified ?

EASA uses "should", not "shall"(Guidance Material). If "shall" would be used, then the transition period needs to be extended.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.485.A Crash axes and crowbars - Aeroplanes p. 224

comment 105 comment by: Air Southwest

In OPS 1.795(b) this matter was considered so important that it was included in the main body of the article text. It also used the word 'must' to apply total compliance. In this section it would appear that the importance of the requirement has been played down by inclusion in the AMC section and also the use of the word 'should'. It is suggested that OPS.GEN.485.A is amended to include AMC OPS.GEN.485.A and the word 'must' is reinstated.

comment 3508 comment by: UK CAA

Page No: 224

Paragraph No:

AMC OPS.GEN.485.A

Comment:

The text refers to CAT aeroplanes requirement and therefore should be moved to AMC OPS.CAT as indicated in the proposed text.

Justification:

Consistency

Proposed Text (if applicable):

AMC OPS.CAT.485.A Crash axes and crowbars - Aeroplanes

POSITION OF CRASH AXES AND CROWBARS FOR AEROPLANES USED IN COMMERCIAL AIR TRANSPORT OPERATIONS

For aeroplanes used in commercial air transport operations, crash axes and crowbars located in the passenger compartment should be stored in a position not visible to passengers.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC1 OPS.GEN.490.A Flight data recorder - Aeroplanes p. 224-229

comment *1642* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1694* comment by: *Dassault Aviation*

Technical comment.

Page 224 AMC1 OPS.GEN.490.A (FDR Aeroplanes): Since FDR in GEN is required for aeroplanes > 5.7 tonnes and first issued with a CoA > 01 jan 2005, or aeroplanes > 27 tonnes and first issued with a CoA > 31 december 1988 (see OPS.GEN.490 for aeroplanes on. Page 50), the title of this AMC should, in addition to quote the date of the first CoA, also quote the maximum take off mass. Our proposal is "LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES WITH A MAXIMUM CERTIFICATED TAKE OFF MASS EXCEEDING 5,700 KG AND FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY 2010".

comment *1695* comment by: *Dassault Aviation*

Technical comment.

Page 228 AMC1 OPS.GEN.490.A Table 2 (FDR Aeroplanes): for parameter 38a (Pilot) and parameter 38b (First officer), it should be added "SELECTED BAROMETRIC SETTING".

comment *2714* comment by: *AOPA-Sweden*

This is a design requirement, doesn't fit in here

comment *3260* comment by: *Eurocontrol CND*

page 228 Table 2 of AMC1 OPS.GEN.490.A

Item 26 should contain GLS distance to threshold. In items 60 add a note to clarify that GLS details can be identified by combination of 60a and 33f. The same is true for Table 2 of AMC1 OPS.GEN.490.H, and Table 2 of AMC2 OPS.GEN.490.H This may require updating ED-55 and/or ED-122.

comment *3509* comment by: *UK CAA*

Page No: 224

Paragraph No:

AMC1 OPS.GEN.490.A

Comment:

The ICAO (FLIRECP) compliance date has been postponed to 2016.

Justification:

Amendment to compliance date.

Proposed Text (if applicable):

LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY ~~2010~~ ***2016***

comment *3510* comment by: *UK CAA*

Page No: 224 – 235

Paragraph No: AMC OPS.GEN.490.A

Comment:

The break down of the FDR AMC OPS.GEN duplicates those in EU-OPS (Commercial Air Transport) and not ICAO Annex 6 Part II.

OPS.GEN breaks down the AMCs into:

After 1 January 2010

After 1 April 1998

After 1 June 1990 & before 30 March 1998

Before 1 June 1990

ICAO Annex 6 Part II breaks down the Requirement into:

After 1 January 2005

After 1 January 1989

Justification:

Incorrect compliant dates.

Proposed Text (if applicable):

AMC1 OPS.GEN.490.A Flight data recorder - Aeroplanes

LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY 2010

Delete: AMC2 OPS.GEN.490.A Flight data recorder – Aeroplanes and AMC3 OPS.GEN.490.A Flight data recorder – Aeroplanes

~~AMC4~~ *AMC2* OPS.GEN.490.A Flight data recorder - Aeroplanes

LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS BEFORE ~~1 JUNE 1990~~ *1 JANUARY 1989*

The flight data recorder should, with reference to a timescale, record the parameters listed in Table 1 of ~~AMC4~~ *AMC2* OPS.GEN.490.A.

When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the FDR of aeroplanes with a maximum certificated take-off mass exceeding 27 000 kg that are of a type which was first type certificated after 30 September 1969 does not need to record the parameters 13, 14 and 15b in Table 1 of ~~AMC4~~ *AMC2* OPS.GEN.490.A, when any of the following conditions are met: a. Sufficient capacity is available on a FDR system; b. The sensor is readily available; c. A change is not required in the equipment that generates the data.

When so determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the FDR does not need to record individual parameters that can be derived by calculation from the other recorded parameters.

Table 1 of ~~AMC4~~ *AMC2* OPS.GEN.490.A

AEROPLANES WITH A MAXIMUM CERTIFICATED TAKE-OFF MASS EXCEEDING 27000 KG

comment *4059* comment by: *Airbus SAS*

AIRBUS asks to add a third point to AMC1 OPS.GEN.490.A Flight data recorder - Aeroplanes to read as following:

"3. Or, the parameters to be recorded as defined by AMC1 item1 should meet performance specifications (Range, Accuracy (sensor input), seconds per sampling interval, and Resolution) of an acceptable international standard recognized sufficient to comply with ICAO Annex 6, for example as defined in

Appendix M to US 14 CFR 121.344 Digital flight data recorders for transport category airplanes."

Rationale:

The operational requirements established by the FAA (so-called 88 parameters) are satisfying the valid ICAO Annex 6 requirements with respect to Digital Fligth Recorders (Type 1A recorders). The industry (aircraft manufactures, operators, STC providers) implemented these FAA requirements on most current types of aeroplanes. Accepting these requirements concerning the parameter specification as an alternative means of compliance would provide only one standard for such in-production types of aeroplanes.

This also would improve the envisaged approach for Harmonization of rules between Europe and USA. Operators in Europe and in the USA would not be faced with unnecessary different requirements and with different costs to implement such requirements.

comment *4071* comment by: *Airbus SAS*

AMC3 OPS.GEN.490.A Flight data recorder - Aeroplanes and

AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS asks to include the same requirement to "AMC1 OPS.GEN.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.GEN.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *4340* comment by: *Airbus SAS*

Airbus proposes to replace, in the first sentence of AMC1 OPS.GEN.490.A, the fixed effectivity threshold of 1 January 2010 by an implementation date depending on the effectivity date of the rule , to read as following:

"LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER ***[insert date 2 years from the effective date of the final rule]***,…"

Rationale:

To record the parameters listed in Table 1 of AMC1 OPS.GEN.490.A and the additional parameters listed in Table 2 of AMC1 OPS.GEN.490.A shall be considered as a new requirement. These lists provide significant differences from the current valid EU-OPS-1.715 requirements (Appendix 1 to OPS 1.715: Tables A1, A2, B, C and ED55). As a consequence, the applicant has to provide significant changes to the aircraft architecture. Not only the Recoding system

must be changed, but also a couple of "source systems" (Navigation, Flight Control systems), which deliver the requested parameters, must be modified as well. This requires a significant lead-time to develop and to certify the required changes.

Two years after the final introduction of the rule OPS.GEN.490 should be provided to implement the required changes to comply with the AMC1 OPS.GEN.490.A.

A corresponding comment has been given under CRT comment no. 4047 concerning AMC1 OPS.CAT.490.A.

comment *4769* comment by: *Airbus SAS*

Airbus proposes to modify Item 2. "The parameters to be recorded should meet the performance specifications (designated ranges, sampling intervals, accuracy limits and minimum resolution in read-out) as defined in the relevant tables of the European Organization for Civil Aviation Equipment (EUROCAE) ED-112." to read as following (changed parts in bold letters):

"The parameters to be recorded should meet the performance specifications (**minimum recording ranges, maximum recording interval**, **recording accuracy, and recording resolution**) as defined in the relevant tables of the European Organization for Civil Aviation Equipment (EUROCAE) ED-112 **(Issue 2003), except for parameter no.78. Parameter no.78 is specified in GM xxx OPS.GEN.490.A."**

Consequently, Airbus proposes to add a GM to specify parameter 78 in accordance with provision included JAA NPA OPS-39 "JAR-OPS 1 Omnibus".

Rationale:

- The changed text is to align the requirement of AMC1 OPS.GEN.490.A with the terms used within the ED-112 document, and to avoid possible misinterpretations.

- The addition of the "Issue 2003" is requested to allow a clear reference to an established industrial standard.

- The table 2 contains Parameter 78 : ANP or EPE or EPU**.** ED-112 does not contain any specification for parameter 78.

comment *6189* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

comment *6907* comment by: *Ryanair*

This date should be changed to January 1 2012 to permit operators to take

account of the changes as aircraft already scheduled for delivery are on the production line and this could cause a delay on delivery or have an enconomic affect not already accounted for.

comment *7071* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

The following items in Table 2 of AMC1 OPS.GEN.490.A is not clear to us. Are parameters 38a and 38b to be understood that both the pilot's and first officer's selected barometric settings are to be recorded?

comment *7620* comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC2 OPS.GEN.490.A Flight data recorder - Aeroplanes p. 229-234

comment *1643* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1696* comment by: *Dassault Aviation*

Technical comment.

page 229 AMC2 OPS.GEN.490.A (FDR Aeroplanes): since AMC1 OPS.GEN.490.A is for aeroplanes with first CoA ≥ 01 january 2010, this AMC2 OPS.GEN.490.A should read "LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 APRIL 1998 UP TO AND INCLUDING 31 DECEMBER 2009".

Furthermore, for the same reason as above, Table 1 of AMC2 OPS.GEN.490.A pg 230 should read "PARAMETERS FOR AEROPLANES WITH A MAXIMUM CERTIFIED TAKE-OFF MASS EXCEEDING 5 700 KG AND FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS AFTER 1 JANUARY 2005 AND UP TO 1 JANUARY 2010 (EXCLUDED)".

The same for Table 2 of AMC2 OPS.GEN.490.A on pg 231, which should read "PARAMETERS FOR AEROPLANES WITH A MAXIMUM CERTIFIED TAKE-OFF MASS EXCEEDING 27 000 KG AND FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY 1998 AND UP TO 1 JANUARY 2010 (EXCLUDED)".

comment *3240* comment by: *AEA*

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *3262* comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3767* comment by: *AUSTRIAN Airlines*

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4057* comment by: *Airbus SAS*

Airbus proposes to re-write the first sentence in AMC2 OPS.GEN.490.A to read as following:

"LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 APRIL 1998 **UP TO AND INCLUDING [the date given in AMC1 OPS.GEN.490.A].**

Rationale:

The AMC2 should have a termination date, because of the existence of AMC1.

comment *4072* comment by: *Airbus SAS*

AMC3 OPS.GEN.490.A Flight data recorder - Aeroplanes and

AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS asks to include the same requirement to "AMC1 OPS.GEN.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.GEN.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *4630* comment by: *KLM*

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment 4806 comment by: TAP Portugal

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment 5014 comment by: Deutsche Lufthansa AG

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment 5578 comment by: Swiss International Airlines / Bruno Pfister

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *6192* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

comment *6251* comment by: *Virgin Atlantic Airways*

Relevant Text:

2. When determined by the competent Authority responsible for type certification or supplemental type certification, the flight data recorder of aeroplanes first issued with an individual certification of airworthiness before 20th August 2002 and equipped with an electronic display system does not need to record those parameters listed in table 3 of AMC2 OPS.GEN.490A for which:

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Realign with EU-OPS

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC3 OPS.GEN.490.A Flight data recorder - Aeroplanes p. 232

comment *1644* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1697* comment by: *Dassault Aviation*

Technical comment.

Page 232 AMC3 OPS.GEN.490.A (FDR Aeroplanes): §2 should read "…the flight data recorder of aeroplanes having a maximum certificated take-off mass ~~of~~ exceeding 27 000 kg does not need to record parameters…"

comment *3242* comment by: *AEA*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *3262* □ comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3769* comment by: *AUSTRIAN Airlines*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be

EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *4068* comment by: *Airbus SAS*

AMC3 OPS.GEN.490.A Flight data recorder - Aeroplanes and

AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS asks to include the same requirement to "AMC1 OPS.GEN.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.GEN.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *4632* comment by: *KLM*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *4807* comment by: *TAP Portugal*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority

responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *5015* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *5579* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Stick to EU-OPS wording.

comment *6193* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

comment *6254* comment by: *Virgin Atlantic Airways*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA).

Proposal:

Realign with EU-OPS

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes p. 234-235

comment *1645* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these table in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1698* comment by: *Dassault Aviation*

Technical comment.

Page 234 AMC4 OPS.GEN.490.A should read "LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS AFTER 31 DECEMBER 1988 AND UP TO ~~BEFORE~~ 1 JUNE 1990 (EXCLUDED)".

comment *3243* comment by: *AEA*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *3262* ☐ comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3773* comment by: *AUSTRIAN Airlines*

elevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4070* comment by: *Airbus SAS*

AMC3 OPS.GEN.490.A Flight data recorder - Aeroplanes and

AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS asks to include the same requirement to "AMC1 OPS.GEN.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.GEN.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane

receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *4635* comment by: *KLM*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4809* comment by: *TAP Portugal*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5016* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5581* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *6195* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

comment *6257* comment by: *Virgin Atlantic Airways*

Relevant Text:

Paragraph 2 and paragraph 3

When determined by the competent Authority responsible for type certification or supplemental type certification,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Realign with EU-OPS

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes - Appendix 1 p. 235-240

comment *1646* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of

JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *1699* comment by: *Dassault Aviation*

Technical comment. Page 235 Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A (FDR aeroplanes): §1 should add "as far as practicable" to be consistent with §5 of AMC2 OPS.GEN.490.A to read "The parameters to be recorded should meet, as far as practicable, the performance specifications…".

comment *3511* comment by: *UK CAA*

Page No: 237

Paragraph No:

AMC3 and AMC4 OPS.GEN.490.A

Comment:

Table 1 of Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A

Duplication of information recorded in EUROCAE Document ED 55

Justification:

Duplication of Information.

Proposed Text (if applicable):

Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A Flight data recorder - Aeroplanes

PERFORMANCES SPECIFICATIONS FOR THE PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS BEFORE 1 APRIL 1998

1. The parameters to be recorded should meet the performance specifications (designated ranges, recording intervals and accuracy limits) defined ~~in Table 1 of Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A~~ ***in table A1.5 of EUROCAE ED 55.***

2. FDR systems for which the recorded parameters do not comply with the performance specifications of ~~Table 1 of Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A~~ ***table A1.5 of EUROCAE ED 55.*** (i.e. range, sampling intervals, accuracy limits and recommended resolution readout) may be acceptable to the competent authority responsible for the type certification or supplemental type certification.

Delete: Table 1 of Appendix 1 to AMC3 and AMC4 OPS.GEN.490.A

comment *4066* comment by: *Airbus SAS*

The following comment is related to point 1. in AMC4 OPS.GEN.490.A

"1. The flight data recorder should, with reference to a timescale, record the parameters listed in **Table 1 of AMC4 OPS.GEN.490.A**."

Airbus comment:

The current equivalent rule corresponding to AMC4 OPS.GEN.490.A (AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS BEFORE 1 JUNE 1990) is EU OPS-1.725.

EU-OPS 1.725 makes additional constraints (alleviations) for airplanes manufactured before 1969, before 1987, or before 1989. The rule provides for these periods different requirements (basically subsets of parameters mentioned in AMC Table 1).

For example:

For airplanes with more than 27000kg MCTOM and first issued with an Individual Certificate of Airworthiness between 1969 and 1987 only recording of parameters 1...15b is required.

Airbus requests EASA may change the Table 1 of AMC4 OPS.GEN.490.A in a way that it correlates completely with the requirements given by EU OPS-1.725.

Rationale:

If the alignment with the existing EU-OPS 1.725 will not be done, operators of aeroplanes manufactured before 1st June 1987 are faced by significant issues. Their recording systems have usually the capability to record just parameters 1..15b.

The required changes to comply with AMC4 OPS.GEN.490.A will be very expensive and time consuming. (We assume, that this is not the intention of EASA).

comment *6197* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

comment *6198* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC1 OPS.GEN.490.H Flight data recorder - Helicopters p. 241-244

comment *1607* comment by: ***EUROCOPTER***

Wording modification proposal:

LIST OF PARAMETERS TO BE RECORDED FOR HELICOPTERS FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY ~~***2010***~~ ***2016****.*

Justification:

It is explained in page 24, item n° 80, of the Explanatory Note that the date of applicability of the ICAO type IVA FDR is postponed to 01.01.2010 because the ICAO SARP already require helicopters to be equipped with type IVA FDRs after 01.01.2005, and as a compromise solution resulting from the JAA NPA-OPS 67 (which proposed applicability from 01.01.2010).

Eurocopter would like to make the following comments:

- the date of 01.01.2005 written in ICAO Annex 6 Part III has never been realistic and implementable (some suppliers did not have compliant equipment at that time) and should be modified in accordance with the latest work done by the ICAO FLIRECP. Moreover, for most of ICAO States, this requirement and implementation date have not been transferred in in their national Operational Regulations up to now.

- as far as Europe is concerned, the date of 01.01.2010 written in JAA NPA-OPS 67 was proposed at the date of definition of this NPA, so in 2006; nevertheless such a requirement for FDRs Type IVA has never been included in JAR-OPS 3.

- today the implementation date for FDRs type IVA to be included in the future Part OPS cannot be the "copy and paste" of a date (01.01.2010) which was defined by JAA in 2006.

- it has to be noted that operators cannot, or will have big difficulties to modify the helicopters in order to retrofit Type IVA FDRs without the help of helicopter manufacturers.

- There are important delays for retrofitting Type IVA FDRs on existing aircraft types because of significant technical difficulties to gather the requested data on sub systems (e.g. AFCS, Instrumentation, Navigation) which are:

* Performance of already installed high technology components (e.g. acquisition units) is no longer sufficient to cope with the new requirements. * A new step of technology is necessary (additional inputs, increased update rates, increased computation power).

* New equipment has to be developed and serialized to receive/structure the requested data.

* Installation (new or supplement for the existing one) has to be developed, qualified, certified and introduced into a serial production.

* New software has to be developed for a significant amount of legacy systems, which have to provide the necessary data.

Proposal: Eurocopter propose to postpone the applicability date of Type IVA FDRs to the one proposed by ICAO (Letter to States Ref SP 55/4-09/56 dated 24 July 2009), so 01.01.2016.

comment *1647* comment by: ***Luftfahrt-Bundesamt***

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *6201* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC2 OPS.GEN.490.H Flight data recorder - Helicopters p. 244-247

comment *1648* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of FDR – parameter tables into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

Justification: see LBA - General Comment, reasons 1 and 2.

comment *6202* comment by: *Air Accidents Investigation Branch*

The requirements for the specific parameters to be recorded (together with accuracy, range and resolution) must not be 'downgraded' to what is effectively only a recommendation as the NPA only addresses them in the AMC section. If these are not required as part of the rule it is likely that any standardisation currently in place in Europe will be lost. The tables need moving back to the rule.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.495.A Cockpit voice recorder - Aeroplanes p. 247

comment *1649* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

comment *2715* comment by: *AOPA-Sweden*

This is a design requirement, doesn't fit in here

comment *4911* comment by: *BEA*

AMC OPS.GEN.495.A (2)

The ED-112 was published in 2003 intending to replace ED-55, 56 and 56A. It is proposed that all new installation should reference this document. The new proposal of Annexe 6 states in notes: CVR, FDR and AIR performance requirements are as contained in the EUROCAE ED-112, Minimum Operational Performance Specification (MOPS) for Crash Protected Airborne Recorder Systems, or equivalent documents.

comment *6214* comment by: *Air Accidents Investigation Branch*

Under JAR-OPS these are requirements. All of the items have sufficient importance attached for accident investigation purposes to require them to be addressed by the rule, not by the AMC. They need moving from the AMC section back to the rule.

comment *7621* comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.495.H Cockpit voice recorder - Helicopters p. 247

comment *1650* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

comment *6217* comment by: *Air Accidents Investigation Branch*

Under JAR-OPS these are requirements. All of the items have sufficient importance attached for accident investigation purposes (especially accidents to helicopters) to require them to be addressed by the rule, not by the AMC. They need moving from the AMC section back to the rule.

comment *7621* □ comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.495(c) Cockpit voice recorder p. 248

comment *1651* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

comment *3512* comment by: *UK CAA*

Page No: 248

Paragraph No:

AMC OPS.GEN.495(c)

Comment:

As a result of the incorrect paragraph numbering in OPS.GEN.495, the title of the AMC is now incorrect.

Justification: Formatting.

Proposed Text (if applicable):

AMC OPS.GEN.495~~(c)~~(*e)* Cockpit Voice Recorder

comment *4913* comment by: *BEA*

AMC OPS.GEN.495 (c) Cockpit voice recorder (page248 of NPA)

The new proposal of Annex 6 states that "*depending on the availability of electrical power, the CVR and CARS shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight*". It is proposed that "should" in the NPA be replaced by "shall" on each similar paragraph in the document and the wording modified to be consistent with ICAO proposal.

comment *6228* comment by: *Air Accidents Investigation Branch*

As this is only 'guidance' (being in the AMC section) there will be no requirement (even though it is essential) for this to be met. Recommend moving it back to the rule under OPS.GEN.

comment *7621* ☐ comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.490 and OPS.GEN.495 Flight data recorder and cockpit voice recorder p. 248

comment *495* comment by: *EHOC*

New Paragraph 4.

This text does not specifically permit a combined recorder (as specified in ICAO Annex 6 Part III).

There is no rule which appears to permit the use of combination recorders. Suggested additional text to this AMC might be:

4. For helicopters, compliance with CVR and/or FDR may be achieved with a combination recorder.

comment *1652* comment by: *Luftfahrt-Bundesamt*

The LBA cannot agree to the move of parts of CVR– requirements into the AMC – material. JAA especially prepared an NPA to move these tables in Section 1 of JAR-OPS in order to provide legal clarity.

comment *3513* comment by: *UK CAA*

Page No: 248

Paragraph No:

AMC OPS.GEN.490 and 495

Comment:

Neither OPS.GEN.490 nor OPS.GEN.495 has a reference to combination recorders. Therefore, the AMC should be amended to include the text below.

Justification:

The AMC text must be linked to the Rule.

Proposed Text (if applicable):

AMC OPS.GEN.490 and OPS.GEN.495 Flight data recorder and cockpit voice recorder

~~COMBINATION RECORDERS~~

1. Compliance with FDR and CVR requirements can be achieved by the use of combination recorders.

~~1~~. ***2***. A combination recorder is a flight recorder that records:

a. all voice communications and the aural environment required by the

applicable CVR AMC; and

b. all parameters and specifications required by the applicable FDR AMC.

Renumber paragraphs 2 and 3 as ***3*** and ***4***.

comment *3515* comment by: *UK CAA*

Page No: 248

Paragraph No:

AMC OPS.GEN.490 and OPS.GEN.495

Comment:

COMBINATION RECORDERS

The text contains no provision for helicopters to use Combination Recorders. This is contrary to JAR OPS 3.705(e) and 3.720(h).

Justification:

The rule allows for aeroplanes, but not helicopters to use combination recorders. There is no safety reason why such recorders should not be used by helicopters.

Proposed Text (if applicable):

Add:

4. **"**For helicopters, compliance with CVR and FDR requirements may be achieved by a combination recorder"

comment *3807* comment by: *Civil Aviation Authority of Norway*

Comment:

The text does not specifically permit a combined recorder (as specified and recommended in ICAO Annex 6 Part III).

There is no rule which appears to permit the use of combination recorders. Suggested additional text to this AMC might be:

4. For helicopters, compliance with CVR and/or FDR may be achieved with a combination recorder.

Justification:

Alignment with ICAO

Proposed Text

(if applicable):

4 For helicopters, compliance with CVR and/or FDR may be achieved with one combination recorder.

comment *6231* comment by: *Air Accidents Investigation Branch*

This does not address combination recorders for helicopters, something that ICAO Annex 6 does address.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC1 OPS.GEN.500 Data link recording - Aeroplanes and Helicopters p. 248-249

comment *2716* comment by: *AOPA-Sweden*

This is a design requirement, doesn't fit in here

comment *4022* comment by: *Airbus SAS*

Airbus proposes to delete the words "and by which provider" at the end of point 2 in AMC 1 to OPS.GEN.500, to read as following:

"2. As a means of compliance with OPS.GEN.500 (a)(2), the operator should enable correlation by providing information, which allows an accident investigator to understand what data was provided to the aircraft."

Rationale:

The requirement related to the last part of this section *(…and by which provider*) couldn't be complied with. The term "provider" is not specified concerning the expected information. Identifications of providers are not part of the recorded information, unless it is part of the message.

comment *4920* comment by: *Airbus SAS*

Airbus proposes to delete Item 7. in AMC1 OPS.GEN.500 saying "The applications to be recorded should meet the performance specifications defined in the relevant tables of part IV CNS/ATM recorder systems of EUROCAE ED-112."

Rationale:

-- The applications and the definition of messages, which shall be recorded, should be completely defined by **AMC2** OPS.GEN.500 Data link recording.

- The reference to Tables of part IV CNS/ATM recorder systems of EUROCAE ED-112 is inadequate. There is a common agreement (based on the work made by FRSG/JAA) that these tables were established without appropriate maturity, and that they contain a couple of inconsistencies. AIRBUS proposes not to reference the table "CNS/ATM Recording Requirements" adopted from ED112, but to use a more consistent listing to avoid misinterpretation.

comment *7622* comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC2 OPS.GEN.500 Data link recording - Aeroplanes and Helicopters p. 249-251

comment *1700* comment by: *Dassault Aviation*

Technical comment.

Page 249 AMC2 OPS.GEN.500 (D/L recording): what are exactly the data link messages that must be recorded ? What would constitute an approved message set ? The proposed requirements are open to interpretation. In §OPS.GEN.500 the requirements concern the data link communication messages, whereas Table 1 and 2 of AMC2 OPS.GEN.500 concern data link communication messages and data link surveillance messages. We propose to record only data link communication messages as FAA regulation.

comment *2380* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Dates are not aligned with **EC Regulation 29/2009** Data link services Article 3 requiring data link services defined in Annex II as from February 2015

comment *4018* comment by: *Airbus SAS*

AIRBUS proposes to add an additional point 3. to AMC2 OPS.GEN.500 Data link recording - Aeroplanes and Helicopters LIST OF APPLICATIONS, to read as following:

"3. For aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April 2012, data link communications messages that support the applications as requested by FAA AC 20-160 (Onboard Recording of Controller Pilot Data Link Communication In Crash Survivable Memory)."

Rationale:

The requirements established by the FAA 25-124, 91-300, 121-338, 125-54, 129-45 & 135-113) are satisfying the valid ICAO Annex 6 requirements with respect to Datalink Recording. The industry (aircraft manufactures, operators, STC providers) will implement these FAA requirements on most types of aeroplanes, for which a first CoA will be issued on or after April 7. 2010. FAA established an AC 20-160 to define the approved data set that has to be recorded. Accepting these requirements as an alternative means of compliance would provide one standard.

This also would improve the envisaged approach for harmonization of rules between Europe and USA. Operators in Europe and in the USA would not be faced with unnecessary different requirements and with different costs to implement such requirements. If EASA would not accept this recommendation, an US operator, even operating in European Airspace have much less datalink recording capability than an European one. This will lead of course to higher costs for all European operators.

comment *4977* comment by: *Airbus SAS*

Attachment #17

The AMC2 OPS.GEN.500 as proposed is structured in 2 parts affecting

1. aircraft first issued with a type certificate after 31 december 2009 (sentence 1. and table 1 on NPA page 249) and

2. aircraft first issued with a type certificate before 1 January 2010 (sentence 2. and table 2 on NPA page 250).

AIRBUS proposes to remove the dependency on the date of "first issued with a type certificate", and to replace sentences/tables 1 and 2 by a single table 1 covering all new manufactured aircraft and a single sentence 1. saying:

"1. For aeroplanes and helicopters first issued with an individual certificate of airworthiness on or after 8 April 2012, data link communications messages that support the applications in Table 1 of AMC2 OPS.GEN.500 should be recorded."

For the Airbus-proposal for that single table 1 see the .pdf-file attached to this comment.

Rationale:

a) AIRBUS would prefer to "unify" the Table 1 and Table 2 of AMC2 OPS.GEN.500 Data link recording in the proposed way, that no dependency would be made between the two conditions. To simplify the requirement, we recommend just introducing **one requirement** applicable for all airplanes first issued with an individual certificate of airworthiness on or after 8 April 2012.

Remark: If EASA will follow this proposal, **AMC1 OPS.GEN.500 item 1** becomes obsolete.

b) EASA and AIRBUS discussed the requirements concerning datalink recording in detail during the Type Certification Process of A380, A400M and currently of A350. The bus-proposed table is the final result of the assessment made by EASA concerning the Application Types, the Application description, and the required Recording Content (extract of the CRI F-26 for the AIRBUS A350). AIRBUS asks to use this table to cover both classes of aircrafts (independent from TC date).

Airbus understanding is, that EASA accepted already our arguments to remove AOC and Graphic Information from the list.

For parameters, where applications, like AOC, are not normalized nor specified (airlines normally specify applications individually) , AIRBUS (as the A/C manufacturer) cannot consider them within the architecture and cannot define recording capabilities. On the other hand, an operator does not have the technical competence to "add" recording capabilities for such complex computers like the ATSU.

The regulation OPS.GEN.500 "Data link recording" requires under paragraph (a)(1) **"...**shall be equipped with a means of recording the following, where applicable:

(1) Data link communication messages related **to air traffic services communications to and from the aircraft**;"

From this basic requirement, AIRBUS does not derive that information related to AOC items would be required to be recorded. we consider the same interpretation is applicable for "Graphics". Consequently, AOC and graphic information were removed from the table established by EASA in CRI

F-26.

comment *7056* comment by: *IACA International Air Carrier Association*

1. and 2.

Dates are not aligned with EC Regulation 29/2009 Data link services Article 3 requiring data link services defined in Annex II as from 5 February 2015.

comment *7072* comment by: *Embraer - Indústria Brasileira de Aeronáutica - S.A.*

Embraer understand that EASA requirement for datalink recording should be harmonized with FAA rule.

In that way, the message set to be recorded on the CVR should be the same as identified on specified on FAA AC 20-160A

ATN CPDLC

FANS 1/A CPDLC

comment *7623* comment by: *AOPA UK*

This is a design requirement, does not fit in here

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.500 Data link recording - Aeroplanes and Helicopters p. 251-253

comment *5724* comment by: *Airbus SAS*

With CRT comment no.4977 Airbus proposes to modify AMC2 OPS.GEN.500 to replace tables 1 and 2 by a single table covering all newly manufactured aircraft.

Consequently, in case EASA would implement Airbus comment no.4977, the GM OPS.GEN.500 would need to be adapted.

Airbus considers explanations for items "C" and "M" sufficient as GM to supplement the AMC. The item "*" may be required if EASA introduces the single table with item "*" included.

Further , Airbus proposes to delete the remaining parts of GM OPS.GEN.500. They are not useful as they do not contain additional information concerning recording capabilities

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.505(d) Preservation of FDR and CVR recordings - Aeroplanes and Helicopters p. 253

comment *568* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.505(d)(1): change as follows:

1. save the recordings for the period of operating time as required by OPS.GEN.490, OPS.GEN.495 and OPS.GEN.500, except that, for the purpose of testing ~~**ad**~~ **and** maintaining recorders, up to one hour of the oldest recorded material at the time of testing may be erased;

comment *1701* comment by: *Dassault Aviation*

Technical comment.

Page 253 AMC OPS.GEN.505(d) §3: is the fact to preserve a record of at least one representative flight made within the last 12 months a new requirement ? Second comment is on the operational check and evaluation of recordings themselves: we suggest that the operational check be done on the FDR itself, and the evaluation of recordings be done on the QAR (Quick Access Recorder) when equipped and when the QAR is connected to the same bus as the FDR - evaluation to be done on the FDR otherwise. The rationale is to say that the QAR can be downloaded in a much easier way that the FDR, it has longer recording duration so that a representative flight is more likely to be recorded, and it prevents damage to the FDR connections if the evaluation of recordings was required to be done from the FDR. This could be part of a new subparagraph 4 as follows: "Operational check has to be done from the FDR, and Evaluation recordings could be done from the FDR or the QAR is the aircraft is equipped and if QAR is connected to the same bus than the FDR".

comment *6249* comment by: *Air Accidents Investigation Branch*

It should be a rule that operators keep the documentation required to convert stored data into engineering units. Without this information a) the operator would be unable to establish the continued airworthiness of the FDR, b) the operator would (for large aircraft) be unable to carry out Flight Data Monitoring as required by ICAO and c) in the event of a serious incident or accident, accident investigation authorities would be unable to use the FDR data which would slow down the identifiaction of any safety deficiencies.

Due to continued issues with recorder serviceability, the ICAO Flight Recorder Panel is recommending that a) the need for the operator to hold this documentation becomes a Standard, and b) it becomes a requirement that both flight recorders are checked for correct operation on a periodic basis.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.505(b) and (c) Preservation of FDR and CVR recordings - Aeroplanes and Helicopters p. 253

comment *385* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.505(b) and (c) 1 :

Reference to new Attachment E to ICAO Annex 13 is missing.

comment *3106* comment by: *Michael Hoeck*

AMC OPS.GEN 505 (d), Point 3 can possibly collide with OPS.GEN 510 (a), if one crewmember does not consent the recording. WE, as an example, have only 2 crewmembers employed so if I´d refuse to use the recording for the 12 month storage, what then? I don´t see the need to anyhow, and then how is a small cooperate flight department such as ours supposed to do that? Legislative unnessary overkill. A functional test before each flight and a yearly checkup by the maintenance is more than enough.

Point 2: it would make more sense to have such a document at either the countries authority airplane register or preferable the EASA for EVERY Airplane. This could be in an electronic file and be accessible for any investigation team instantly.

comment *4917* comment by: *BEA*

GM OPS.GEN.505 (b) and (c)

The new ICAO annex 6 proposal states about inspections of FDR and CVR flight recorder systems:

3.1 7.1 Prior to the first flight of the day, the built-in test features on for the flight deck for the CVR, FDR recorders and flight data acquisition unit (FDAU), when installed, should shall be monitored by manual and/or automatic checks.

3.2 7.2 Annual inspections should/shall be carried out as follows:

a) the readout an analysis of the recorded data from the FDR and CVR should flight recorders shall ensure that the recorder operates correctly for the nominal duration of the recording;

b) the analysis of the FDR should shall evaluate the quality of the recorded data to determine if the bit error rate (including those introduced by recorder, the acquisition unit, the source of the data on the aeroplane and by the tools used to extract the data from the recorder) is within acceptable limits and to determine the nature and distribution of the errors;

c) a complete flight from the FDR should shall be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention should/shall be given to parameters from sensors dedicated to the FDR. Parameters taken from the aircraft's electrical bus system need not be checked if their serviceability can be detected by other aircraft systems;

d) the readout facility should shall have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals;

e) an annual examination of the recorded signal on the CVR should shall be carried out by replay of the CVR recording. While installed in the aircraft, the CVR should shall record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility

standards; and

f) where practicable, during the annual examination, a sample of in-flight recordings of the CVR should shall be examined for evidence that the intelligibility of the signal is acceptable.: and

g) an annual examination of the recorded images on the AIR shall be carried out by replay of the AIR recording. While installed in the aircraft, the AIR shall record test images from each aircraft source and from relevant external sources to ensure that all required images meet recording quality standards.

3.3 6.3 Flight recorder systems should/shall be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters is not recorded correctly.

It is proposed that the wording should be consistent with future ICAO wording rather than referring to a version which will be soon replaced. Otherwise reference to ED-112 is ok.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.505(d) Preservation of FDR and CVR recordings - Aeroplanes and Helicopters p. 253

comment *496* comment by: *EHOC*

General

This text was originally inserted in the rule because there might have been occasions when the aircraft had been dispatched under the conditions of the MEL. Such representative flights are conducted in order to establish the servicability of the recorders; if on return, the recorder is not servicable (all required fields recorded) then the requirement of the rule has not been satisfied.

The requirement to record and retain one flight will only be done when the recorder is serviceable.

The guidance is related only to clauses (b) and (c) of the rule.

In view of the title and header needs to be changed to:

"GM OPS.GEN.505(c) and (d) Preservation of FDR and CVR recordings - Aeroplanes and Helicopters

RETENTION OF DATA"

and the preamble to:

"Data may not have been recorded if:"

comment *721* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.GEN.505(d): NIL

The change from EU OPS has been noted, but it is accepted.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.515(b) and OPS.GEN.520(a) Microphones - Aeroplanes and Helicopters and Flight Crew interphone system p. 253-254

comment *1702* comment by: *Dassault Aviation*

Technical comment.

Page 253 AMC OPS.GEN.515(b) and OPS.GEN.520(a) Microphones - Aeroplanes and Helicopters and Flight Crew interphone system § Headsets: The sentence "Headset boom microphones should be of noise cancelling type" is not clear. Usually there is a squelch doing that and located in the audio panel.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - GM OPS.GEN.525(b) Communication equipment p. 254

comment *937* comment by: *KLM*

To say that 121.5 Mhz is the emergency freq is useless information that is provided elswhere.

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.530 Pressure-altitude-reporting transponder p. 254

comment *106* comment by: *Air Southwest*

AMC OPS.GEN.530 3. This has a double standard. The requirement is for the additional SSR facilities to be carried when required by the airspace. The statement then gives the option of carriage. Incorrect use of the word 'may' creates this problem. The wording should be "The airspace may require additional SSR transponder capabilities."

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.535(a) Navigation equipment p. 254

comment *3516* comment by: *UK CAA*

Page No: 254

Paragraph No:

GM OPS.GEN.535(b)

Comment:

The GM is vague and does not offer any guidance. It can be deleted.

Justification:

Proposed Text (if applicable):

~~**GM OPS.GEN.535(b) Navigation equipment**~~

~~NUMBER OF NAVIGATION EQUIPMENTS~~

~~The requirement in OPS.GEN.535(b) may be met by means other than the duplication of equipment.~~

B. II. Draft Decision - Part-OPS - Subpart A - Section IV - AMC OPS.GEN.525 and 535 Communication equipment and Navigation equipment p. 255

comment *405* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.540.A: regarding an editorial change:

ECA requests clarification:

There is an error with the paragraph, as this AMC is mixed with the previous one, making it difficult to find it.

When compliance with OPS.GEN.525 and OPS.GEN.535 requires more than one communication or navigation equipment unit to be provided, each should be independent of the other(s), to the extent that a failure in any one will not result in failure of any other **AMC OPS.GEN.540.A(b)** Electronic Navigation Data Management - complex motor-powered aeroplanes

comment *497* comment by: *EHOC*

Editorial

Formatting has run the text of one AMC into the heading for another and the subsequent AMC has not therefore appeared in the index.

comment *3517* comment by: *UK CAA*

Page No: 255

Paragraph No:

AMC OPS.GEN.525 and 535

Comment:

The text of this AMC has run into the heading of the next AMC (AMC OPS.GEN.540.A(b)) and picked up its bold formatting.

Justification: Editorial

Proposed Text (if applicable):

AMC OPS.GEN.525 and 535 Communication equipment and Navigation equipment

GENERAL

When compliance with OPS.GEN.525 and OPS.GEN.535 requires more than one communication or navigation equipment unit to be provided, each should be independent of the other(s), to the extent that a failure in any one will not result in failure of any other. ~~**AMC OPS.GEN.540.A(b) Electronic Navigation Data Management - complex motor-powered aeroplanes**~~

AMC OPS.GEN.540.A(b) Electronic Navigation Data Management - complex motor-powered aeroplanes

NAVIGATION DATA PRODUCTS NEEDED FOR OPERATIONS IN ACCORDANCE WITH OPS.SPA

comment *3804* comment by: *Civil Aviation Authority of Norway*

Comment:

The text of this AMC has run into the heading of the next AMC (AMC OPS.GEN.540.A(b)) and picked up its bold formatting.

Justification:

Editorial

Proposed Text

(if applicable):

AMC OPS.GEN.525 and 535 Communication equipment and Navigation equipment

GENERAL

When compliance with OPS.GEN.525 and OPS.GEN.535 requires more than one communication or navigation equipment unit to be provided, each should be independent of the other(s), to the extent that a failure in any one will not result in failure of any other. ~~**AMC OPS.GEN.540.A(b) Electronic Navigation Data Management - complex motor-powered aeroplanes**~~

AMC OPS.GEN.540.A(b) Electronic Navigation Data Management - complex motor-powered aeroplanes

NAVIGATION DATA PRODUCTS NEEDED FOR OPERATIONS IN ACCORDANCE WITH OPS.SPA

comment *5924* comment by: *ERA*

European Regions Airline Association Comment

1. When an operator of a complex motor-powered aeroplane uses a navigation database which supports an airborne navigation application as a primary means of navigation**, the navigation database supplier should hold a Type 2 Letter of Acceptance (LoA),** or equivalent.

EASA need to send this paragraph back to experts. It is currently understood that such Type 2 LOA are required only for P-RNAV approval, not for B-RNAV

approval. Can B-RNAV be the primary means of navigation ?

comment *5978* comment by: *DGAC*

Put the bold text "**When compliance [..] failure of any other**" back to standard text and insert a "return carriage" between that text and the terms "**AMC OPS.GEN.540.A(b) Electronic Navigation Data Management - complex motor-powered aeroplanes** " which are in fact the title for the next paragraph "NAVIGATION DATA PRODUCTS NEEDED FOR OPERATIONS IN ACCORDANCE WITH OPS.SPA ")

comment *6282* comment by: *Lufthansa CityLine GmbH*

EASA needs to send this paragraph back to experts. It is currently understood that such Type 2 LOA are required only for P-RNAV approval, not for B-RNAV approval. Can B-RNAV be the primary means of navigation ?

comment *6510* comment by: *Jeppesen*

Jeppesen comments regarding AMC OPS.GEN.540.A(b).

Please note the comments are being posted here refer to AMC OPS.GEN.540.A(b). Rulemaking Process Support asked me to post comments here as there was a slight editorial error where the reference was linked to the previous one (AMC.OPS.GEN.525 and 535. The comments (via attachment) I am posting relate to AMC OPS.GEN.540.A(b).

Thanks for your consideration.

AMC OPS.GEN.540.A(b) Electronic Navigation Data Management – complex motor-powered aeroplanes

NAVIGATION DATA PRODUCTS NEEDED FOR OPERATIONS IN ACCORDANCE WITH OPS.SPA

1. When an operator of a complex motor-powered aeroplane uses a navigation database which supports an airborne navigation application as a primary means of navigation, the navigation database supplier should hold a Type 2 Letter of Acceptance (LoA), or equivalent.

From EASA's CONDITIONS FOR THE ISSUANCE OF LETTERS OF ACCEPTANCE FOR NAVIGATION DATABASE SUPPLIERS BY THE AGENCY, the definition of a Navigation Database is as follows:

Navigation Database - Data (such as navigation information, flight planning waypoints, airways, navigation facilities, SID, STAR) that is stored electronically in a system that supports an airborne navigation application.

Jeppesen's Position on Navigation Databases and Acceptable Means of Compliance Navigation Databases covered under a Type 2 Letter of Acceptance (LoA) should include more database types than those cited above, and should be applicable to all phases of flight (not just airborne) including databases utilized for navigation from gate-to-gate. By expanding the definition beyond airborne to all phases of flight, EASA will be more closely harmonized with

other regulatory agencies like the FAA. Other benefits of the expanded navigation database definition will include additional data being available for flight crews including the offering of three dimensional data (these data types include vertical data).

These additional navigational database types include terrain, obstacles, and airport moving map, and each of these data types offer additional information for flight crews to utilize for gate-to-gate navigation. Therefore, Jeppesen proposes EASA expand the acceptable means of compliance to recognize and include these other forms of navigational databases. The EASA "CONDITIONS FOR THE ISSUANCE OF LETTERS OF ACCEPTANCE FOR NAVIGATION DATABASE SUPPLIERS BY THE AGENCY" should be reviewed accordingly.

B. II. Draft Decision - Part-OPS - Subpart A - Section V - AMC OPS.GEN.600 Documents and information to be carried on all aircraft p. 256

comment *712* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.GEN.600 5.c.:

Paragraph 5.c. should be transferred to OPS.GEN.605(a)(8).

Justification:

Compliance with EU OPS contents.

comment *804* comment by: *CAA-NL*

Regarding the following part of AMC OPS.GEN.600

2. The documents and information may be available in a form other than on printed paper. Accessibility, usability and reliability should be assured.

Proposal CAA-NL:

Add:

permission from the authority.

Reason:

EU-OPS and JAR-OPS requires permission from the authority. Re-implement this requirement.

Add:

Take also into account the EFB requirements and type of operation.

Reason:

To give the operator means of compliance in order to introduce documents and information other than on paper

comment *1548* comment by: *Luftfahrt-Bundesamt*

The possibility of no. 1. allowing an operator to operate for a limited duration without certain documents on board might not be in line with procedures stipulated in NPA 2009-02D for the conduct of ramp-inspections (AR.GEN.435 and following).

comment *1774* comment by: *claire.amos*

Point 2

Implies that electronic copies may be carried

comment *5313* comment by: *Light Aircraft Association UK*

The LAA applauds the note in the paragraph 2 that allows documentation to be carried in non-printed paper form.

comment *6004* comment by: *Ryanair*

Para 3 - Clarification of 'competent authority' required as follows:

Proposal

Competent authority designated by the Member State where the operator has its principle place of business

Para 5 - Clarification of 'states concerned' required as follows:

Proposal

"....that may be pertinent to the flight or required by the competent authority designated by the Member State where the operator has its principle place of business"

comment *6509* comment by: *UK CAA*

Page No: 256

Paragraph No:

AMC OPS.GEN.600 (5)(b)

Comment:

The carriage of cargo and/or passenger manifests is a requirement of Article 29 of the Chicago Convention. Therefore, it should be a rule and moved to OPS.GEN .600.

Justification:

A requirement of the Chicago Convention should be Rule material in OPS.GEN.

Proposed Text (if applicable):

OPS.GEN.600 Documents and information to be carried on all aircraft

(a) On any aircraft, the following documents shall be carried on each flight:

(1) the Aircraft Flight Manual or equivalent documents;

(2) the Certificate of Airworthiness;

(3) the Certificate of Registration;

(4) the original or copy of the Noise Certificate, if applicable;

(5) the original or copy of the third party liability Insurance Certificate;

(6) the journey log book for the aircraft;

(7) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(8) procedures and visual signals for use by intercepting and intercepted aircraft which shall be easily accessible to the flight crew;

(9) ***if passengers and/or cargo are carried, a passenger and/or cargo manifest;*** and

(***10***) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

Delete AMC OPS.GEN.66 (5)(b)

comment *7069* comment by: *IACA International Air Carrier Association*

See also comments on OPS.GEN.600 (a)

Replace in (3) "to be carried on all aircraft" by "to be available on all aircraft".

Delete "original or copy" from (4) and (5) as this implies the option is not available to the other documents. AMC OPS.GEN.600 2. states the documents and information may be available in a form other than on printed paper; this implies also electronic documents and/or hard copies.Please clarify.

Please also clarify that the requirement to carry the Airworthiness Review certificate adequately covered by the mandatory carriage of the Certificate of Airworthiness ?

comment *7624* comment by: *AOPA UK*

If there is no log book issued, how can there be compliance? See our comments above.

B. II. Draft Decision - Part-OPS - Subpart A - Section V - AMC OPS.GEN.605 Documents and information to be carried on non-commercial flights with complex motor-powered aircraft and aircraft used in commercial operations p. 256

comment *498* comment by: *EHOC*

Paragraph 2.

Editorial; not sure that portions (which is usually associated with allocation) is

the correct word; it might be better as:

"Those parts of the operations manual..."

comment *812* comment by: *CAA-NL*

Comment regarding:

….. 'equivalent document as specified in accordance with Part-21.'

The CAA-NL proposes to add:

Add:

Replace 'Part 21' by specifications of the equivalent document or more logical reference

Reason:

Operators, more specific small operators, are not familiar with Part 21 requirements

comment *1680* comment by: *Dassault Aviation*

Editorial comment.

Page 256: AMC OPS.GEN.605 §1: either the second "and" is to be removed, or something is missing after this "and".

comment *3518* comment by: *UK CAA*

Page No: 256

Paragraph No: AMC OPS.GEN.605

Comment: Incomplete reference in title.

Justification: Incomplete reference in title.

Proposed Text (if applicable):

AMC OPS.GEN.605***(a)(4)***

comment *6476* comment by: *Konrad Polreich*

AMC OPS.GEN.605

1. The information pertinent to the intended flight concerning search and rescue services **and** should be easily accessible in the cockpit

Either there is missing an item after 'and', or 'and' is obsolete.

B. II. Draft Decision - Part-OPS - Subpart A - Section V - AMC OPS.GEN.610 Journey log book p. 256-257

comment *499* comment by: *EHOC*

General 1

The Operational Flight Plan is used to document exactly how the flight is to be conducted and what resources will be required: "the operator's plan for the safe conduct of the flight based un considerations of aircraft performance, other operating limitations and expected conditions on the route to be flown and at the aerodromes concerned".

On the other hand, the Journey Log Book is a document that provides a post flight record used to: complete flight records; bill customers; provide the data for engineering schedules etc. In commercial operations, the Technical Log may be used instead of the Journey Log Book.

Because of their disparate uses and the timing of their completion, it might be better to establish the contents of each individually and separately.

General 2

The construction of the form would be much clearer if the elements were set out as they were previously - as it is in ICAO Annex 6 Part I Chapter 11.4.

"...journey log book should contain the following items and the corresponding roman numerals"

General 3

Not sure of the benefit of not having the flight time box provided on the journey log; if it is necessary (and it probably is) it should be provided as it is in Annex 6.

Paragraph 2.

Part GEN is referring to the aircraft log book, not the technical log. Currently some CAT operators use the Technical Log as part of the journey log to meet current requirements, not the aircraft log book. As Technical Log books are not required for non CAT operations this would need to be referred to. Part Gen should be expanded to include:-

"The journey log may be combined with the aircraft log book as required in Part M.A.305 or the technical log as required in M.A.306."

comment *2717* comment by: *AOPA-Sweden*

If there is no log book issued, how to do? See our comments above.

comment *3108* comment by: *Michael Hoeck*

Why e) Purpose of flight?

Point c) Crew names: can we use TLC´s please?

comment *4222* comment by: *DGAC*

OPS.GEN.600 + OPS.GEN.610 + AMC OPS.GEN 610

Proposal :

Return to the wording of EU-OPS 1055(b)

(b) An operator may be permitted not to keep an aeroplane journey log, or parts thereof, by the Authority if the relevant information is available in other documentation.

Justification

As written OPS.GEN.600 + OPS.GEN.610 seem to imply that a journey log has to be established and carried on board, which is not consistant with the possibility provided in EU-OPS OPS 1.125 & 135 + OPS 1.1055b, which allowed to gather this information in other documentations.

comment *6049* comment by: *Ryanair*

The use of the word 'retained' implies for record keeping purposes. This information may be submitted in electronic format

Proposal

The information or parts thereof may be ~~retained~~ *submitted*/retained in a form other than on printed paper.....

B. II. Draft Decision - Part-OPS - Subpart A - Section V - GM OPS.GEN.610 Journey log book p. 257

comment *6050* comment by: *Ryanair*

Please refer to earlier proposal in relation to the definition of a 'series of flights'

B. II. Draft Decision - Part-OPS - Subpart A - Section VI p. 258

comment *781* comment by: *ECA - European Cockpit Association*

The whole section on security should be deleted. ECA believes the provisions of the security section should be deleted as they overlap with Regulation 300/2008. If, however it is decided to keep this section within OPS, ECA recommends to amend the text (see below comments).

B. II. Draft Decision - Part-OPS - Subpart A - Section VI - GM OPS.GEN.700 Disruptive Passenger Behavior p. 258

comment *782* comment by: *ECA - European Cockpit Association*

The paragraph should be deleted. ECA believes the provisions of the security section should be deleted as they overlap with Regulation 300/2008 (see comment n° 781). If, however it is decided to keep this section within OPS, the following changes are needed:

GM OPS.GEN.700 Disruptive Passenger Behavior

GENERAL

1. Operators engaged in the transportation of passengers should take into account that their passengers could ~~**obstruct**~~ **jeopardise** the safe operation of the aircraft. **Undesirable** ~~**P**~~**p**assenger behaviour may be affected by a variety of factors, including:

a. limitations on personal 'freedom', such as restrictions on smoking or on the use of mobile phones;

b. ~~**physical**~~ **physiological** effects, ~~**such as**~~ **possibly** from **medication**, consummation of alcohol **or illicit drugs**, illness, ~~**or taking of medication, possibly increased from**~~ **including the** effects of higher altitude and ~~**less available**~~ **with the consequent reduction in** oxygen;

c. social or psychological effects, such as from fear of flying, claustrophobia, or reluctance to follow instructions.

2. The pilot-in-command should consider preventive measures when ~~**the possibility of**~~ disruptive passenger behaviour is anticipated. Such measures **may** ~~**could**~~ include~~**, but are not limited to**~~:

a. communication ~~**on behalf of the pilot-in-command**~~ with the potentially disruptive passenger in an effort to reduce the likelihood of disruptive behaviour;

b. reseating a potentially disruptive passenger to an area where there is less risk of passenger interference;

c. deny boarding to the potentially disruptive passenger or cancel the flight.

Justification:

Pilots should not leave the flight deck during in-flight security incidents as this presents flight safety and security hazards.

comment *2071* comment by: *claire.amos*

Para 2: potentially and disruptive

This paragraph duplicates requirements in EC300 Chapter 10.1(b) potentially disruptive passengers shall be subjected to appropriate security measures during a flight.

Definition of potentially disruptive passengers is deportees, inadmissables and prisoners - a security issue. This paragraph should be changed to cover dealing with actual disruptive behaviour by deleting the word "potentially" from a. b. and c.

OPS GEN.700 is about

comment *5979* comment by: *DGAC*

Justification : In the title of GM.OPS.GEN.700 "Disruptive Passenger *Behavior*", the US spelling is used for the word behaviour. As in the rest of the text (including the title of OPS.GEN.700 "Disruptive Passenger *Behaviour*") the British spelling is used, the following change should be done to ensure spelling consistency throughout the text :

Proposal : In the title of GM.OPS.GEN.700 replace "behaviour" by "behaviour"

comment *6077* comment by: *Ryanair*

Paragraph 2

The term "potentially disruptive passenger" in the context of Regulation (EC) 300/2008 means a "passenger who is either a deportee, a person deemed to be inadmissible for immigration purposes, or a person in lawful custody".

Although we cannot find any definition of the term "potentially disruptive passenger" or "disruptive passenger" in Regulation 216, it is clear that the term "disruptive passenger" is used in a much wider context. This anomaly must be addressed and any confusion removed.

Paragraph 2 (a)

Any provision which suggests that the pilot-in-command should communicate with a disruptive passenger (particularly in the context of flight deck security) must be removed.

Proposal

REMOVE

Paragraph 2 (c)

Any suggestion that the pilot-in-command should consider cancelling a flight in these circumstances is unacceptable and must be removed.

Proposal

REMOVE

comment *7330* comment by: *ANE (Air Nostrum) OPS QM*

Paragraph 2.

We stance about this subject is very different to the one explained in this section. We took a stand on disruptive passenger and communication with cockpit, according to OPS 1.1255 Flight crew compartment security, that states that the Company will establish means of communication between cabin and cockpit but always keeping the integrity of cockpit. For this reason we can not agree with this measure (mentioned above), from our point of view it is against the philosophy of keeping secure flight crew compartment.

On the other hand, if the pilot will leave cockpit and start conversation with the disruptive passenger, if this measure goes wrong the damage can be bigger.

B. II. Draft Decision - Part-OPS - Subpart B - Section I - AMC1 OPS.CAT.010 Definitions p. 259

comment *9* comment by: *KLM*

2.Contingency fuel

Change definition into

- An amount of Fuel to cover unforseen events that could negatively influence the planned fuel consumption.

The rest of the text has to be deleted as:

an individual aircraft that deviates from the expected fuel consumption has to be covered by the high/low fuel consumption percentage or fuel factor and not by contingency fuel. So this has to be deleted from the defintion.

A definition has to cover the total and not suggest that meteorological conditions and/or cruising level deviations are the only events that may be covered. Therefore these examples should be taken out of the defintion.

comment *500* comment by: *EHOC*

General

Editorial: List should be in alphabetical order.

Paragraph 8.

Should be in OPS.GEN.010 as it is used in OPS.CAT.365.H.

A general point; it would assist in the understanding of the regulations if all the definitions were in one place. In the case of helicopter performance, all of the terms could be provided under the definition 'Helicopter Performance' containing the terms used.

comment *1158* comment by: *Stefan Huber*

Point 30 : Blood, organs or drugs which does not need any medical equipment shall not be considerated as HEMS.The final decision shall remain with the National Authority.

comment *3244* comment by: *AEA*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *3774* comment by: *AUSTRIAN Airlines*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *4637* comment by: *KLM*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *4811* comment by: *TAP Portugal*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *5017* comment by: *Deutsche Lufthansa AG*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *5583* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

AMC 1 OPS.CAT.010 Definitions

Comment:

There is no CAT.010 Definitions but only a GEN.010 Definitions. We fail to understand why there is an AMC to a non-existing rule. This highlights the AEA concern that definitions need to be clear, unambiguous and be put into a common part. This EASA NPA does not provide any legal certainty and only leads to confusion. In the interest of flight safety and efficiency, we request EASA to realign its rules with EU-OPS.

Proposal:

Introduce a common part for definitions.

Realign with EU-OPS.

comment *5710* comment by: *Irish Aviation Authority*

Comment:

A lot of these definitions pertain to all helicopter operations, not just CAT. Particularly the performance related ones such as: LDP, RTODRH, RTODAH and TDP etc. They should be moved to OPS.GEN.010 Definitions.

comment *5980* comment by: *DGAC*

There is no paragraph OPS.CAT.010 Definitions to link this AMC to.

Generally speaking it is very difficult to have several places to check when one looks for a definition. All definitions should be in the same place: OPS.GEN.010. The definitions should not be in AMC as a definition must be clear and unambiguous and shall not require any "acceptable mean of compliance" to be understood. A definition is a reference and therefore has to be in the rule (IR).

comment *6458* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

There is a need for a global part dedicated to definitions.

Proposal

We suggest a specific part or the EASA regulation framework may contain a comprehensive and exhaustive list of definitions, applicable to the whole EASA regulation, which is the best way to have consistent and non-redundant definitions.

Jusfication

This might be a legal issue regarding the scope of understanding and cause problems of reading

B. II. Draft Decision - Part-OPS - Subpart B - Section I - AMC OPS.CAT.040 Carriage of weapons and ammunition p. 259

comment *687* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.040(1): delete completely:

AMC OPS.CAT.040 Carriage of weapons and ammunition

STOWAGE OF WEAPONS AND AMMUNITION

~~**1. If the aircraft does not have a separate compartment in which weapons can be stowed, procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. As far as possible, the weapons should be stowed so they are not immediately accessible to the passengers (e.g.**~~

~~**in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly.**~~

Justification:

Requirement is inappropriate to security requirements – weapons shall never be accessible to passengers.

comment *688* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.040(2): clarify if needed:

2. The applicability of OPS.GEN.035 should be taken into account.

Justification:

OPS.GEN.035 not existing, wrong cross-reference.

comment *1024* comment by: *Beat Fahrni*

Getrennte Aufbewahrung der Waffen und der Munition zu den Passagieren. Der Pic muss Kentniss über den Transport von Waffen und Munition haben.

comment *1163* comment by: *CAA-NL*

Comment: Carriage of weapons in other than separate compartment should only be permitted if the approval of all states concerned has been granted, as required by EU-OPS 1.065 (b).

Justification: The current wording is vague and the wording "as far as possible" may provide for the operator not implementing adequate measures.

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 1. as follows:

"If the aircraft does not have a separate compartment in which weapons <u>and ammunition</u> can be stowed, <u>carriage of such items is subject to approval by all States concerned. In such instances,</u> procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. ~~As far as possible,~~ The weapons should be stowed so they are not immediately accessible to the passengers (e.g. in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly."

AMC OPS.CAT.040

Comment: The conditions of AMC OPS.CAT.040 are equally relevant to weapons of war and munitions of war.

Justification: Weapons of war and munitions of war will often be firearms and so need to be inaccessible to passengers and unloaded.

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 as follows:

"OPS.CAT.040 Carriage of sporting weapons, weapons of war, munitions of war and ammunition

Sporting weapons, weapons of war, munitions of war and ammunition carried in an aircraft shall be:"

comment *1197* comment by: *CAA-NL*

AMC OPS.CAT.040 2.

Comment: Reference to OPS.GEN.035(b) is incorrect.

Justification: OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b)

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 2. as follows:

"Except as provided for in OPS.GEN.0305(b), an operator….."

comment *1562* comment by: *Luftfahrt-Bundesamt*

- The reference „OPS.GEN.035(b)" mentioned under character (a) does not exist. The right reference would be „OPS.GEN.**030**(b)".

comment *2001* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

Reference to OPS.GEN.035(b) is incorrect.

Comment:

OPS.GEN.035(b) does not exist, reference should be to OPS.GEN.030(b).

Proposal:

Amend AMC OPS.CAT.040 2. as follows:

"Except as provided for in OPS.GEN.030(b), an operator….."

comment *2525* comment by: *Royal Aeronautical Society*

The reference to OPS.GEN.035 cannot be correct as no such paragraph exists. **It is thought that the reference should be to OPS.GEN.030(b).**

comment *2783* comment by: *Pietro Barbagallo ENAC*

Comment: Carriage of weapons in other than separate compartment should only be permitted if the approval of all states concerned has been granted, as required by EU-OPS 1.065 (b).

Justification: The current wording is vague and the wording "as far as possible" may provide for the operator not implementing adequate measures.

Proposal: Amend AMC OPS.CAT.040 1. as follows: "If the aircraft does not have a separate compartment in which weapons and ammunition can be stowed, carriage of such items is subject to approval by all States concerned. In such instances, procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. ~~As far as possible, t~~The weapons should be stowed so they are not immediately accessible to the passengers (e.g. in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly."

comment *2784* comment by: *Pietro Barbagallo ENAC*

Comment: AMC OPS.CAT.040 2. The reference to OPS.GEN.035 is not correct.

Justification: OPS.GEN.035 does not exist, reference should be to OPS.GEN.030

Proposal:Amend AMC OPS.CAT.040 2. as follows: "The applicability of OPS.GEN.030~~5~~ should be taken into account."

comment *3277* comment by: *AEA*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *3519* comment by: *UK CAA*

Page No: 259

Paragraph No:

AMC OPS.CAT.040 2.

Comment:

Reference to OPS.GEN.035 is incorrect.

Justification:

OPS.GEN.035 does not exist, reference should be to OPS.GEN.030.

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 2. as follows:

"Except as provided for in OPS.GEN.030~~5~~, an operator….."

comment *3776* comment by: *AUSTRIAN Airlines*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *4281* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

2. wrong reference

comment *4638* comment by: *KLM*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *4729* comment by: *Virgin Atlantic Airways*

Relevant Text:

2. The applicability of OPS.GEN.035 should be taken into account.

Comment:

OPS.GEN.035 does not exist, reference should be to OPS.GEN.030

Proposed Text:

Change text to:

2. The applicability of OPS.GEN.030~~5~~ should be taken into account.

comment *4797* comment by: *Virgin Atlantic Airways*

Relevant Text:

"The applicability of OPS.GEN.035 should be taken into account."

Comment:

1. Cannot find OPS.GEN.035 and not listed in NPA 2b's contents list.

2. Should the title of this AMC and GM.OPS.CAT.040 be the same as OPS.CAT. 040 to include 'sporting' to describe the weapons?

comment *4813* comment by: *TAP Portugal*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *5019* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *5067* comment by: *M Wilson-NetJets*

Original text:

(2) The applicability of OPS.GEN.035 should be taken into account.

Suggested new text:

No suggested text

Comment/suggestion:

Reference to OPS.GEN.035. This paragraph does not exist.

comment *5356* comment by: *ALFA-HELICOPTER*

wrong reference in 2nd paragraph.

comment *5394* comment by: *HDM Luftrettung gGmbH*

AMC.OPS.CAT.040:

wrong reference OPS.GEN.035 ?

comment *5584* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Para 2. The applicability of OPS.GEN.035 should be taken into account

Comment:

There is no OPS.GEN.035. We urge EASA to realign with EU-OPS and JAR wording which is more clear and which - unlike this EASA NPA – does not lead to legal uncertainty

Proposal:

Realign with EU-OPS

comment *5668* comment by: *ADAC Luftrettung GmbH*

Referece OPS.GEN.035 is wrong. Maybe OPS.GEN.030.

comment *5845* comment by: *Norsk Luftambulanse*

2. wrong reference

comment *5959* comment by: *Irish Aviation Authority*

Comment:

Subparagraph "2" the cross reference to OPS.GEN.035 does not exist. Could this be OPS.COM.035 or OPS.COM.040?

comment *5982* comment by: *DGAC*

§2 : The reference to "OPS.GEN.035" is erroneous as that paragraph does not exist. The reference should be : "OPS.GEN.**030** "(Transport of Dangerous goods)

comment *6150* comment by: *Finnish CAA*

Paragraph: AMC OPS.CAT.040

Comment: Carriage of weapons in other than separate compartment should only be permitted if the approval of all states concerned has been granted, as required by EU-OPS 1.065 (b).

Justification: The current wording is vague and the wording "as far as possible" may provide for the operator not implementing adequate measures.

Proposed text (if applicable):

Amend AMC OPS.CAT.040 1. as follows:

"If the aircraft does not have a separate compartment in which weapons and ammunition can be stowed, carriage of such items is subject to approval by all States concerned. In such instances, procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. ~~As far as possible,~~ The weapons should be stowed so they are not immediately accessible to the passengers (e.g. in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly."

comment *6155* comment by: *Finnish CAA*

Paragraph: AMC OPS.CAT.040

Comment: The conditions of AMC OPS.CAT.040 are equally relevant to weapons of war and munitions of war.

Justification: Weapons of war and munitions of war will often be firearms and so need to be inaccessible to passengers and unloaded.

Proposed text (if applicable):

Amend AMC OPS.CAT.040 as follows:

"AMC OPS.CAT.040 Carriage of sporting weapons, weapons of war, munitions of war and ammunition

Sporting weapons, weapons of war, munitions of war and ammunition carried in an aircraft shall be: ..."

comment *6512* comment by: *UK CAA*

Page No: 259

Paragraph No:

AMC OPS.CAT.040

Comment:

Carriage of weapons in other than a separate compartment should only be permitted if the approval of all States concerned has been granted, as required by EU-OPS 1.065 (b).

Justification: The current wording is vague and the wording "as far as possible" may allow for the operator to avoid implementing adequate

measures.

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 1. as follows:

"If the aircraft does not have a separate compartment in which weapons and ammunition can be stowed, carriage of such items is subject to approval by all States concerned. In such instances, procedures should take into account the nature of the flight, its origin and destination, and the possibility of unlawful interference. ~~As far as possible,~~ The weapons should be stowed so they are not immediately accessible to the passengers (e.g. in locked boxes, in checked/personal baggage which is stowed under other baggage or under fixed netting). The pilot-in-command should be notified accordingly."

comment *6517* comment by: *UK CAA*

Page No: 259

Paragraph No:

AMC OPS.CAT.040

Comment:

The conditions of AMC OPS.CAT.040 are equally relevant to weapons of war and munitions of war.

Justification:

Weapons of war and munitions of war will often be firearms and so need to be inaccessible to passengers and unloaded.

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 as follows:

"OPS.CAT.040 Carriage of sporting weapons, weapons of war, munitions of war and ammunition

Sporting weapons, weapons of war, munitions of war and ammunition carried in an aircraft shall be:"

comment *6519* comment by: *IATA*

2. The applicability of OPS.GEN.035 should be taken into account.

The reference mentioned is missing

Proposal:

Change reference to OPS.GEN.030(b)

comment *6590* comment by: *Finnish CAA*

Paragraph No: AMC OPS.CAT.040 2.

Comment: Reference to OPS.GEN.035(b) is incorrect.

Justification: OPS.GEN.035(b) does not exist, reference should be to

OPS.GEN.030(b)

Proposed Text (if applicable):

Amend AMC OPS.CAT.040 2. as follows:

"Except as provided for in OPS.GEN.030~~5~~(b), an operator….."

B. II. Draft Decision - Part-OPS - Subpart B - Section I - GM OPS.CAT.040 Carriage of weapons and ammunition p. 260

comment *719* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.CAT.040: NIL

The change from EU OPS has been noted, but it is accepted.

comment *5986* comment by: *DGAC*

Rename the paragraph "GM OPS.CAT.040 Carriage of **sporting** weapons and ammunition"

comment *6081* comment by: *Ryanair*

This GM requires cross reference with Regulation (EC) 300/2008 to confirm that there is no conflict with the prohibited article list.

B. II. Draft Decision - Part-OPS - Subpart B - Section I - GM OPS.CAT.045 Carriage of weapons and ammunition p. 260

comment *720* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.CAT.045: add the following text:

Where weapons of war or munitions of war are also dangerous goods by definition (e.g. torpedoes, bombs, etc.), Subpart will also apply.

Justification:

Reference to DG req is missing.

B. II. Draft Decision - Part-OPS - Subpart B - Section I - AMC OPS.CAT.050 Information on emergency and survival equipment carried p. 260

comment *501* comment by: *EHOC*

General

The ATS flight plan will not contain the detailed information (such as those elements that are already included in the text) that is necessary to establish survival time. The method of compliance appears to go below the objective standard set in the ICAO rule.

The last sentence should be deleted.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC1 OPS.CAT.110 Carriage of special categories of passengers p. 261

comment *1734* comment by: *claire.amos*

2. c.

This appears to be a new addition and does not reflect the current procedures which are in line with the recently implemented PRM guidelines. This statement infers the crew are responsible for the PRM in the case of emergency. Under our Standard Operating Procedures (SOP) the passenger is to be self sufficient or travel with an ABP. If the crew are to be responsible for assisting a PRM in an emergency further training in manual handling of passengers may be require which in term could extend the training and have cost implications.

comment *4757* comment by: *Virgin Atlantic Airways*

Relevant Text:

"When carrying special categories of passengers, the following should be taken into account:

a.The number and category of those persons;

b.The total number of passengers carried compared to the seating capacity of the aircraft configuration;

c.The number and composition of the crew able to assist special categories of passengers in case of emergencies."

Comment:

PRMs are now in the 'special category' of passengers which now includes both disabled and able-bodied passengers, rather than in a separate category as previously.

It seems the carriage of PRMs has been amalgamated with the restrictions for seating special categories of pax in exits rows. Although it is correct to say that PRMs are included in the category of passengers who should not be seated at exits, their carriage presents other safety challenges e.g. in an emergency and evacuation, therefore we need to consider limits.

The Air Carriers Access Act and EU PRM have given disabled passengers additional rights, so long as safety levels can be maintained. It is therefore

incumbent on us to ensure this can be achieved.

As it stands, we could have any numbers of each of the types listed as special category, e.g. children, deportees, inads, prisoners, pax with animals, PRMs. It will be impossible for either check-in or the cabin crew comply with (b) or (c)

Proposed Text:

"When carrying special categories of passengers, the following should be taken into account:

a.The number and category of those persons.

b.The total number of passengers carried compared to the seating capacity of the aircraft configuration.

c.The number of PRMs should not exceed the number of able-bodied persons capable of assisting with an emergency evacuation.

d.The number and composition of the crew able to assist special categories of passengers in case of emergencies."

comment *5129* comment by: *Pietro Barbagallo ENAC*

Comment: no indications is given to avoid seating positions adiacent to emergency exits.

Justiifcation: Any person with reduced mobility (PRM) expecially disable at various level of physical incapacity as blind passengers with their guide dogs, seated adiacent to emergency exit jeopardize the flow passengers in case of emergency evacuation.

comment *6117* comment by: *Ryanair*

Ref GM OPS.CAT.100 - "special categories of passengers" includes deportees, inadmissible passengers and persons in custody. Such persons are already defined and legislated for in Regulation (EC) 300/2008 as "potentially disruptive passengers". This conflict must be removed.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM OPS.CAT.110 Carriage of special categories of passengers p. 261

comment *107* comment by: *Air Southwest*

Sub paragraph 2. specifies 'children and infants.' Definition 42 defines what an infant is (a person under the age of 24 months) but there is no definition of a child. For the sake of regularity, please define a child by age.

comment *886* comment by: *Condor Flugdienst GmbH - FRA HO/R*

It appears unreasonable to classify children as "Special category Passengers".

comment *5121* comment by: *Elaine Allan Monarch*

Page No.

261

Ref No.

NPA 2009 – 2b AMC OPS.CAT.110 page 261 of 464

Summary of EASA Proposed Requirement:

Carriage of special categories of passengers

2. When carrying special categories of passengers, the following should be taken into account:

a. The number and category of those persons;

b. The total number of passengers carried compared to the seating capacity of the aircraft configuration;

c. The number and composition of the crew able to assist special categories of passengers in case of emergencies.

Comment:

It appears that PRMs have been included in special category passengers, which means that there may be a significant number of passengers onboard that fall into the special category.

Justification:

Currently PRMs are a separate category.

Proposed Text (if applicable)

When carrying special categories of passengers, the following should be taken into account:

a. The number and category of those persons;

b. The total number of passengers carried compared to the seating capacity of the aircraft configuration.

Add text **c. the number of PRMS should not exceed the number of able-bodied persons capable of assisting in an emergency evacuation.**

d. The number and composition of the crew able to assist special categories of passengers in case of emergencies.

comment *5987* comment by: *DGAC*

Where is the definition for child/children ? There should be a single location for all definitions

comment *6119* comment by: *Ryanair*

Ref GM OPS.CAT.100 - "special categories of passengers" includes deportees, inadmissible passengers and persons in custody. Such persons are already defined and legislated for in Regulation (EC) 300/2008 as "potentially disruptive passengers". This conflict must be removed.

comment *7075* comment by: *IACA International Air Carrier Association*

2.

Children should not be a "special category of passenger".

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC2 OPS.CAT.110.B Carriage of special categories of passengers p. 261

comment *5136* comment by: *UK CAA*

Page No: 261

Paragraph No:

AMC2 OPS.CAT.110.B

Comment:

An additional requirement is needed to ensure that passengers are able to understand and respond to instructions given by the crew. Persons unable to understand the crew may not necessarily be children nor PRMs.

Justification:

The UK Air Accident Investigation Branch made such a recommendation following an accident caused (in part) by a balloon passenger not understanding the passenger briefing.

Proposed Text (if applicable):

AMC2 OPS.CAT.110.B Carriage of special categories of passengers

~~CARRIAGE OF CHILDREN AND PERSONS WITH REDUCED MOBILITY – BALLOONS~~

An operator may exclude **passengers** ~~children and/or PRMs~~ from transportation in a balloon, when:

1. their presence may impede:
   a. the crew in their duties;
   b. access to emergency equipment; or
   c. the emergency evacuation of the balloon; and/or
2. those persons are:
   a. unable to take a proper brace position; or
   b. smaller than the height of the basket plus 20 cm**; or**
   c. unable to understand and respond to instructions given by the crew

comment *5987* ☐ comment by: *DGAC*

Where is the definition for child/children ? There should be a single location for all definitions

comment *7658* comment by: *Asociación Española de Pilotos de Aerostación (AEPA)*

AMC2 OPS CAT 110 B: Although the procedure is accurate typing CAT is not adequate. It would be better GEN

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC1 OPS.CAT.120 Stowage of baggage and cargo p. 262

comment *2993* comment by: *CAA-NL*

Comment CAA-NL:

It is not clear whether cargo is similar to carry on lugage. Does EASA stick to the ICAO definition Part 1, Chapter 3, Paragraph 3.1? If the AMC is intended to ban all DG form the passenger compartment this is conflicting with ICAO.

The CAA-NL proposes to EASA to clarify the AMC on this point.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC2 OPS.CAT.120 Stowage of baggage and cargo p. 262

comment *2403* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

AMC2 OPS.CAT.120 item 2.

Proposal:

Replace "guide dogs" with "registered assistance dogs".

comment *2813* comment by: *M Wilson-NetJets*

Original text:

CARGO CARRIAGE IN THE PASSENGER COMPARTMENT – MOTOR-POWERED AIRCRAFT The following should be observed before carrying cargo in the passenger compartment:

1. Dangerous goods should not be allowed;

2. For aeroplanes, a mix of passengers and live animals should only be allowed for pets weighing not more than eight kg and guide dogs;

3. The weight of cargo should not exceed the structural loading limits of the floor or seats;

4. The number/type of restraint devices and their attachment points should be capable of restraining the cargo in accordance with applicable certification specifications;

5. Cargo should be located such that, in the event of an emergency evacuation, it will not hinder egress nor impair the crew's view.

Suggested new text:

CARGO CARRIAGE IN THE PASSENGER COMPARTMENT – MOTOR-POWERED AIRCRAFT The following should be observed before carrying cargo in the passenger compartment:

1. Dangerous goods should not be allowed;

2. For aeroplanes, a mix of passengers and live animals should only be allowed for pets weighing not more than eight kg and guide dogs;

3. For aeroplanes with 19 seats or less, dogs of more than eight Kg but not more than forty Kg may be carried in the passenger cabin if for each such dog a seat is available and each dog is restrained such that no dog can reach another dog and each required crewmember can exercise his/her safety duties without being hampered by any dog;

4. The weight of cargo should not exceed the structural loading limits of the floor or seats;

5. The number/type of restraint devices and their attachment points should be capable of restraining the cargo in accordance with applicable certification specifications;

6. Cargo should be located such that, in the event of an emergency evacuation, it will not hinder egress nor impair the crew's view.

Comment/suggestion:

A restriction for dogs of 8KG in the cabin is a problem for our owners since they take Labradors etc. and this is part of the whole experience of flying or owning a private jet. For airline operations the restriction is sensible because the a larger dog can be a issue for other passengers that not voluntarily want to be near or come in contact with a larger dog. On private jets the other passengers have a relationship in one form or another with the owner or lead passenger of the flight. This relationship indicates that they can have direct information and knowledge about the dog and, if they board, do not have any issues with the cabin with the dog. Furthermore, in the suggested text extra safeguards have been built in to ensure Flight and Cabin Crew safety and a limit as to prevent overcrowding of the passenger cabin with dogs.

comment *5988* comment by: *DGAC*

The paragraph deals only with stowage of the cargo, not with carrying :

"CARGO ~~CARRIAGE~~ **STOWAGE** IN THE PASSENGER COMPARTMENT – MOTOR-POWERED AIRCRAFT The following should be observed before ~~carrying~~ **stowing** cargo in the passenger compartment"

comment *7076* comment by: *IACA International Air Carrier Association*

2.

Replace "guide dogs" with "registered assistance dogs".

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM OPS.CAT.150.H Operating minima - Helicopter Airborne Radar Approaches (ARAs) for overwater operations p. 263-267

comment *502* comment by: *EHOC*

Paragraph 3.

Editorial: Incorrect reference.

Paragraph 6.

Editorial: Incorrect reference.

comment *3520* comment by: *UK CAA*

Page No: 263

Paragraph No:

AMC OPS CAT.150.H Paragraphs 3. and 6.

Comment:

A transposition of "H" and "150" in both paragraphs.

Justification:

Clarification / correction of typographical error.

Proposed Text (if applicable):

Both should read "***AMC OPS CAT 150 H***".

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.155.A Selection of aerodromes - Aeroplanes p. 268

comment *2* comment by: *KLM*

In the table for ETOPS ENROUTE ALTERNATE at earliest/latest should be ETA plus 1HR instead of the plus/minus that is still written there.

comment *306* comment by: *Rega / Swiss Air-Ambulance*

Attachment #18

AMC OPS.CAT.155.A Selection of aerodromes - Aeroplanes

Scope:

The table of "Application of aerodrome forecasts" is completely wrong formatted --> multiple typing errors.

Text to be added:

Please find the correct formatted table under JAR-OPS 1 AMT 13 TGL 44 AMC OPS 1.297 and also in the added file.

Proof:

Self explanatory.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *569* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.155.A(1)(b): change as follows: delete the two asterix after PROB:

b. Application of forecast The prevailing weather conditions forecast in the initial part of the TAF should be fully applied with the exception of the mean wind and gusts (and crosswind) which should be applied in accordance with the policy in the column 'BECMG AT and FM' in the table below. This may however be overruled temporarily by a 'TEMPO' or 'PROB~~**~~' if applicable according to the table below.

Justification:

Suggests additional info below the table, see single asterix at the bottom. There is no additional info presented and necessary.

comment *570* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.155.A(2): change:

- In the column "*BECMG (alone), BECMG FM, BECMG TL, BECMG FM…* TL in case of*", insert a vertical line at row 'DESTINATION at ETA ± 1 hr'.

- In the box below '*Deterioration*' insert text: '**Applicable from the time of start of the change**'.

- In the box below '*Improvement*' insert text: '**Applicable from the time of end of the change**'.

- In the column '*FROM (alone) and BECMG AT*' change text in row 'DESTINATION at ETA ± 1 hr' into '**Applicable from the time of start of the change**'

Justification:

The table as proposed is not correct. Reference: JAR-OPS 1.297 (AMC OPS p. 2-D-13). The proposed changes make it correct.

comment *571* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.155.A(2): All horizontal lines within "aerodromes planned as" with same applications should be erased.

Justification:

As table is presented now it is not clear and might be confusing. For instance blanc boxes behind t/o altn. If horizontal lines are deleted in the applications for destination, t/o altn, dest altn, enroute altn, it will become far more clear which applications apply for all of them. Same remark also for etops enroute altn applications. See also jar-ops table AMC OPS 1.297

comment *955* comment by: *KLM*

For ETOPS enroute alternate it should be:

gusts exceeding crosswind/tailwind limits should be fully applied

comment *3278* comment by: *AEA*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with JAR-OPS

comment *3778* comment by: *AUSTRIAN Airlines*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with JAR-OPS

comment *4641* comment by: *KLM*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with EU-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with EU-OPS

comment *4814* comment by: *TAP Portugal*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with JAR-OPS

comment *5020* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins. It shows

however how negligible EASA handles real safety issues.

Proposal:

Realign with JAR-OPS

comment *5071* comment by: *M Wilson-NetJets*

Original text:

See NPA OPS.CAT.155.A

Suggested new text:

No suggested text:

Comment/suggestion:

Second row under point 1b. After PROB** there are no two** in the for notes the indication "BECMG AT and FM" should be worded as in the column below "FM(alone) and BECMG AT"

Sometimes the wording "Applicable from the start of the change" and "Applicable from the time of the start of the change", suggest consistent wording

TAF or Trend improvement allows application from the start of the change, this should be end of change because the change might not yet be completed and worse weather conditions could be encountered (ETOPS alternate has the correct restriction).

It appears that some errors were made in formatting the table (e.g. empty field for Take-Off alternate and Dest Alternate)

comment *5585* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with JAR-OPS

comment *5989* comment by: *DGAC*

In section 2. "APPLICATION OF FORECAST FOLLOWING CHANGE INDICATORS IN TAF AND TREND" of the table, there is an editorial mistake in Column

"BCMG" which unfortunately reduces the safety. : This part of the table should read as follows (consistent with the table in section 2 ofJAR-OPS 1.297

BECMG (alone), BECMG FM, BECMG TL, BECMG FM…* TL	
Deterioration	Improvement
Applicable from the time of start of change	Applicable from the time of **end** of change

comment *7295* comment by: *AIR FRANCE*

Relevant Text:

Becoming columns for Destination at ETA +/-1 hour (deterioration and improvement)

Comment:

This table is not line with JAR-OPS. For the improvement case, it should be the time of end of change' rather than 'time of start of change'. It seems to be a mistake since this proposal would reduce flight safety margins.

Proposal:

Realign with JAR-OPS.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM OPS.CAT.155.A(a)(2) Selection of aerodromes - Aeroplanes p. 269

comment *108* comment by: *Air Southwest*

" ... in accordance with AMC1 CAT OPS.GEN.205 3." Is this wrong!

comment *5990* comment by: *DGAC*

The reference given at the end of the GM "AMC1 CAT OPS.GEN.205 3" can not be accessed as it does not exist (anyhow the numbering is not standard)

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.155.A(b) Selection of aerodromes - Aeroplanes p. 269-270

comment *3* comment by: *KLM*

The term 3% enroute alternate ERA aerodrome is to be replaced by :

Fuel en route alternate (ERA) aerodrome. See definitions.

This en route alternate is also applicable for fuel policies with statistical data and does not necessariliy implies a reduction of the contingency fuel to 3%,

but a decrease of the contingency fuel in general.

comment *5991* comment by: *DGAC*

The purpose of a 3% ERA aerodrome is :

- either to select one ERA aerodrome and one destination aerodrome (see OPS.CAT.155.A(b)
- either and mostly to reduce the contingency fuel with a reduced fuel contingency procedure.

Then this AMC should be transferred to AMC2 OPS.CAT.205.A Fuel and oil supply

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM OPS.CAT.155.A(d) Selection of aerodromes - Aeroplanes p. 270

comment *956* comment by: *KLM*

Wrong methodology; see table on page 61 what is required is a margin in weather and not in facilities.

The facility that is available and usable has to be plannable and an addon in wx (200ft-400mtrs) notams and components out table take care of unserviceability.

This is a more logical and workeable way to ensure that weather complies with the required minima,than looking into the next facility always ending up with unnecessary high minima.

The methodology used for ETOPS with an increment added to the usable facility is easier and more appropriate.

comment *6601* comment by: *KLM*

The use of APV BaroVNAV procedures shall be included in the weather minima to be applied for alternates.

Since this type of procedures is in between Precision- and Non Precision procedures there is a sepearte view required and the methodology has to be chnaged to enable this.

Here is what I propose:

Approach Facility or equipment	**Ceiling minimum**:	**Visibility/RVR/CMV minimum**:

Precision Approach Procedure or GBAS/SBAS	Authorised DH/DA plus an increment of 200 ft	Authorised visibility plus an increment of 800 metres
APV BaroVNAV procedure	Authorised DH/DA plus an increment of 300 ft	Authorised Visibility plus an increment of 1000 metres
Non-Precision Approach or Circling Approach APV LNAV only	Authorised MDH/MDA plus an increment of 400 ft	Authorised visibility plus an increment of 1500 metres

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.156.A(b)(1) Selection of take-off alternate aerodromes - Aeroplanes p. 271

comment *7031* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

Regarding ETOPS conditions, it must be "still air conditions" as in AMC 20-6 2003/12/RM EASA decision from NOV 03.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.155.H(a)(1) Selection of aerodromes - Helicopters p. 271

comment *4023* comment by: *UK CAA*

Page No: 271

Paragraph No:

AMC OPS.CAT.155.H(a)(1) - 2(a)

Comment:

Important text has been omitted in the draft from the original in JAR-OPS 3 AMC OPS 3.295(c)(1) and needs to be reinstated as indicated.

Justification: Accuracy of text.

Proposed Text (if applicable):

2. The following should be taken into account:

a. Suitability of the weather based on the landing forecast for the destination;

b. The fuel required to meet the instrument flight rules requirements ***less alternate fuel***;

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.170 Minimum terrain clearance altitudes p. 273-274

comment *10* comment by: *KLM*

amc ops cat 170

2. c. any foreseeable contingencies along the planned route.

This has to be changed into something that is intended to be specified here; a contingency is by definition unforeseen.

Beter is to delete this because if an event is foreseen it has to be included in the flightplan and if it is a contingency meaning not expected.

comment *503* comment by: *EHOC*

General

This is not a method of compliance but an set of objective requirements – it would be better if it was promoted into the IR leaving the methods of compliance as shown in GM OPS.CAT.170 (which might be renamed to AMC).

Paragaph 1.a.

Editorial: The accuracy **with** which...

comment *957* comment by: *KLM*

1.e.

How can possible inaccuracies in aeronautical charts be determined.

Only for areas that are indicated in the chart as unsurveyed this may have a meaning. For the rest a chart is accurate and it is 1934 way of thinking to assume that is not.

Delete these meaningless points.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM OPS.CAT.170 Minimum terrain clearance altitudes p. 274-277

comment *2093* comment by: *Airbus S.A.S.*

Typo error.

In GM OPS.CAT.170 (4)(a)(ii), wording "to a maximum of 60 nm See Note 2 below)" should be shifted on the right, to be placed below "10% of the segment length up" and a bracket should be opened before "See note 2", to read:

" ii. Segmant lenght more than 100 nm - 10% of the segment lenght up

to a maximum of 60 nm (See Note 2 below)"

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC1 OPS.CAT.205 Fuel and oil supply p. 277

comment *655* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.CAT.205(1)(b): add the following text:

1. Fuel planning should be based on:

a. data provided by the aircraft manufacturer; or

b. current aircraft specific data derived from a fuel consumption monitoring system.

The operator should demonstrate to the competent authority that this monitoring system is based on consistent calculations and historical data.

Justification:

A fuel consumption monitoring system is valid only if the data and calculations have been validated by a competent authority.

comment *2097* comment by: *Airbus S.A.S.*

Typo error.

In AMC1 OPS.CAT.205 (2)(b)(iv), close bracket after word "ETOPS", to read:

"(e.g. Extended Range Twin-Engine Operations (ETOPS));"

comment *5992* comment by: *DGAC*

(2)(b)(iv): Additional fuel is not only for ETOPS operations.

Proposed text : amend 2.b.iv as follows :

"iv. additional fuel, if **necessary** ~~required by the type of operation~~ (e.g. Extended Range Twin-Engine Operations (ETOPS)**, Pre-Determined Point (PDP) Procedure, etc.)**; and"

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC2 OPS.CAT.205.A Fuel and oil supply p. 277-280

comment *547* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(2)(a)(iii): change as follows:

2. Reduced Contingency Fuel (RCF) Procedure:

If an operator uses pre-flight planning to a destination 1 aerodrome with a reduced contingency fuel procedure using a decision point along the route and a destination 2 aerodrome (optional refuel destination), the amount of usable fuel, on board for departure, should be the greater of a.**,** ~~**or**~~ b. **or c.** below:

a. The sum of:

i. Taxi fuel;

ii. Trip fuel to the destination 1 aerodrome, via the decision point;

iii. Contingency fuel equal to not less than 5% of the estimated fuel consumption from the decision point to the destination 1 aerodrome;

iv. Alternate fuel or no alternate fuel if the decision point is at less than six hours from the destination 1 aerodrome and the requirements of OPS.CAT.A.155(a)(3) are fulfilled;

v. Final reserve fuel;

vi. Additional fuel; and

vii. Extra fuel, if required by the pilot-in-command.

b. The sum of:

i. Taxi fuel;

ii. Trip fuel to the destination 2 aerodrome, via the decision point;

iii. Contingency fuel equal to not less than the amount calculated in accordance with 1.c.i. from departure aerodrome to the destination 2 aerodrome;

iv. Alternate fuel, if a destination 2 alternate aerodrome is required;

v. Final reserve fuel;

vi. Additional fuel; and

vii. Extra fuel, if required by the pilot-in-command.

c. an amount to fly for five minutes at holding speed at 1 500 ft (450 m) AAL above the destination aerodrome in standard conditions.

Justification:

Include the 5min holding fuel requirement to avoid the possibility that contingency fuel is reduced to an equivalent of 1 or 2 minutes flying time, since in real life the contingency fuel will be used on the approach.

comment *656* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(1)(b)(iv): change as follows:

iv. fuel for **a complete instrument** approach and landing at the destination aerodrome;

Justification:

Fuel for a complete instrumental approach procedure should be considered even if the aerodrome is under visual conditions. Instrumental approaches can be done for reasons other than meteorological conditions.

comment *657* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(1)(c)(i)(A)(4): delete the paragraph:

c. Reserve fuel, consisting of:

i. Contingency fuel; except as provided for in 2. below 'Reduced Contingency Fuel', which should be the higher of A. or B. below:

A.

1. 5% of the planned trip fuel or, in the event of in-flight re-planning, 5% of the trip fuel for the remainder of the flight; or

2. not less than 3% of the planned trip fuel or, in the event of in-flight re-planning, 3% of the trip fuel for the remainder of the flight, provided that an ERA aerodrome is available in accordance with AMC OPS.CAT.A.155(b); or

3. an amount of fuel sufficient for 20 minutes flying time based upon the planned trip fuel consumption provided that the operator has established a fuel consumption monitoring programme for individual aeroplanes and uses valid data determined by means of such a programme for fuel calculation; or

~~**4. an amount of fuel based on a statistical method which ensures an appropriate statistical coverage of the deviation from the planned to the actual trip fuel. This method is used to monitor the fuel consumption on each city pair/aeroplane combination and the operator uses this data for a statistical analysis to calculate contingency fuel for that city pair/aircraft combination.**~~

Justification:

The contingency fuel should not be based on statistical data because contingency fuel is required for unexpected conditions. "Unexpected" should be understood as something that previous experience has not taken into account.

comment *658* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(1)(c)(ii)(E): change as follows:

E. fuel for **a complete instrument** executing an approach and landing at the destination alternate aerodrome; and

Justification:

Fuel for a complete instrumental approach procedure should be considered even if the aerodrome is under visual conditions. Instrumental approaches can be done for reasons other than meteorological conditions.

comment *659* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(1)(c)(iv)(C): change as follows:

C. make an **instrument** approach and landing; and

Justification:

Fuel for a complete instrumental approach procedure should be considered even if the aerodrome is under visual conditions. Instrumental approaches can

be done for reasons other than meteorological conditions.

comment *660* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.205.A(2): delete the following paragraph:

~~**2. Reduced Contingency Fuel (RCF) Procedure: If an operator uses pre-flight planning to a destination 1 aerodrome with a reduced contingency fuel procedure using a decision point along the route and a destination 2 aerodrome (optional refuel destination), the amount of usable fuel, on board for departure, should be the greater of a. or b. below: a. The sum of: i. Taxi fuel; ii. Trip fuel to the destination 1 aerodrome, via the decision point; iii. Contingency fuel equal to not less than 5% of the estimated fuel consumption from the decision point to the destination 1 aerodrome; iv. Alternate fuel or no alternate fuel if the decision point is at less than six hours from the destination 1 aerodrome and the requirements of OPS.CAT.A.155(a)(3) are fulfilled; v. Final reserve fuel; vi. Additional fuel; and vii. Extra fuel, if required by the pilot-in-command. b. The sum of: i. Taxi fuel; ii. Trip fuel to the destination 2 aerodrome, via the decision point; iii. Contingency fuel equal to not less than the amount calculated in accordance with 1.c.i. from departure aerodrome to the destination 2 aerodrome; iv. Alternate fuel, if a destination 2 alternate aerodrome is required; v. Final reserve fuel; vi. Additional fuel; and**~~

~~**vii. Extra fuel, if required by the pilot-in-command.**~~

Justification:

This kind of practice should be avoided because it shifts the task of calculating fuel requirements from the dispatch office into the cockpit whilst in flight, resulting in an unnecessary increase in workload in an unsuitable environment for this type of calculation.

comment *950* comment by: *CAA-NL*

Comment regarding:

NPA 2009-02b AMC 2 OPS.CAT.205.A 1 c iV

Suggestion CAA-NL:

Text should be in accordance with EU-OPS text. CAA-NL propses to EASA to change the text according to EU-OPS, being:

EU-OPS App1 to OPS1.255 1.6.:

1.6. The minimum additional fuel, which shall permit:

(a) the aeroplane to descend as necessary and proceed to an adequate alternate aerodrome in the event of engine failure

or loss of pressurisation, whichever requires the greater amount of fuel based on the assumption that such a

failure occurs at the most critical point along the route, and

(i) hold there for 15 minutes at 1 500 ft (450 m) above aerodrome elevation in

standard conditions; and

(ii) make an approach and landing,

except that additional fuel is only required, if the minimum amount of fuel calculated in accordance with subparagraphs

1.2. to 1.5. above is not sufficient for such an event, and

(b) Holding for 15 minutes at 1 500 ft (450 m) above destination aerodrome elevation in standard conditions, when

a flight is operated without a destination alternate aerodrome;

comment *2821* comment by: *M Wilson-NetJets*

Original text:

b. Trip fuel, which should include: i. fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing;

Suggested new text:

b. Trip fuel, which should include: i. fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing **and applicable or expected altitude restrictions;**

Comment/suggestion:

Many aerodromes have known and fixed altitude and speed restrictions which should be included in the calculation of the trip fuel.

comment *5043* comment by: *IAOPA Europe*

Non-commercial operators of complex aircraft should also have the option to follow this AMC since it allows in some aspects more flexibility than the general rules.

Particularly it allows for aircraft with turbine engines a final reserve fuel of 30 minutes where the general requirement is 45 minutes.

It is a well-established principle that commercial requirements are more conservative since they should protect the safety of non-involved paying passengers. It would be a violation of this principle to force non-commercial operators to have larger reserves than commercial operators.

comment *5077* comment by: *M Wilson-NetJets*

Original text:

(c) (iii) Final reserve fuel:

A. For aeroplanes with reciprocating engines, fuel to fly for 45 minutes;

B. For aeroplanes with turbine engines, fuel to fly for 30 minutes at holding speed at 1 500 ft (450 m) above aerodrome elevation in standard conditions, calculated with the estimated mass on arrival at the destination alternate

aerodrome or the destination aerodrome, when no destination alternate aerodrome is required and

Suggested new text:

No suggested text

Comment/suggestion:

This is already in the IR (OPS.CAT.205 (b)(4))

comment *5993* comment by: *DGAC*

(1)(c)(iv): Additional fuel :

Proposal:

Go back to the philosophy of EU-OPS (1.6 of Appendix 1 to OPS 1.255)

Justification :

What is the rational behind the change of philosophy from EU-OPS?

The wording "if not already included in 1.c.i.A.1 and 2." implies that the additional fuel must be compared to contingency fuel (5% or 3%) whereas the present rule in EU-OPS (1.6 of Appendix 1 to OPS 1.255) is that additional fuel is only required if the minimum amount of fuel calculated for trip fuel and reserve fuel (contingency, alternate, and final reserve) is not sufficient for such an event.

comment *6065* comment by: *Irish Aviation Authority*

Comment:

The guidance material makes reference to 205 A and 205 H but there is no such subdivision of the OPS.CAT.205 in the main rule text.

Justification:

Standardisation throughout the rule structure.

comment *6872* comment by: *AIR FRANCE*

1.C.i.A.2 "not less than 3% of the planned trip fuel or, in the event of in-flight re-planning, 3% of the trip fuel for the remainder of the flight, provided that an **3%** ERA aerodrome is available in accordance with AMC OPS.CAT.A.155(b); or"

Suggest to add "3%" before ERA for clarity. The "3% ERA" is defined in OPS GEN 010

comment *6878* comment by: *AIR FRANCE*

"iv. Additional fuel, if required by the type of operation (e.g. ETOPS).

The minimum additional fuel, **if not already included in 1.c.i.A.1.**

and 2., should allow:

A. the aeroplane to descend as necessary and proceed to an adequate alternate aerodrome in the event of engine failure or loss of pressurisation, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route;

B. hold there for 15 minutes at 1 500 ft (450 m) above aerodrome elevation in standard conditions;

C. make an approach and landing; and

D. holding for 15 minutes at 1 500 ft (450 m) above destination aerodrome elevation in standard conditions, when a flight is operated without a destination alternate aerodrome;"

The trial to simplify the EU OPS text results here in an error.

Bullet A, B and C belong all three to the same scenario for additional fuel

and this additional fuel does not need to be added to the total fuel

if the reserve fuel covers the issue.

BUT

Bullet D is an other case which, this time, must always be added to

the total fuel.

Suggest to strictly stick to the EU OPS text (appendix 1.255 §1.6)

comment *7144* comment by: *M Wilson-NetJets*

Original text:

b. Trip fuel, which should include: i. fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing; ii. fuel from top of climb to top of descent, including any step climb/descent; iii. fuel from top of descent to the point where the approach is initiated, taking into account the expected arrival procedure; and

Suggsted new text:

b. Trip fuel, which should include: i. fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing; ii. fuel from top of climb to top of descent, including any step climb/descent; iii. fuel from top of descent to the point where the approach is initiated, taking into account the expected arrival procedure **and applicable or expected altitude restrictions;** and

Comment/suggestion:

Many aerodromes have known and fixed altitude and speed restrictions which should be included in the calculation of the trip fuel.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC3 OPS.CAT.205.H Fuel and oil supply p. 280-282

comment *2978* comment by: *REGA*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions.

comment *3920* comment by: *FOM ANWB MAA*

AMC3 OPS.CAT.205.H Fuel and oil supply

FUEL PLANNING HELICOPTERS

1. The pre-flight calculation of usable fuel required for a flight should include the following:

c. Reserve fuel consisting of:

iii. final reserve fuel;

A. For VFR flights navigating by day with reference to visual landmarks, 20 minutes fuel at best range speed; or

B. For IFR flights or when flying VFR and navigating by means other than by reference to visual landmarks or at night, fuel to fly for 30 minutes at holding speed at 1 500 ft (450 m) above the destination aerodrome in standard conditions calculated with the estimated mass on arrival above the alternate aerodrome, or the destination aerodrome, when no alternate aerodrome is required; and

RMK @ 1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions

comment *4288* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions

comment *5051* comment by: *SNEH Organisation representing all french commercial helicopters operators*

(c) (ii) f

OPS3 indicates 10% fuel reserve for offshore operation in hostile environment, but only for fuel trip not for fuel alternate.

comment *5362* comment by: *ALFA-HELICOPTER*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions.

comment *5400* comment by: *HDM Luftrettung gGmbH*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions

comment *5627* comment by: *HDM Luftrettung gGmbH*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions

comment *5680* comment by: *ADAC Luftrettung GmbH*

AMC3 OPS.CAT.205H

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions

comment *5847* comment by: *Norsk Luftambulanse*

1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions.

comment *6066* comment by: *Irish Aviation Authority*

Comment:

The guidance material makes reference to 205 A and 205 H but there is no such subdivision of the OPS.CAT.205 in the main rule text.

Justification:

Standardisation throughout the rule structure.

comment *7210* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC3 OPS.CAT.205.H Fuel and oil supply

FUEL PLANNING HELICOPTERS

1. The pre-flight calculation of usable fuel required for a flight should include the following:

c. Reserve fuel consisting of:

iii. final reserve fuel;

A. For VFR flights navigating by day with reference to visual landmarks, 20 minutes fuel at best range speed; or

B. For IFR flights or when flying VFR and navigating by means other than by reference to visual landmarks or at night, fuel to fly for 30 minutes at holding speed at 1 500 ft (450 m) above the destination aerodrome in standard conditions calculated with the estimated mass on arrival above the alternate aerodrome, or the destination aerodrome, when no alternate aerodrome is required; and

Remark on 1.c.iii : The additional weight may become a safety issue in some of the mountaineous areas of operation, while refuel is available every 10 minutes of flight. Add paragraph to allow for less reserve fuel in mountain rescue operations under these conditions.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC4 OPS.CAT.205.A Fuel and oil supply p. 282

comment *6067* comment by: *Irish Aviation Authority*

Comment:

The guidance material makes reference to 205 A and 205 H but there is no such subdivision of the OPS.CAT.205 in the main rule text.

Justification:

Standardisation throughout the rule structure.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC5 OPS.CAT.205.H Fuel and oil supply p. 282

comment *1074* comment by: *REGA*

In addition to the provisions of AMC5 OPS.CAT.205.H for HEMS operations the provisions shall apply throughout a specific defined area (e.g. the area covered by a rescue base), as well to helicopters with a take-off mass of more than 3,175 kilograms and hems flights at night, providing that the maximum approved passenger seating configuration (MAPSC) does not exceed 9.

The defined area has to be described in the operation manual and approved by

the competent authority.

comment *4310* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

1. wrong reference

comment *4421* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

2. Local area operations encompass usually an area within a distance of 20-25 nm, **for HEMS operation 30-40nm.**

comment *5366* comment by: *ALFA-HELICOPTER*

Wrong reference in the 1st paragraph.

comment *5632* comment by: *HDM Luftrettung gGmbH*

wrong reference - OPS.CAT.215(b) ?

Why 20 to 25 NM Local area operations only?

comment *5683* comment by: *ADAC Luftrettung GmbH*

1: wrong reference.

2. Why 20-to 25NM only?

comment *5850* comment by: *Norsk Luftambulanse*

1. wrong reference

comment *6068* comment by: *Irish Aviation Authority*

Comment:

The guidance material makes reference to 205 A and 205 H but there is no such subdivision of the OPS.CAT.205 in the main rule text.

Justification:

Standardisation throughout the rule structure.

comment *6234* comment by: *HSD Hubschrauber Sonder Dienst*

2.local area

where does 20 to 25 miles come from? That seems to be wronly referenced.

comment *6285* comment by: *Peter Moeller*

Why is the "fuel remaining" (final reseerve fuel??) in a local area (well known to the crew) with 30 minutes more than required according to AMC 3 OPS. CAT. 205 H (1)(c)(iii)(A) with 20 minutes

OPS.CAT.215.b is a wrong reference

The definition for local area should not be limited to 20-25 NM. This equals only 10 - 13 minutes flight time. It should be depending on geographical circumstances (flat area, mountaineous etc), local weather etc and should be defined in the OM of the operator

comment *6936* comment by: *Konrad Polreich*

AMC5 OPS.CAT.205.H (1)

Due to the limited endurance of helicopters and its ability to execute landings in any open fields, I suggest to use 20 min remaining fuel at normal cruising speed upon completion of the flight. 30 minutes would reduce the operatonability too much for no real additional safety gain.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - GM1 OPS.CAT.205 Fuel and oil supply p. 282-283

comment *661* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.CAT.205: delete the paragraph:

~~**GM1 OPS.CAT.205 Fuel and oil supply**~~

~~**CONTINGENCY FUEL STATISTICAL METHOD**~~

~~**1. As an example, the following values of statistical coverage of the deviation from the planned to the actual trip fuel provide appropriate statistical coverage:**~~

~~**a. 99% coverage plus 3% of the trip fuel, if the calculated flight time is less than two hours, or more than two hours and no suitable ERA aerodrome is available; b. 99% coverage if the calculated flight time is more than two hours and a suitable ERA aerodrome is available; c. 90% coverage if: i. The calculated flight time is more than two hours; and ii. A suitable ERA aerodrome is available; and iii. At the destination aerodrome two separate runways are available and usable, one of which is equipped with an ILS/MLS, and the weather conditions are in**~~

~~**compliance with OPS.CAT.A.156(b)(1)(ii); or the ILS/MLS is operational to Cat II/III operating minima and the weather conditions are at or above 500 ft/2 500 m. 2. The fuel consumption database used in conjunction with these values should be based on fuel consumption monitoring for each route/aeroplane combination over a rolling two-year period.**~~

Justification:

The contingency fuel should not be based on statistical data because contingency fuel is required for unexpected conditions. "Unexpected" should be understood as something that previous experience has not taken into account.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC1 OPS.CAT.215 In-flight fuel checks p. 283

comment *669* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.CAT.215(1): add the following text:

1. Fuel checks should be carried out in-flight at regular intervals. The usable remaining fuel should be recorded and evaluated to:

a. compare actual consumption with planned consumption;

b. check that the usable remaining fuel is sufficient to complete the flight; and

c. determine the expected usable fuel remaining on arrival at the destination aerodrome~~.~~**;**

d. distribution of remaining fuel in tanks.

Justification:

Have been a couple of instances of having adequate fuel but a tank has been empty.

comment *2979* comment by: *REGA*

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *3922* comment by: *FOM ANWB MAA*

AMC1 OPS.CAT.215 In-flight fuel checks

IN-FLIGHT FUEL MANAGEMENT – MOTOR-POWERED AIRCRAFT

Except for VFR day flights of other than complex motor-powered aeroplanes, and operations by day and over routes navigated by reference to visual landmarks with helicopters with a maximum passenger seating configuration of nine or less engaged in-flight operations conducted within a local area and

other than complex motor-powered helicopters, in-flight fuel management should be carried out according to the following criteria: In-flight fuel checks:

1. Fuel checks should be carried out in-flight at regular intervals. The usable remaining fuel should be recorded and evaluated to:

a. compare actual consumption with planned consumption;

b. check that the usable remaining fuel is sufficient to complete the flight; and c. determine the expected usable fuel remaining on arrival at the destination aerodrome.

2. The relevant fuel data should be recorded.

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *4312* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *5369* comment by: *ALFA-HELICOPTER*

For (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *5638* comment by: *HDM Luftrettung gGmbH*

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *5687* comment by: *ADAC Luftrettung GmbH*

2. How and why record on 10 minutes flight (HEMS)

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *5856* comment by: *Norsk Luftambulanse*

RMK: for (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

comment *6268* comment by: *HSD Hubschrauber Sonder Dienst*

Here we have again the term " within the local area", which is not clearly defined for everyone. A clear definition would state, who has to perform an inflight fuel check under which conditions,(the others do not have to).

At least the lenght of the intended leg should be one of the conditions, because it does not make sense to perform the check on a 10 minute sector, for example.

comment *7211* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC1 OPS.CAT.215 In-flight fuel checks

IN-FLIGHT FUEL MANAGEMENT - MOTOR-POWERED AIRCRAFT

Except for VFR day flights of other than complex motor-powered aeroplanes, and operations by day and over routes navigated by reference to visual landmarks with helicopters with a maximum passenger seating configuration of nine or less engaged in-flight operations conducted within a local area and other than complex motor-powered helicopters, in-flight fuel management should be carried out according to the following criteria: In-flight fuel checks:

1. Fuel checks should be carried out in-flight at regular intervals. The usable remaining fuel should be recorded and evaluated to:

a. compare actual consumption with planned consumption;

b. check that the usable remaining fuel is sufficient to complete the flight; and c. determine the expected usable fuel remaining on arrival at the destination aerodrome.

2. The relevant fuel data should be recorded.

Remark: For (night) HEMS flights averaging 10 minutes of flight time the recording of relevant fuel data should be limited to the amount at take-off and landing in the Aircraft Technical Log or Journey Log. In flight recording is impractical and does not add to the safety of flight.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC2 OPS.CAT.215.A In-flight fuel checks p. 283-284

comment *662* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.215.A: add text (4) as follows:

(4) Where in-flight re-clearance operations are authorised, the operator shall provide all suitable means for reliable and accurate calculation of the fuel requirements. Such means may be via on-board equipment used for navigation and fuel calculations, or via easily read and interpreted documentation suitable for use within the cockpit. This documentation may include pre-planned values that are route specific or tables for general application.

Justification:

In order to get the most accurate results of the fuel calculations required for this procedure, the flight crew should be supported with all available means to continue the flight safely.

comment *2306* comment by: *Austro Control GmbH*

Recommendation:

define regular intervals e.g. every hour but at least two times per flight

Justification:

AMC provides checks, but without any further explanation. Experience shows that a guideline is necessary.

comment *5079* comment by: *M Wilson-NetJets*

Original text:

(4) On a flight using the PDP procedure in order to proceed to the destination aerodrome, the usable fuel remaining at the PDP should be at least the total of:

a. trip fuel from the PDP to the destination aerodrome;

b. contingency fuel from the PDP to the destination aerodrome calculated in accordance with AMC2 A CAT OPS.GEN.205 1.c.i.; and c. fuel required according to AMC2 A CAT OPS.GEN.205 3.b.iv.

Suggested new text:

No suggested text

Comment/suggestion:

references in 4.b. are incorrect and/or incorrectly annotated.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.225.A Maximum distance from an adequate aerodrome for two-engined aeroplanes p. 285

comment *11* comment by: *KLM*

AMC OPS.CAT.225.A

1 and 2 to be replaced by:

A speed selected by the operator, within the aircraft capabilities, with the subsequent distance from an adequate aerodrome with one engine inoperative in still air and standard conditions.

comment *5995* comment by: *DGAC*

There should be a reference to EASA AMC 20-6 for ETOPS conditions.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.225.A(c) Maximum distance from an adequate aerodrome for two- engined aeroplanes p. 285-289

comment *304* comment by: *Rega / Swiss Air-Ambulance*

AMC OPS.CAT.225.A(c) Maximum distance from an adequate aerodrome for two engined aeroplanes

Scope:

Description of the condition when an aircraft loses one engine.

Text to be added:

Chapter b. Airframe systems, third chapter; replace "single-engine operation" with the term "one-engine inoperative operation".

The equipment (including avionics necessary for extended diversion times should have the ability to operate acceptably follwing failures in the cooling system or electrical power systems.

For **one-engine inoperative** operations, the remaining power ... rest of text no change

Proof:

Instead of the term "single-engine operation" the term "one-engine inoperative" operation shall be used to be consistent.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *309* comment by: *Rega / Swiss Air-Ambulance*

AMC OPS.CAT.225.A(c) Maximum distance from an adequate aerodrome for two engined aeroplanes

Ingress: Swiss Air-Ambulance is operating dedicated ambulance jets soley in the MEDEVAC and repatriation role (see background information at the end of the comment). Commenced ambulance jet MEDEVAC and repatriation operation decades ago with a mixed fleet consisting of Learjet 24/35, BAe-125 Hawker and Canadair CL-600/601 jets, Swiss Air-Ambulance operates now since 2002 a uniformed fleet of 3 dedicated Bombardier CL-604 Challenger ambulance jets.

Due to the specific type of Aeroplane Emergency Medical Service (AEMS) operation it is of upmost importance for Swiss Air-Ambulance to have the ability to conduct MEDEVAC and/or repatriation operations worldwide, thus having the capability to operate also routings like

- Azores Islands - Carribean islands and vice versa
- United States of America West Coast - Hawaii Islands and vice versa
- Easter Islands (Chile)- South America West Coast and vice versa

Therefore, Swiss Air Ambulance requests as designated Aeroplane Emergency Medical Service (AEMS) operator to be allowed for operations between 120 and 240 minutes diversion (threshold) time being compliant with the requirements stipulated in AMC.OPS.CAT.225.A(c).

The Swiss NAA Federal Office of Civil Aviation (FOCA) issued the Air Operator Certificate CH-AOC-No.1015 to Swiss Air Ambulance for type(s) of operation "A3 Emergency Medical Service" and granted Swiss Air Ambualance under Swiss Air Ambulance Operations Manual OM A 14.1.2 the following exemption: "Long range operations between 180 and 240 minutes diversion (threshold) time".

Without having the possibility to operate up to 240 minutes from an adequate aerodrome, Swiss Air Ambulance will loose the capability to react swift and in due time to medevac/repatriation requests from persons in distress and need. Furthermore and first Swiss Air Ambulance will not be able anymore to reach certain spots around the globe and second will not be able to operate e.g. Azores Islands - Carribean islands and vice versa on the shortest possible routing but is forced e.g. to route via New Fundland and so loosing valuable time focussing on the well being of the patient on board.

For your information: Swiss Air Ambulance is calculating with a One Engine Inoperative (OEI) long range cruise speed of 300 KTAS as published in the Bombardier CL-604 Challenger "Flight Planning & Cruise Control Manual).

Swiss Air Ambulance requests to establish and publish a new AMC.OPS.CAT.225.A(c)(1) for dedicated Aeroplane Emergency Medical Service (AEMS) operators.

Text to be added (new paragraph):

AMC.OPS.CAT.225.A(c)(1) Maximum distance from an adequate aerodrome for two-engined aeroplanes operated in accordance with dedicated Aeroplane Emergency Medical Service (AEMS) Operations

OPERATION OF DEDICATED AIR AMBULANCE TWIN TURBOJET AEROPLANES HAVING A MAXIMUM PASSENGER SEATING CONFIGURRATION OF 19 OR LESS

AND HAVING A MAXIMUM TAKE-OFF MASS OF LESS THAN 45360 KG BETWEEN 120 AND 240 MINUTES FROM AN ADEQUATE AERODROME - OPERATIONAL CRITERIA FOR SMALL TWINS WITHOUT ETOPS CAPABILITY

Rest of text as per draft text AMC.OPS.CAT.225.A(C); no change

Proof:

- Swiss Air Ambulance is compliant with the requirements stipulated in AMC.OPS.CAT.225.A(c) when operating under the "ETOPS for NON ETOPS" regime
- Swiss Air Ambulance has no history of incidents or accidents when operating under the "ETOPS for NON ETOPS" regime

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *2102* comment by: *Airbus S.A.S.*

In AMC OPS.CAT.225.A(c) (1), wording “Relevant information” is considered to be not clear enough.

Please, specify what is considered to be “relevant”.

comment *2105* comment by: *Airbus S.A.S.*

In AMC OPS.CAT.225.A(c) (3)(a), the wording “Supplementary (S)TC” is misleading. It could be interpreted as a new acronym for “Supplemental Type Certificate”, as defined in IR Certification Part 21 Subpart E.

In our interpretation, substantiated by the following sub-paragraph (b), the wording “(S)TC holders” refers to both Supplemental Type Certification holders and Type Certification holders.

The sub-paragraph (3)(a) should read as follows:

“All powerplant events and operating hours should be reported by the operator to the airframe and engine TC holders, to Supplemental TC (STC) holders as well as to the competent authority.”

comment *5082* comment by: *M Wilson-NetJets*

Original text:

(2) (b) (C) The APU should meet the criteria in AMC OPS.CAT.A.220(c) c.

Suggested new text:

No suggested text

Comment/suggestion:

references to AMC OPS.CAT.A.220(C) c. which doesn't exist.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.230.A Pushback and towing - Aeroplanes p. 289

comment *958* comment by: *KLM*

unnecessary text not adding anything. normal practice should not be made more complicated then required. This text does not mean anything and shall be deleted.

comment *2825* comment by: *M Wilson-NetJets*

Original text:

TOWBARLESS TOWING

1. Towbarless towing should be based on the applicable SAE ARP (Aerospace Recommended Practices), i.e. 4852B/4853B/5283 (as amended).

Suggested new text:

TOWBARLESS TOWING

1. Towbarless towing should be based on the applicable SAE ARP (Aerospace Recommended Practices), i.e. 4852B/4853B/5283 (as amended) or manufacturer instructions.

Comment/suggestion:

Some manufacturers issue their own instructions on towbarless towing. Therefore, this should be included in this paragraph.

B. II. Draft Decision - Part-OPS - Subpart B - Section II - AMC OPS.CAT.235 Air Traffic Services - motor-powered aircraft p. 289-290

comment *2125* comment by: *Airbus S.A.S.*

AMC OPS.CAT.235 (1) is based on EU-OPS 1.216, which reads:

"in-flight operational instructions involving a change to the air traffic flight plan

shall, when practicable, be coordinated with the appropriate air traffic service unit before transmission to an aeroplane."

The wording "before transmission to an aeroplane" should be kept in the proposed text, to read:

"In-flight operational instructions involving a change to the air traffic flight plan should be co-ordinated with the appropriate ATS unit before transmission to an aeroplane."

comment *2136* comment by: *Airbus S.A.S.*

The sub-paragraph AMC OPS.CAT.235 (4) aims at defining the wording "Local area operation".

However, such wording is not used in any IR-OPS proposed requirement and it seems to be out of context here. For consistency reasons and to ease readability, this definition should be moved to OPS.GEN.010.

comment *2826* comment by: *M Wilson-NetJets*

Original text:

2. When unable to submit or to close the ATS flight plan due to lack of ATS facilities or any other means of communications to ATS, an operator should alert search and rescue services.

Suggested new text:

2. When unable to submit or to close the ATS flight plan due to lack of ATS facilities or any other means of communications to ATS, an operator should advise search and rescue services.

Comment/suggestion:

The word "alert" in search and rescue is associated with alerting the search and rescue facilities of a missing aircraft. Therefore, change the word "alert" into "advise".

comment *2980* comment by: *REGA*

Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *3925* comment by: *FOM ANWB MAA*

AMC OPS.CAT.235 Air Traffic Services - motor-powered aircraft

GENERAL

1. In-flight operational instructions involving a change to the air traffic flight plan should be co-ordinated with the appropriate ATS unit.

2. When unable to submit or to close the ATS flight plan due to lack of ATS

facilities or any other means of communications to ATS, an operator should ~~alert~~ inform search and rescue services.

comment *4316* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

2. Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *5373* comment by: *ALFA-HELICOPTER*

Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *5656* comment by: *HDM Luftrettung gGmbH*

Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *5688* comment by: *ADAC Luftrettung GmbH*

2: shouldn't this read inform in stead of alert?

Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *5857* comment by: *Norsk Luftambulanse*

2. Change alerted into informed: Search and rescue services should be informed, not alerted.

comment *6515* comment by: *Peter Moeller*

Change in 2.

.....an operator should inform search and rescue services

4. Definition of local area should be more flexible including orographie, local weather etc. 20 -25 NM is too less and covers only10 - 13 minutes of flight time.

comment *7212* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.CAT.235 Air Traffic Services - motor-powered aircraft

GENERAL

1. In-flight operational instructions involving a change to the air traffic flight plan should be co-ordinated with the appropriate ATS unit.

2. When unable to submit or to close the ATS flight plan due to lack of ATS facilities or any other means of communications to ATS, an operator should ~~alert~~ inform search and rescue services.

B. II. Draft Decision - Part-OPS - Subpart B - Section III p. 291

comment *1482* comment by: *Airbus*

A number of our comments on AMC OPS.CAT Section III (pages 291-312) are about the difficulty to read and sort, paragraph by paragraph, the performance requirements that apply to one aeroplane performance class. It would be much easier to have a clear split between the performance classes, like in EU OPS 1 subparts F (performance general), G (performance class A), H (performance class B), and I (performance class C).

comment *5996* comment by: *DGAC*

This section is very difficult to read as almost all the performance and limitations requirements from EU-OPS subparts F to I have been transferred in a lot of AMCs, with a classification that is not clear.

comment *7275* comment by: *Ryanair*

General Comments

1. The structure of the Performance Section is too complicated and confusing. Aeroplane Performance Class A should be separated from Class B and C Aeroplane and Helicopters.

2. There is no clear distinction between certified/dispatch and in-flight landing performance requirements and factors which should be considered for each case.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(a) Performance General – Aeroplanes p. 291

comment *959* comment by: *KLM*

Charts have to be accurate and when it is known to be inaccurate an operator will have them adjusted to be accurate or find another provider

comment *1494* comment by: *Airbus*

One may wonder why the charting accuracy should be taken into account in CAT only.

comment *1773* comment by: *claire.amos*

Existing requirement, but how is compliance demonstrate?

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(a)(1) Performance General – Aeroplanes p. 291

comment *1231* ☐ comment by: *Loganair Limited*

Turbine Powered aircraft with 19 seats Currently Operating to United Kingdom AN(G)R Performance C for Lifeline and Public Service Obligations where no alternative exists

The regulations do not cater for for turbine propeller powered aircraft with up to 19 passenger seats designed for STOL operations, such as the DHC6 Twin Otter, currently operating on Public Service Obligation and Lifeline routes to United Kingdom AN(G)R Performance C (Broadly equivalent to EASA/EU-OPS Performance Class B.) The purpose for which the aircraft was designed (Commercial Air Transport Short Take-Off and Landing (STOL) operations) is not recognised, by omission rather than specifically stated, in either EU-OPS or the proposed implementing rules. **Both EU-OPS and the proposed implementing rules need to recognise that Commercial Air Transport STOL operations exist within Europe and are necessary to meet Public Service Obligation requirements.**

Performance Class A requirements cannot be met because of the physical characteristics of the runways and obstacles. Typical examples are operations where no hard runway is available such as where Commercial Air Transport Operations are required to operate from a beach or where it would not be physically possible extend an existing runway. Example airfields are the beach airfield at Barra (EGPR) and Isles of Scilly (EGHE).

Performance Class A data is becoming available for aircraft such as the DHC6 Twin Otter, but the aircraft cannot be operated from certain airfields in Performance Class A. In the case of the Beach airfield at Barra no aircraft currently exists that can comply with the Public Service Obligation requirements and meets either Performance Class A, Performance Class B or Performance Class C.

Enforcing the performance Class A requirement on aircraft which have operated safely out of these airfields under United Kingdom AN(G)Rs for over 40 years would terminate air services which are operated purely for Public service Obligations and to provide lifeline services to remote and isolated Islands and Regions. During the Winter months these services are frequently the only method of transport available. It is clear that the imposition of Performance Class A requirements on STOL - type aircraft such as the DHC6 Otter has effectively removed the Short Take Off capability of the type as there

is no provision for Short Take Off techniques in Performance Class A. Loganair believes that there is no case to answer in this respect and that the operating safety record of the type under AN(G)R has been exemplary. Loganair cannot overstress the importance of short field capability in Public Service Obligation Commercial Air Transport Operations.

The only alternatives are:

1. Continue to allow operations with current aircraft to United Kingdom AN(G)R Performance C or EASA Performance Class B at airfields where Performance Class A requirements cannot be met.

OR

2. Cease operations to remote and isolated regions or Islands.

Proposal

Amend AMC OPS.CAT.316.A(1) by making it an acceptable means of compliance for Turbine Propeller aircraft with a seating capacity of 19 seats or less to operate to Performance class B criteria at airfields where Performance A criteria cannot be met ie STOL operations.

AMC OPS.CAT.316.A(a)(1)1. would then read:

Performance Class A. Performance class A aeroplanes should be multi-engined aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700 Kg, amd all multi-engined turbojet powered aeroplanes. ***Turbine propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass not exceeding 5700 Kg may be classified as a performance B aeroplane at airfields where Performance A criteria cannot be be met for reasons of airfield physical characteristics. In this case supplemental Performance B data must be incorporated in the Aeroplane Flight Manual in addition to the Performance A data.***

This would cater for STOL operations*.*

Equivalent safety case

Operations would meet the current level of safety at the very few airfields where Performance A criteria could not be applied, but would meet the level of safety afforded by performance B. In effect the the level of safety of Performance A is met by the increased visibility requirements for take-off for Performance B, which will be the same for all aircraft with a maximum take-off mass of 5700Kg or less, irrespective of the number of passengers carried. The increased take-off visibility requirements will allow the pilot "to see and avoid" obstacles which is unlikely to be valid on aircraft with a maximum take-off mass greater than 5700Kg due the increased speed, energy, inertia and consequently radius of turn. This technique has served DHC6 operations well and has resulted in an exemplary safety record.

In summary provided operations are restricted to operating in Visual Meteorological Conditions (VMC) to 300ft above aerodrome level and the aircraft Maximum Take-Off Mass is limited to 5700Kg, regardless of the number of passengers, the level of safety will be equivalent to that of a Performance A aircraft operating in Instrument Meteorological Conditions (IMC) from Take-Off to 300ft. The Shortfield Landing case is already covered by the regulations and in the Rejected Take-off case level of safety is improved because the Take-off has to be made in VMC instead of visibilities down to 500 metres or less as the regulations permit.

comment *2526* comment by: *Royal Aeronautical Society*

The text in each paragraph is written as a sentence when it need not be so, for in each case the words provide a description: the words 'should be' are inappropriate as is use of 'engined' in place of 'engine' (as used in EU-OPS, OPS 1.470). **It is suggested that each definition should read as, 'Performance Class A: multi-engine aeroplanes powered by …; Performance Class B: propeller driven aeroplanes …; Performance Class C: aeroplanes powered by …' as appropriate.**

Single engine turbojet aeroplanes such as are currently being manufactured for uses that could include commercial air transport cannot be accommodated in existing EU-OPS/proposed EASA Class A, B and C descriptions. **It is suggested that the aeroplane Performance Class text in this AMC should be amended to include single engine turbojet aeroplanes.**

comment *2754* comment by: *Isles of Scilly Skybus*

Response from Isles of Scilly Skybus to NPA-2009-02b.

Item. Classification of Turbo propeller driven Aircraft with 19 seats or less and MTOW of less than 5700kg currently operating under UKAN(G)R Performance C on Lifeline services to remote communities.

The current proposal to group Turbo propeller driven aircraft with 19 seats or less and a MTOW of 5700kg or less into performance group A would mean the performance requirements of that group cannot be met by the physical characteristics and location of certain airfields. Examples of this are St Mary's Isles of Scilly off the south west of England and the Isle of Barra in the Western Isles of Scotland.

The current operators that service these island communities have safely operated the Twin Otter for many years on these routes under UK AN(G)R performance C which is broadly equivalent to EASA/EU-OPS performance class B.

The communities affected rely on the air services not only for local transport to and from the islands but also for Royal Mail. Essential freight deliveries (especially during the winter months when it is regularly the only method of transport to the islands), and in respect of the Isles of Scilly the main source of income the tourist industry.

Performance data that is becoming available for the DHC6 to operate under performance class A would prevent operations from these remote communities with the loss of life line services. At present there is no comparable alternative aircraft capable of operating into these restricted airfields.

Possible amendment to proposal

A permanent exemption issued to affected operators from the UK Civil Aviation Authority to allow continued operation under UK AN(G)R performance C or EASA/EU-OPS performance Group B where performance group A requirements cannot be met at certain airfields.

If the above decision was accepted the AMC 316.A(a)(1) could be worded as follows.

Performance Class A . Performance class A aeroplanes should be multi-engined

aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700kg and all multi-engined turbojet powered aeroplanes.

Turbo-propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass less than 5700kg may be classified as a performance group B aeroplane at airfields where performance group A criteria cannot be met due to airfield physical characteristics. In this case the Operators National Aviation Authority will issue a local approval to operate into the airfield under performance Group B and Performance group B data must be available in the Aeroplane Flight Manual.

Safety Case.

Operations into the affected airfields would maintain the levels of safety achieved under current performance where performance A criteria cannot be achieved, but would also meet the levels of safety afforded by performance group B. The level of safety would be the same for all aircraft with a maximum take-off weight of 5700kg or less irrespective of the number of passengers carried.

The increased visibility requirements of Performance group B would allow the pilots to see and avoid obstacles. This may not be possible on aircraft with a take-off mass greater than 5700kg due to the greater inertia and radius of turn

comment *3279* comment by: *AEA*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

Proposal:

Upgrade to hard-law

comment *3781* comment by: *AUSTRIAN Airlines*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

Proposal:

Upgrade to hard-law

comment *4024* comment by: *UK CAA*

Page No: 291 of 464

Paragraph No:

AMC OPS.CAT.316.A(a)(1)

Comment:

This paragraph should be rule material.

Justification:

This paragraph defines which performance category each aeroplane belongs to and the standards to which it must operate. The relegation of this material to AMC and the use of the word 'should' instead of 'must' will cause operators to question whether these definitions are negotiable. Indeed, this confusion has already happened with one operator.

Proposed Text (if applicable):

Transfer AMC1 OPS.CAT.316.A(1) to OPS.CAT.316(A)(1).

comment *4643* comment by: *KLM*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

Proposal:

Upgrade to hard-law

comment *4816* comment by: *TAP Portugal*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

Proposal:

Upgrade to hard-law

comment *5021* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law

to provide legal certainty

Proposal:

Upgrade to hard-law

comment *5249* comment by: *Virgin Atlantic Airways*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

comment *5586* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Aeroplane performance classes

Comment:

The definition of aeroplane performance classes should be part of the hard-law to provide legal certainty

Proposal:

Upgrade to hard-law

comment *5997* comment by: *DGAC*

The definitions of Aeroplane performance classes should not be in an AMC. All definitions should be grouped in one single paragraph of the IR, for instance in OPS.GEN.010. The definitions should not be in AMC as a definition must be clear and unambiguous and shall not require any "acceptable mean of compliance" to be understood. A definition is a reference and therefore has to be in the rule (IR).

The concept of performance classes is yet used in some AMC and GM of subpart A GEN which demonstrates that definition of performance classes is a main issue.

This paragraph misses the intent of the concept of performance classes:

Performance classes were meant in JAR-OPS 1 (subparts F, G , H and I) as:

- performance class A: operations with engine failure accountability at nearly all flight phases

- performance class B: operations with partial engine failure accountability at take-off and landing phases

- performance class C: operations with partial engine failure accountability adapted to early design aeroplanes equipped with reciprocating engines

comment *6137* comment by: *Isles of Scilly Skybus*

Comment from Isles of Scilly Skybus.

Operation of aircraft designed to operate STOL (short take off and landing).

As an operator for many years of the DHC6 Twin Otter into airfields limited on runway length by their location it seems apparent that STOL operations are no longer to be accepted under EASA. There are a number of aircraft in service and under review to be built, that are designed specifically for operating into airfields of restricted length either by their remote location or nature of terrain. The manufacturers have produced performance supplements for STOL operations of these aircraft and these have been accepted by National Aviation Authorities up until now.

In order to maintain lifeline services to these remote locations and to take advantage of technological changes in aircraft development and improved safety, future aircraft operations may depend on airlines requiring STOL performance into these airfields.

An additional paragraph could be added to AMC316.A(a)(1) regarding STOL operations, and addition training criteria laid down.

Example.

Short Take off and Landing Performance (STOL)

Aircraft specifically designed for STOL operations may be operated without full compliance to the appropriate performance group providing the operator utilises the manufacturers approved performance supplement and operations are conducted to an equivalent level of safety. Operators requiring the use of STOL must be approved by the National Aviation Authority.

Additional Requirements.

The operator must demonstrate the need for STOL operations regarding public interest,operational necessity and remoteness/physical limitations of the Airfield.

STOL Operations may only be approved for aeroplanes where the vertical distance between the path of the pilots eye and the lowest part of the wheels does not exceed 3 metres.

Aerodrome operating minima needs to be specified in the operations manual. Visibility should not be below 1500m and wind limitations should be stated.

Aircrew must receive specific training on the aircraft into the approved Airfields

The Authority may impose further restrictions as deemed necessary for safe operation.

comment *6942* comment by: *Konrad Polreich*

AMC OPS.CAT.316.A(a)(1)

What ist the categorization of single-engined turbojet powered aeroplanes?

comment *7433* comment by: *Axel Schwarz*

Performance class B should include all single-engine turbojet aeroplanes, which are so far missing from the definition of performance classes.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(a)(2) Performance General – Aeroplanes p. 291

comment *1231* comment by: *Loganair Limited*

Turbine Powered aircraft with 19 seats Currently Operating to United Kingdom AN(G)R Performance C for Lifeline and Public Service Obligations where no alternative exists

The regulations do not cater for for turbine propeller powered aircraft with up to 19 passenger seats designed for STOL operations, such as the DHC6 Twin Otter, currently operating on Public Service Obligation and Lifeline routes to United Kingdom AN(G)R Performance C (Broadly equivalent to EASA/EU-OPS Performance Class B.) The purpose for which the aircraft was designed (Commercial Air Transport Short Take-Off and Landing (STOL) operations) is not recognised, by omission rather than specifically stated, in either EU-OPS or the proposed implementing rules. **Both EU-OPS and the proposed implementing rules need to recognise that Commercial Air Transport STOL operations exist within Europe and are necessary to meet Public Service Obligation requirements.**

Performance Class A requirements cannot be met because of the physical characteristics of the runways and obstacles. Typical examples are operations where no hard runway is available such as where Commercial Air Transport Operations are required to operate from a beach or where it would not be physically possible extend an existing runway. Example airfields are the beach airfield at Barra (EGPR) and Isles of Scilly (EGHE).

Performance Class A data is becoming available for aircraft such as the DHC6 Twin Otter, but the aircraft cannot be operated from certain airfields in Performance Class A. In the case of the Beach airfield at Barra no aircraft currently exists that can comply with the Public Service Obligation requirements and meets either Performance Class A, Performance Class B or Performance Class C.

Enforcing the performance Class A requirement on aircraft which have operated safely out of these airfields under United Kingdom AN(G)Rs for over 40 years would terminate air services which are operated purely for Public service Obligations and to provide lifeline services to remote and isolated Islands and Regions. During the Winter months these services are frequently the only method of transport available. It is clear that the imposition of Performance Class A requirements on STOL - type aircraft such as the DHC6 Otter has effectively removed the Short Take Off capability of the type as there is no provision for Short Take Off techniques in Performance Class A. Loganair believes that there is no case to answer in this respect and that the operating safety record of the type under AN(G)R has been exemplary. Loganair cannot overstress the importance of short field capability in Public Service Obligation Commercial Air Transport Operations.

The only alternatives are:

1. Continue to allow operations with current aircraft to United Kingdom AN(G)R Performance C or EASA Performance Class B at airfields where Performance Class A requirements cannot be met.

OR

2. Cease operations to remote and isolated regions or Islands.

Proposal

Amend AMC OPS.CAT.316.A(1) by making it an acceptable means of compliance for Turbine Propeller aircraft with a seating capacity of 19 seats or less to operate to Performance class B criteria at airfields where Performance A criteria cannot be met ie STOL operations.

AMC OPS.CAT.316.A(a)(1)1. would then read:

Performance Class A. Performance class A aeroplanes should be multi-engined aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700 Kg, amd all multi-engined turbojet powered aeroplanes. ***Turbine propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass not exceeding 5700 Kg may be classified as a performance B aeroplane at airfields where Performance A criteria cannot be be met for reasons of airfield physical characteristics. In this case supplemental Performance B data must be incorporated in the Aeroplane Flight Manual in addition to the Performance A data.***

This would cater for STOL operations***.***

Equivalent safety case

Operations would meet the current level of safety at the very few airfields where Performance A criteria could not be applied, but would meet the level of safety afforded by performance B. In effect the the level of safety of Performance A is met by the increased visibility requirements for take-off for Performance B, which will be the same for all aircraft with a maximum take-off mass of 5700Kg or less, irrespective of the number of passengers carried. The increased take-off visibility requirements will allow the pilot "to see and avoid" obstacles which is unlikely to be valid on aircraft with a maximum take-off mass greater than 5700Kg due the increased speed, energy, inertia and consequently radius of turn. This technique has served DHC6 operations well and has resulted in an exemplary safety record.

In summary provided operations are restricted to operating in Visual Meteorological Conditions (VMC) to 300ft above aerodrome level and the aircraft Maximum Take-Off Mass is limited to 5700Kg, regardless of the number of passengers, the level of safety will be equivalent to that of a Performance A aircraft operating in Instrument Meteorological Conditions (IMC) from Take-Off to 300ft. The Shortfield Landing case is already covered by the regulations and in the Rejected Take-off case level of safety is improved because the Take-off has to be made in VMC instead of visibilities down to 500 metres or less as the regulations permit.

comment *5084* comment by: *M Wilson-NetJets*

Original text:

(3) Factoring of Automatic Landing Distance Performance Data for Performance Class A Aeroplanes. In those cases, where the landing requires the use of an automatic landing system, and the distance published in the AFM includes safety margins that are equivalent to those contained in AMC OPS.CAT.345(a).A, the landing mass of the aeroplane should be the lesser of: a. the landing mass determined in accordance with AMC OPS.CAT.325(a)(4).A, as appropriate; or b. the landing mass determined for the automatic landing distance for the appropriate surface condition as given in the AFM or equivalent document. Increments due to system features such as beam location or elevations, or procedures such as use of overspeed, should also be included.

Suggested new text:

No suggested text

Comment/suggestion:

references AMC OPS.CAT.345(a).A should be AMC1 OPS.CAT.345.A(a)(1) or AMC2 OPS.CAT.345.A(a)(1) or AMC OPS.CAT.345.A(a)(2)

comment *5087* comment by: *M Wilson-NetJets*

Original text:

(3) (a) the landing mass determined in accordance with AMC OPS.CAT.325(a)(4).A, as appropriate; or

Suggested new text:

No suggested text

Comment/suggestion:

Reference to AMC OPS.CAT.325(a)(4).A is incorrectly annotated and the reference in itself does not exist.

comment *5998* comment by: *DGAC*

In § 1 there is an misuse of "may" instead of "should".

Proposed Text: Amend the text as follows:

"1. Operational factors. When applying factors, account ~~may~~ **should** be taken of any operational factors already incorporated in the Aeroplane Flight Manual (AFM) performance data to avoid double application of factors."

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(a)(3) Performance General – Aeroplanes p. 292

comment *437* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.316.A(a)(3)(2): Proposal from JAA DNPA-OPS 47:

2. For performance purposes, an operator should consider a damp runway, other than a grass runway, to be dry.

Justification:

State of the art practise and latest scientific knowledge indicate that damp runways do not produce effective dry braking action for an aircraft. Although measurements with runway friction testing equipment might suggest otherwise, there is currently no scientifically based and agreed correlation with aircraft and friction testing equipment. ECA is unaware of flight test data indicating an effective dry braking action for aircraft on damp runways and strongly urges adoption of the proposals contained in JAA DNPA-OPS 47. Additionally damp runway seems not to be defined under OPS.GEN.010.

comment *1231* ☐ comment by: *Loganair Limited*

Turbine Powered aircraft with 19 seats Currently Operating to United Kingdom AN(G)R Performance C for Lifeline and Public Service Obligations where no alternative exists

The regulations do not cater for for turbine propeller powered aircraft with up to 19 passenger seats designed for STOL operations, such as the DHC6 Twin Otter, currently operating on Public Service Obligation and Lifeline routes to United Kingdom AN(G)R Performance C (Broadly equivalent to EASA/EU-OPS Performance Class B.) The purpose for which the aircraft was designed (Commercial Air Transport Short Take-Off and Landing (STOL) operations) is not recognised, by omission rather than specifically stated, in either EU-OPS or the proposed implementing rules. **Both EU-OPS and the proposed implementing rules need to recognise that Commercial Air Transport STOL operations exist within Europe and are necessary to meet Public Service Obligation requirements.**

Performance Class A requirements cannot be met because of the physical characteristics of the runways and obstacles. Typical examples are operations where no hard runway is available such as where Commercial Air Transport Operations are required to operate from a beach or where it would not be physically possible extend an existing runway. Example airfields are the beach airfield at Barra (EGPR) and Isles of Scilly (EGHE).

Performance Class A data is becoming available for aircraft such as the DHC6 Twin Otter, but the aircraft cannot be operated from certain airfields in Performance Class A. In the case of the Beach airfield at Barra no aircraft currently exists that can comply with the Public Service Obligation requirements and meets either Performance Class A, Performance Class B or Performance Class C.

Enforcing the performance Class A requirement on aircraft which have operated safely out of these airfields under United Kingdom AN(G)Rs for over 40 years would terminate air services which are operated purely for Public service Obligations and to provide lifeline services to remote and isolated Islands and Regions. During the Winter months these services are frequently the only method of transport available. It is clear that the imposition of Performance Class A requirements on STOL - type aircraft such as the DHC6 Otter has effectively removed the Short Take Off capability of the type as there is no provision for Short Take Off techniques in Performance Class A. Loganair believes that there is no case to answer in this respect and that the operating safety record of the type under AN(G)R has been exemplary. Loganair cannot

overstress the importance of short field capability in Public Service Obligation Commercial Air Transport Operations.

The only alternatives are:

1. Continue to allow operations with current aircraft to United Kingdom AN(G)R Performance C or EASA Performance Class B at airfields where Performance Class A requirements cannot be met.

OR

2. Cease operations to remote and isolated regions or Islands.

Proposal

Amend AMC OPS.CAT.316.A(1) by making it an acceptable means of compliance for Turbine Propeller aircraft with a seating capacity of 19 seats or less to operate to Performance class B criteria at airfields where Performance A criteria cannot be met ie STOL operations.

AMC OPS.CAT.316.A(a)(1)1. would then read:

Performance Class A. Performance class A aeroplanes should be multi-engined aeroplanes powered by turbo-propeller engines with a maximum passenger seating configuration of more than 9 or a maximum take-off mass exceeding 5700 Kg, amd all multi-engined turbojet powered aeroplanes. ***Turbine propeller aircraft with a passenger seating configuration of 19 seats or less and a maximum take-off mass not exceeding 5700 Kg may be classified as a performance B aeroplane at airfields where Performance A criteria cannot be be met for reasons of airfield physical characteristics. In this case supplemental Performance B data must be incorporated in the Aeroplane Flight Manual in addition to the Performance A data.***

This would cater for STOL operations*.*

Equivalent safety case

Operations would meet the current level of safety at the very few airfields where Performance A criteria could not be applied, but would meet the level of safety afforded by performance B. In effect the the level of safety of Performance A is met by the increased visibility requirements for take-off for Performance B, which will be the same for all aircraft with a maximum take-off mass of 5700Kg or less, irrespective of the number of passengers carried. The increased take-off visibility requirements will allow the pilot "to see and avoid" obstacles which is unlikely to be valid on aircraft with a maximum take-off mass greater than 5700Kg due the increased speed, energy, inertia and consequently radius of turn. This technique has served DHC6 operations well and has resulted in an exemplary safety record.

In summary provided operations are restricted to operating in Visual Meteorological Conditions (VMC) to 300ft above aerodrome level and the aircraft Maximum Take-Off Mass is limited to 5700Kg, regardless of the number of passengers, the level of safety will be equivalent to that of a Performance A aircraft operating in Instrument Meteorological Conditions (IMC) from Take-Off to 300ft. The Shortfield Landing case is already covered by the regulations and in the Rejected Take-off case level of safety is improved because the Take-off has to be made in VMC instead of visibilities down to 500 metres or less as the regulations permit.

comment *1495* comment by: *Airbus*

It should be made clear that paragraphs 1.a and 1.b are applicable to performance class A aeroplanes only.

comment *1722* comment by: *ECA - European Cockpit Association*

Comment: Remove paragraph b

~~**b. if the performance data has been determined on the basis of a measured runway friction coefficient, a procedure correlating the measured runway friction coefficient and the effective braking coefficient of friction of the aeroplane type over the required speed range for the existing runway conditions should be applied; and**~~

Justification :

As indicated in relation to paragraph a of this AMC the JAA Performance Subcommittee identified in JAA DNPA-OPS 47 that data on wet and contaminated runways are normally developed by the aeroplane manufacturer and consequently operators do not generally have the means to be able to demonstrate that a method acceptable to the Authority has been used.

Additionally the major manufacturers do not provide a means or support a correlation between friction measurements and aircraft braking action. Scientific research over the last couple of decades indicates that friction measurements are inherently subject to large inaccuracies or uncertainties. More so, optimistic correlation by operators between friction measurements and aircraft braking performance have led in the past to unsafe situations including incidents and accidents. Industry activity is ongoing at the moment with regard to this subject, including work done by the FAA Takeoff and Landing Performance Assessment Aviation Rulemaking Committee (TALPA ARC) and the ICAO Friction Task Force.

As such the wording in current paragraph b should be either deleted or rewritten in accordance with state-of-the art knowledge from industry activities.

comment *2307* comment by: *Austro Control GmbH*

General Comment to this paragraph:

a calculation method by multipling data for a dry runway with a certain factor should also be possible for easier procedure.

CS 23 certified aeroplanes have mostly only factors.

comment *4025* comment by: *UK CAA*

Page No: 292

Paragraph No:

AMC OPS.CAT.316.A(a)(3) paragraph 1a

Comment:

The sub-paragraph 1(a) "the performance data should be determined in accordance with CS 25.1591 or equivalent;" has been amended from the text in JAR-OPS 1 and is deficient as a result, because it applies the latest standards ("or equivalent") of CS 25.1591 to existing, in-service, aeroplanes. This is not appropriate, not least because the wet take-off performance certification requirements have been moved to CS 25.109. Consequently, a reference to CS 25.1591 is not relevant to wet runway take-off performance. The objective of the original requirement in JAR-OPS 1 was that wet and contaminated runway operations should be based upon the use of appropriate, though not necessarily the latest, standard of performance data. This aspect was recognised by the JAA Performance Sub-Committee, who were responsible for this text.

Justification:

Applying the latest standards of CS 25.1591 is not necessarily appropriate for all in-service aeroplanes.

Wet and contaminated performance data is normally developed by the aeroplane manufacturer and consequently operators do not generally have the means to be able to demonstrate that a method acceptable to the Authority has been used.

Additionally, the publication of Change 15 to JAR-25 resulted in the transfer of the wet take-off performance certification guidelines of AMJ 25X1591 from Section 3 of JAR-25 (Advisory Material – Joint) to Section 1 (Requirements). Consequently, a reference to CS 25X1591 would no longer be relevant to wet runway take-off performance data produced in accordance with Change 15 of JAR-25 or later.

The following proposals clarify the objective and intention of the original JAR-OPS 1 text, namely that the required standard of wet runway take-off data is that which has been determined either in accordance with JAR-25 Change 13 (which was the first edition of JAR-25 to specify a satisfactory standard of wet and contaminated runway performance), or that which is appropriate to the type certification basis of the aeroplane, whichever is the later. An additional proposed GM paragraph provides clarification of the intention that the performance data need only account for the effect of the contaminant on runway performance and that existing methodologies used in the certified performance data remain valid.

Proposed Text (if applicable):

1. For a wet and contaminated runway:

a. the performance data ***~~should be determined in accordance with CS 25.1591 or equivalent~~ that complies with Change 13 of JAR-25, or that appropriate to the type certification date, whichever is the later, must be used. (See GM OPS XYZ)****.*

GM OPS XYZ

General – Wet and contaminated runway data

The performance data that is used to show compliance with the take-off requirements of OPS.CAT XYZ on wet and contaminated runways need only reflect the effects of drag and runway braking on the performance data determined at the time of type certification. Accordingly therefore, the performance assumptions used by the type's certification standard remain valid, except as modified by the

effects of contaminants. These include, for example, accelerate-stop distance definition, time delays, take-off distance definition, and braking means. For aeroplanes whose type certification date precedes Change 13 of JAR-25, the data should be acceptable to the Authority and provide an equivalent similar level of safety to, and thus comply with the safety intent of, Change 13 of JAR-25

comment *4026* comment by: *UK CAA*

Page No: 292

Paragraph No:

AMC OPS.CAT.316.A(a)(3) Para 1 (b)

Comment:

Sub-para b. states that "if the performance data has been determined on the basis of a measured runway friction coefficient, a procedure correlating the measured runway friction coefficient and the effective braking coefficient of friction of the aeroplane type over the required speed range for the existing runway conditions should be applied"

No such correlation currently exists. Delete sub-para b. and re-number sub-para c.

Justification:

This is a topic being examined by the ICAO Friction Task Force and in practice this is currently unattainable.

Proposed Text (if applicable):

1. For a wet and contaminated runway:

a. …..

~~b. if the performance data has been determined on the basis of a measured runway friction coefficient, a procedure correlating the measured runway friction coefficient and the effective braking coefficient of friction of the aeroplane type over the required speed range for the existing runway conditions should be applied; and~~

~~c~~.*b*.on a wet or contaminated runway, the take-off mass should not exceed that permitted for a take-off on a dry runway under the same conditions.

comment *4027* comment by: *UK CAA*

Page No: 292

Paragraph No:

AMC OPS.CAT.316.A(a)(3) Para 2.

Comment:

2. For performance purposes, an operator should consider a damp runway, other than a grass runway, to be dry.

The use of 'damp' is incorrect.

Justification:

ICAO does not define a 'damp' runway. A damp runway implies visible moisture and therefore should be taken as wet.

Proposed Text (if applicable):

Delete paragraph 2

~~2. For performance purposes, an operator should consider a damp runway, other than a grass runway, to be dry.~~

comment *5999* comment by: *DGAC*

(2) : Considering a damp runway as a dry one is not compliant with definition of a dry runway of ICAO annex 6 part 1 supplement C (amendment 33) :

Dry runway. A dry runway is one which is clear of contaminants and visible moisture within the required length and the width being used

The conclusion of previous PERF HWG has been that a damp runway should be assumed to be wet for performance purposes, based on research results comparing braking coefficient on dry, wet and damp surfaces (FAA reports, NASA technical notes and ESDU studies).

Moreover, a definition of damp runway is missing in this set of texts. The definition from EU-OPS 1.480 should be incorporated somewhere..

comment *6685* comment by: *Ryanair*

According to harmonised FAA/JAA position the damp runway should be considered to be wet, not dry

comment *7195* comment by: *ECA - European Cockpit Association*

Comment on paragraph 1.a.: rewrite according to JAA DNPA-OPS 47:

1. For a wet and contaminated runway:

a. the performance data ~~**should be**~~ determined in accordance with **Change 13 of JAR-25 , or that appropriate to the type certification date, whichever is the later, must be used.**~~**CS 25.1591 or equivalent**~~;

Justification:

Two issues were identified by the JAA Performance Subcommittee:

Firstly, these data are normally developed by the aeroplane manufacturer and consequently operators do not generally have the means to be able to demonstrate that a method acceptable to the Authority has been used.

Secondly, the publication of Change 13 to JAR-25 resulted in the transfer of the wet take-off performance certification guidelines of AMJ 25X1591 from section 3 of JAR-25 (Advisory Material – Joint) to section 1 (Requirements). Consequently, a reference in JAR-OPS 1 to JAR 25X1591 would no longer be

relevant to wet runway take-off performance data produced in accordance with Change 15 of JAR-25 or later.

These arguments are equally valid for the proposed text in relation to CS 25.1591 and the text should therefore be amended.

In combination with other comments, ECA strongly urges adoption of the changes published in DNPA-OPS 47 of the JAA Performance Subcommittee.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(a)(4) Performance General – Aeroplanes p. 292-294

comment *109* comment by: *Air Southwest*

Paragraph 1.c. refers to Appendix 2 to AMC OPS.CAT.325.A(a)(4). I think this should be Appendix 2 to AMC OPS.CAT.316.A(a)(4).

comment *1496* comment by: *Airbus*

It should be made clear that:

- Paragraph 1.a is applicable to performance classes A and C only;
- Paragraph 1.b is applicable to performance classes B and C only;
- Paragraph 1.c is applicable to performance classes A and C only.

comment *1498* comment by: *Airbus*

Editorial:

- Paragraph 1.b should refer to Appendix 1 to AMC OPS.CAT.316.A(a)(4), instead of Appendix 1 to AMC OPS.CAT.325.A(a)(4);
- Paragraph 1.c should refer to Appendix 2 to AMC OPS.CAT.316.A(a)(4), instead of Appendix 2 to AMC OPS.CAT.325.A(a)(4).

comment *1772* comment by: *claire.amos*

Point 3

Appears to be a relaxation from the JAR-OPS that had the speed and configurations used for go-around. This would appear to allow application of the certification criteria i.e. higher speeds, better gradient.

comment *2527* comment by: *Royal Aeronautical Society*

In Appendix 1 it is suggested that 'training' should be replaced by

'trained' in the last line of this paragraph.

comment *2793* comment by: *IDRF e.V. (association of regional airports)*

Item 1.b. refers to appendix 1 to AMC OPS.CAT.325.A(a)(4). This appendix could not be found, but a para 316.A(a)(4), which applies to performance class B

We suggest to use the material of the JAA-PERFSC, which released a draft (new IEM 1.490(c)(4) - NPA-OPS XX) listing the 4 methods for the calculation of the **effective runway slope**.

comment *3281* comment by: *AEA*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with OPS 1.510

comment *3783* comment by: *AUSTRIAN Airlines*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X**

and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with OPS 1.510

comment *4029* comment by: *UK CAA*

Page: 292

Paragraph No:

AMC OPS.CAT.316.A(a)(4) (See also UK CAA comment on AMC1 OPS.CAT.345.A(a)(1))

Comment:

It is suggested that the improved text which was developed and agreed by the JAA Performance Sub-Committee should be considered in the development of the implementing rules for air operations.

Justification:

Provides improvement and clarification of the requirement:-

It is fundamental to operational safety that the aeroplane is despatched with the ability to conduct safely a missed approach upon arrival at the destination and destination alternate airports, even if power is lost from the most critical engine. Instrument approach procedures are designed to provide protection from obstacles, and this includes obstacle clearance throughout the missed approach part of the procedure. Having allowed for a transition from the approach configuration to the missed approach climb configuration, a nominal climb gradient of 2·5% is specified, though occasionally increased gradients may be required if necessitated by the obstacle environment or other considerations.

It is proposed to replace paragraphs AMC OPS.CAT.316.A(a)(4) paragraphs 3(a) and (b) with a new paragraph (a). It applies to all instrument approaches, regardless of the decision height, and requires that the aeroplane is capable of a go-around climb gradient of 2·5%, or the published missed approach climb gradient, whichever is the greater. This is similar to existing paragraph 3(b), but which is currently applicable only to Category 2 and 3 approaches.

For consistency with the instrument approach procedure design outlined above, it is also proposed in the new paragraph 3(a) that the configuration used to

comply with the climb gradient prescribed for the missed approach must be achievable within the horizontal distance allowed for in the transition to the climb configuration. This is accomplished by placing limits on the acceleration and changes in flap necessary to achieve the missed approach climb configuration as follows:-

(i) The specified go-around speed must not exceed the speed used during the approach (V_{REF}) by more than 10 knots.

(ii) The go-around flap angle setting should not result in an increase in stall speed of more than 10% of that in the landing configuration.

These constraints are intended to limit the prolonged acceleration close to the ground which could otherwise be required during the transition to the go-around configuration. The constraint relating to stall speed is consistent with the recent harmonised certification standards agreed for CS-25/FAR 25.121(d).

A provision for the operator to use an alternative procedure or method, acceptable to the Authority, is retained in the new paragraph (a).

Proposed Text (if applicable):

3. Landing mass for missed approach for Performance Class A aeroplanes.

~~***a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); and***~~

a. *For* ***all*** *instrument approaches* ***appropriate to the landing runway*** ~~***with decision heights below 200 ft***~~*, an operator should verify that the expected landing mass of the aeroplane****, taking into account the take-off mass and the fuel expected to be consumed in flight,*** *allows a missed approach gradient of climb, climb****, with the critical engine failed, at a speed not exceeding V_{REF} +10 knots and with the approach flap setting associated with the landing configuration used to show compliance with AMC OPS.CAT.345 as appropriate,*** *with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243).* ***The speeds and configurations used to show compliance with this paragraph shall be the same as the approved recommended procedures. The use of an alternative procedure and/or method must be accepted by the Authority.***

comment *4644* comment by: *KLM*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with OPS 1.510

comment *4817* comment by: *TAP Portugal*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with OPS 1.510

comment *4823* comment by: *British Airways Flight Operations*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a.

For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with EU OPS 1.510

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *5022* comment by: *Deutsche Lufthansa AG*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method must be approved by the Authority**"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method**

must be approved by the Authority"

Proposal:

Realign with OPS 1.510

comment *5089* comment by: *M Wilson-NetJets*

Original text:

MASS OF THE AEROPLANE FOR TAKE-OFF, IN-FLIGHT AND LANDING

1. Take-off and in-flight mass. The mass of the aeroplane at the start of the take-off or, in the event of in-flight re-planning, at the point from which the revised operational flight plan applies should not be greater than the mass at which the requirements can be complied with for the flight to be undertaken allowing for expected reductions in mass as the flight proceeds, and for fuel jettisoning as is provided for in the particular provision.

When determining the maximum permitted take-off mass, in addition to AMC1 OPS.GEN.320.A(a), an operator should also take into account the following:

a. the impact of engine failures on the take-off distance required;

b. the runway slope in the direction of take-off as indicated in Appendix 1 to AMC OPS.CAT.325.A(a)(4); and

c. the loss, if any, of runway length due to alignment of the aeroplane prior to take-off as indicated in Appendix 2 to AMC OPS.CAT.325.A(a)(4).

Suggested new text:

No suggested text

Comment/suggestion:

References are incorrect

comment *5587* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

3. Landing mass for missed approach for Performance Class A aeroplanes. a. For instrument approaches with a missed approach gradient greater than 2.5%. an operator should verify that the expected landing mass of the aeroplane allows a missed approach with a climb gradient equal to or greater than the applicable missed approach gradient in the one-engine inoperative missed approach configuration and speed (CS 25.121(d) / JAR-25.121(d)); **X** and

b. For instrument approaches with decision heights below 200 ft, an operator should verify that the expected landing mass of the aeroplane allows a missed approach gradient of climb, with the critical engine failed and with the speed and configuration used for go-around of at least 2.5%, or the published gradient, whichever is the greater (CS-AWO 243 / JAR-AWO 243). **Y**

Comment:

X; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (b) is missing; "**The use of alternative method**

must be approved by the Authority"

Y; Ref to OPS 1.510 – Landing - Destination and alternate aerodromes;

The last sentence of 1.510 (c) is missing; "**The use of alternative method must be approved by the Authority**"

Proposal:

Realign with OPS 1.510

comment *6001* comment by: *DGAC*

In § 1 the reference to "the requirements" lacks accuracy

Justification:

JAR/EU OPS 1.475(a) from which the text of § 1 has been copied refers to "the requirements of the appropriate subpart"

Proposed Text:

Amend text as follows:

"1. Take-off and in-flight mass. The mass of the aeroplane at the start of the take-off or, in the event of in-flight re-planning, at the point from which the revised operational flight plan applies should not be greater than the mass at which the requirements **of this section** can be complied with for the flight to be undertaken allowing for expected reductions in mass as the flight proceeds, and for fuel jettisoning as is provided for in the particular provision."

§ 1.a. refers to "the impact of engine failures on the take-off distance required", whereas airworthiness codes do not take into account the failure of more than one engine.

Proposed Text:

Amend text as follows:

"a. the impact of **an** engine failure~~s~~ on the take-off distance required;"

comment *6690* comment by: *Ryanair*

Paragraph 2

Certification requirement for landing performance for large aeroplanes and landing performance data/software provided by manufacturers do not include effect of ambient temperature.

Paragraph 3.a

This paragraph describes operational performance requirements for instrument approach procedures missed approach climb gradients >2.5%. At the same time it refers to certification WAT requirements from CS 25.121(d) which has nothing to do with IAP missed approaches climb gradients.

comment *7203* comment by: *SWISS AERODROMES ASSOCIATION*

The slope calculation (1.b) should be the calculation of the effective runway slope

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.316.A(c) Performance General – Aeroplanes p. 294-295

comment *1497* comment by: *Airbus*

This material, which is applicable to performance class B aeroplanes only, is located between other AMC and GM that are applicable to different performance classes (sometimes mixed). This is just an example of the difficulty to sort the information related to a given performance class in Section III AMC and GM. The structure of the performance provisions in OPS 1 and TGL 44, with a clear split between performance classes, is much more user-friendly.

comment *1723* comment by: *ECA - European Cockpit Association*

Comment: delete 1:

TAKE-OFF AND LANDING CLIMB FOR CLIMB CRITERIA FOR PERFORMANCE CLASS B AEROPLANES

~~**1. The climb criteria should be those required by the applicable airworthiness code (e.g. CS 23.63(c)(1); CS 23.63(c)(2) or equivalent).**~~

2. Take-off Climb

Justification:

The original requirement in Appendix 1 to EU-OPS 1.525(b) contained a statement on which certification requirement the climb were based. This seems to be translated in the proposed text as a general requirement for the climb criteria to meet the applicable standards in the airworthiness code. This would mean that those aircraft certified to a standard which does not meet the requirements under 2 can still be considered to satisfy the requirement of OPS.CAT.316.A. This was not the intent of EU-OPS 1.525(b) as the requirements under proposed 2 are meant as a minimum. By removing the unnecessary reference to the airworthiness code under 1 the original intent is restored.

comment *2528* comment by: *Royal Aeronautical Society*

It is suggested that the words 'FOR CLIMB' in the heading should be deleted.

comment *3785* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *3864* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *3865* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *4031* comment by: *UK CAA*

Page No: 294

Paragraph No:

OPS.CAT.316.A(c) & AMC OPS.CAT.316.A(c)

Comment:

OPS.CAT.316.A(c) specifies that aeroplanes with insufficient climb performance with one-engine-inoperative should be subject to the same operational restrictions as single-engined aeroplanes. The existing criteria specified in AMC OPS.CAT.316.A(c) to satisfy this objective are the CS-23 WAT climb limits applicable to aeroplanes greater than 2,730kg. As well as being complex these criteria require data whch is not required to be available in the AFM/POH.

Justification:

In order to enable the operator to determine without difficulty whether the aeroplane has the necessary one-engine inoperative performance capability, the criteria has to be set in simpler terms and make use of the data already available in the AFM/POH. To that end, instead of the existing CS-23 WAT criteria, it is proposed to specify a minimum one-engine inoperative rate of climb figure that needs to be achievable in the en-route configuration. The text below is a further refinement of proposals that were agreed within the JAA Performance Sub-Committee.

Proposed Text (if applicable):

(i) Amend OPS.CAT.316.A(c) as follows:-

*(c) **~~Two~~** **Multi-engined** propeller-driven aeroplanes. **~~Two~~** **Multi-engined** propeller-driven aeroplanes which **are not capable of a steady rate of climb in the en-route configuration with one-engine-inoperative of 150 feet per minute at:-***

(i) 1,500ft above the altitude and air temperature of the departure aerodrome and

***(ii) 1,500ft above the altitude and air temperature of the destination and destination alternate aerodromes** **~~do not meet the applicable climb criteria~~** shall be treated as single**-engined** propeller-driven aeroplanes and shall comply with (b).*

(ii) Delete AMC OPS.CAT.316.A(c).

comment *5150* comment by: *Directflight Limited*

NPA 2009-02b

Page 294 0f 464

AMC OPS.CAT.316A(c) Performance General – Aeroplanes

Aircraft conforming to BCAR Subpart K/ UK Performance Group C can be excluded e.g when 2. b. i. D. is not measured. These aircraft should be accommodated. They continue in production as CS-23A aircraft.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - GM OPS.CAT.316.A(c) Performance General – Aeroplanes p. 296

comment *1497* ☐ comment by: *Airbus*

This material, which is applicable to performance class B aeroplanes only, is located between other AMC and GM that are applicable to different performance classes (sometimes mixed). This is just an example of the difficulty to sort the information related to a given performance class in Section III AMC and GM. The structure of the performance provisions in OPS 1 and TGL 44, with a clear split between performance classes, is much more user-friendly.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC1 OPS.CAT.326.A Take-off requirements - Aeroplanes p. 296

comment *1499* ☐ comment by: *Airbus*

Affected paragraphs:

- OPS.GEN.320.A(a)(1), p. 40
- OPS.CAT.326.A, p. 68
- AMC1 OPS.CAT.326.A § 1.b, p. 296

Comment:

These provisions as written are unclear. A consistency check is needed for provisions on take-off distance vs. TODA/clearway, in relation with categories of operations and aeroplane performance classes.

comment *1501* comment by: *Airbus*

- Paragraph 1 is applicable to performance class A aeroplanes and some performance class C aeroplanes.
- Paragraph 2 is applicable to some other performance class C aeroplanes.
- Paragraph 3 is applicable to performance class B aeroplanes.

The structure of the performance provisions in OPS 1 and TGL 44, with a clear split between performance classes, is much more user-friendly.

comment *1771* comment by: *claire.amos*

Point 1

SHOULD is a change from MUST

Also, no DRY check required. No objection. Wording is more achievable. This reflects that performance is a plan with the best information and not a totally exact science.

comment *6002* comment by: *DGAC*

The text in paragraph 1.d only applies to paragraph 1, not 2 and 3.

Proposed Text:

Amend § 1.d as follows:

"compliance with this ~~**AMC**~~ **paragraph** should be shown using a single value of V1 for the rejected and continued take-off."

Paragraph 1.b. is redundant with OPS.GEN.320.A (a)(1) which says that : "the take-off distance shall not exceed the take-off distance available, with a clearway distance not exceeding half of the take-off run available" and is applicable for all aeroplanes in commercial operations, therefore is also applicable to CAT.

The whole paragraph 3 for operators of class B aeroplanes must be modified.

Proposed text:

Amend paragraph 3 as follows :

"3. Operators of Performance Class B aeroplanes should ensure that the unfactored take-off distance, as specified in the AFM does not exceed :

a. when multiplied by a factor of 1.25, the take-off run available; or

b. when clearway is available, the following:

i. the take-off run available;

ii. when multiplied by a factor of 1.25, the take-off distance available; and/or

c. when stopway is available, the following :

i. the take-off run available;

ii. when multiplied by a factor of 1.25, the accelerate-stop distance available.

~~b. when stopway and/or clearway is available, the following:~~

~~i. the take-off run available;~~

~~ii. when multiplied by a factor of 1.15, the take-off distance available; and~~

iii. ~~when multiplied by a factor of 1.3, the accelerate-stop distance available.~~ "

Justification :

The present wording is confusing because it seems to melt stopway and clearway which are completely different even if only one is available.

The three requirements (i), (ii) and (iii) are effective even if only one of clearway and stopway, is available. The way it is written, it appears that in most of cases for small aerodromes, if no stopway or a short stopway is available, it doesn't provide any benefit for the operator (stopway < 4% runway) who cannot take advantage of the clearway. Clearly separating the different cases and leaving to the operator the choice of using or not a stopway when available, the result could be more useful. That's why we should replace "and" by "and/or".

Moreover, the safety coefficients are not relevant. For example : TORA = 1000m and clearway = 100m :

- Without clearway, we would have : 1000/1.25=800m then the margin

between TOD and TODA is 200m

- 1100/1.15=956m then the margin TOD/TODA is 144m which is less than 200m

- with a new coefficient of 1.25 for the TOD : 1100/125=880m then the margin is 220m. In this case we take benefit of the clearway without lowering the safety level.

The same coefficient of 1.25 should therefore be used for all cases.

Proposal :

Amend AMC 1 OPS.CAT.326.A by replacing point 3 as follows :

"1. Operators of Performance Class A aeroplanes and for such Performance Class C aeroplanes, for which take-off field length data accounts for engine failures in their AFM, […]

2. Operators of Performance Class C aeroplanes for which the AFM does not include engine failure accountability[…]

3. Operators of Performance Class B aeroplanes should ensure that the unfactored take-off distance, as specified in the AFM does not exceed:

c. when multiplied by a factor of 1.25, the take-off run available; or

~~d. when stopway and/or clearway is available, the following:~~

~~iv. the take-off run available;~~

~~v. when multiplied by a factor of 1.15, the take-off distance available; and~~

vi. ~~when multiplied by a factor of 1.3, the accelerate-stop distance available.~~

b. when clearway is available, with a clearway distance not exceeding half of the take-off run available, the following:

iii. the take-off run available;

iv. when multiplied by a factor of 1.25, the take-off distance available; and/or

e. when stopway is available, the following :

j. the take-off run available;

ii. when multiplied by a factor of 1.25, the accelerate-stop distance available."

Justification :

The present wording is confusing because it seems to melt stopway and clearway which are completely different even if only one is available and uses irrelevant safety coefficient (for example : TORA = 1000 m and stopway = 20 m, it is better not to take the stopway into account as 1020/1.3 < 1000/1.25, but with a clearway of 1 m 1001/1.15 is much > than 1000/1.25). The same coefficient of 1.25 should therefore be used for all cases. In addition, clearway length should be limited to half of the runway length as for performance class A aeroplanes.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - GM2 OPS.CAT.326.A Take-off requirements - Aeroplanes p. 297

comment *1502* comment by: *Airbus*

The subtitle of this GM shows that it is applicable to performance class A and class C aeroplanes.

It should be mentioned in paragraph 2 that AMC 25.1591 is relevant to performance class A aeroplanes only.

OPS 1 provisions have to be accurately transposed.

comment *5094* comment by: *M Wilson-NetJets*

Original text:

(2) An adequate overall level of safety will only be maintained if operations in accordance with AMC 25.1591 or equivalent are limited to rare occasions. Where the frequency of such operations on contaminated runways is not limited to rare occasions, operators should provide additional measures ensuring an equivalent level of safety. Such measures could include special crew training, additional distance factoring and more restrictive wind limitations.

Suggested new text:

No suggested text

Comment/suggestion:

Reference to AMC 25.1591 is unknown

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC1 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes p. 297-298

comment *466* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.CAT.327.A: include current text under AMC1 OPS.CAT.327.A under OPS.CAT.327.A or OPS.GEN.315

Justification:

The list under AMC1 OPS.CAT.327.A is either a consequence of physics or agreed upon for many years. The list does not need the flexibility of AMC material and should be included in OPS.CAT.327.A which in itself is proposed to be moved to OPS.GEN (see other comments). As the list is partially or completely repeated for other phases of flight, further improvement and simplification could be achieved by moving the list to OPS.GEN.315.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC2 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes p. 298-299

comment *462* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.327.A(1): change as follows:

1. Horizontal distances or vertical margins. Operators should ensure that the ~~**take-off flight path**~~ **net take-off flight path** clears all obstacles by horizontal or vertical distances as following:

Justification:

See comments OPS.GEN.010(a)(75). It is essential that AMC2 OPS.CAT.327.A refers to the net take-off flight path to ensure that the appropriate climb gradient reductions according to the certification specifications are taken into account. A difference between flight path and net flight path for Performance Class C and Class A aircraft could be addressed by suitable wording.

comment *464* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.327.A(1)(b): change as follows:

b. for aeroplanes with a wingspan of less than 60 m, by a ~~**horizontal distance of half**~~ **horizontal distance of at least half** the aeroplane wingspan plus 60 m, plus 0.125 x D; or

Justification:

This change brings the requirement under 1.b. in line with the wording under 1.a.

comment *513* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.327.A: change as follows:

AMC2 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes

DETERMINATION OF THE HORIZONTAL, VERTICAL AND LATERAL DISTANCES FOR THE ~~**TAKE-OFF FLIGHT PATH**~~ **NET TAKE-OFF FLIGHT PATH** OBSTACLE CLEARANCES

1. Horizontal distances or vertical mrgins. Operators should ensure that the ~~**take-off flight path**~~ **net take-off flight path** clears all obstacles by horizontal or vertical distances as following:

a. for aeroplanes with a wingspan of 60 m or more, by a horizontal distance of at least 90 m plus 0.125 x D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available or the end of the take-off distance if a turn is scheduled before the end of the take-off distance available;

b. for aeroplanes with a wingspan of less than 60 m, by a horizontal distance of half the aeroplane wingspan plus 60 m, plus 0.125 x D; or

c. for Performance Class A aeroplanes (Appendix 1 to AMC2 OPS.CAT.327.A), by a vertical margin of at least 35 ft and for any part of the net take-off flight path in which the aeroplane is banked by more than 15° by a vertical margin of at least 50 ft; or

d. for Performance Class B (Appendix 2 to AMC2 OPS.CAT.327.A) and Performance Class C aeroplanes, by a vertical margins of at least 50 ft.

2. Where the intended ~~**take-off flight path**~~ **net take-off flight path** does not require track changes of more than 15°, an operator does not need to consider those obstacles which have a lateral distance greater than:

a. 300 m, if the pilot is able to maintain the required navigational accuracy (Appendix 3 to AMC2 OPS.CAT.327.A) through the obstacle accountability area; or

b. 600 m, for flights under all other conditions.

3. Where the intended ~~**take-off flight path**~~ **net take-off flight path** does require track changes of more than 15°, an operator does not need to consider those obstacles which have a lateral distance greater than:

a. 600 m, if the pilot is able to maintain the required navigational accuracy (Appendix 3 to AMC2 OPS.CAT.327.A) through the obstacle accountability area; or

b. 900 m for flights under all other conditions.

4. For the compliance with 1. to 3. above, it should be assumed that:

a. track changes are not allowed up to the point at which:

i. the ~~**take-off flight path**~~ **net take-off flight path** for Performance Class B and C aeroplanes is not less than 50 ft above the elevation of the end of the take-off run available; and
ii. the net take-off flight path for Performance Class A aeroplanes has achieved a height equal to one half the wingspan but not less than 50 ft above the elevation of the end of the take-off run available.

b. thereafter, up to a height of 400 ft the aeroplane is banked by no more than 15°;

c. above 400 ft, the aeroplane is banked by no more than 25° for Performance Class A and C aeroplanes.

5. Operators of Performance Class A aeroplanes may use special procedures, to apply increased bank angles (Appendix 4 to AMC2 OPS.CAT.327.A) of not more than 20º between 200 ft and 400 ft, or not more than 30º above 400 ft.

6. For showing compliance with 2.a. and 3.b above, operators of Performance Class B aeroplanes should ensure that the flight is conducted under conditions allowing visual course guidance navigation, or if navigational aids are available, enabling the pilot to maintain the intended flight path with the same accuracy.

Justification:

Is is essential that the climb gradient reductions specified in the certification specifications are included when showing compliance with obstacle clearance criteria. As such all references to take-off flight path should be amended to net take-off flight path.

comment *1503* comment by: *Airbus*

Again, this AMC is a mix of provisions of different applicability with regard to the performance class, difficult to sort. The structure of the performance requirements in OPS 1, with separate subparts for each performance class, is

much more user-friendly.

comment *1724* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.327.A: change as follows:

4. For the compliance with 1. to 3. above~~, it should be assumed that~~:

Justification:

The original requirement of EU-OPS 1.495(c) constitutes a requirement not only for obstacle clearance but also for operating procedures by limiting bank angles and track changes. The current proposal implies by the wording "it should be assumed" that the requirements under (a) to (c) are intended only for showing compliance with the obstacle clearance criteria and not as operating limits. To avoid confusion the wording should be deleted.

comment *1725* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.327.A:

Change 1.d. as follows:

"For Performance Class B (Appendix 2 to AMC2 OPS.CAT.327.A)~~ and Performance Class C aeroplanes,~~ by a vertical margin of at least 50 ft."

Add 1.e. as follows:

"**1.e. For Performance Class C by a vertical margin of at least 50 ft plus 0.01 x D.**"

Justification:The original requirement contained in EU-OPS 1.570(a) is not properly reflected in the proposed text.

comment *2858* comment by: *M Wilson-NetJets*

Original text:

Where the intended take-off flight path does not require track changes of more than 15°, an operator does not need to consider those obstacles which have a lateral distance greater than:

Suggested new text:

Where the intended take-off flight path does not require track changes of more than 15º of the extended runway centerline, an operator does not need to consider those obstacles which have a lateral distance greater than:

Comment/suggestion:

As the text reads now it could be interpreted that multiple track changes, where each track change in itself is limited to 15º, are allowed.

comment *6072* comment by: *DGAC*

- The distinction between horizontal and vertical margins is not clearly made (see JAR/EU OPS 1.495(a)).

- the margin in § 1.b is an option (see JAR/EU OPS 1.495(a) : "…a horizontal obstacle clearance…may be used).

Proposed Text:

Amend text as follows:

"1. Horizontal distances or vertical margins. Operators should ensure that the take-off flight path clears all obstacles by horizontal ~~**or vertical**~~ distances as follow~~**sing**~~:

a. for aeroplanes with a wingspan of 60 m or more, by a horizontal distance of at least 90 m plus 0.125 x D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available or the end of the take-off distance if a turn is scheduled before the end of the take-off distance available;

b. **or at the option of the operator**, for aeroplanes with a wingspan of less than 60 m, by a horizontal distance of half the aeroplane wingspan plus 60 m, plus 0.125 x D;

or by vertical distances as follows:

c. for Performance Class A aeroplanes (Appendix 1 to AMC2 OPS.CAT.327.A), by a vertical margin of at least 35 ft and for any part of the net take-off flight path in which the aeroplane is banked by more than 15° by a vertical margin of at least 50 ft; or

d. for Performance Class B (Appendix 2 to AMC2 OPS.CAT.327.A) and Performance Class C aeroplanes, by a vertical margins of at least 50 ft."

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC1 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes - Appendix 1 p. 299

comment *6074* comment by: *DGAC*

Is this paragraph and (2) of AMC1 OPS.CAT.327.A applicable for all performance classes ?

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC2 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes - Appendix 1 p. 300

comment *5928* comment by: *ERA*

European Regions Airline Association Comment

Operators are surprised that this material is included as it appears to not be consistent with the presentation in CS 25.

Therefore further clarification is required as to the reason for this material to be included.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC2 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes - Appendix 2 p. 300-304

comment *6075* comment by: *DGAC*

Figures 4 and 5 are unreadable

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC2 OPS.CAT.327.A Take-off obstacle clearance - Aeroplanes - Appendix 3 p. 305

comment *1505* comment by: *Airbus*

The subtitle of this appendix indicates that it is applicable to performance class A and class B aeroplanes.

This material is copied from AMC OPS 1.495(d)(1) & (e)(1) in TGL 44, which is applicable to performance class A only. There is no equivalent material in TGL 44 for performance class B.

Is it intentional, and justified, to extend applicability to class B?

The principle should be to accurately transpose OPS 1 & TGL 44 provisions, and nothing more unless clearly justified.

comment *1726* comment by: *ECA - European Cockpit Association*

Comment on Appendix 3 to AMC2 OPS.CAT.327.A : amend title to include category C airplanes as well.

Change as follows:

TAKE-OFF FLIGHT PATH – REQUIRED NAVIGATIONAL ACCURACY FOR PERFORMANCE CLASS A ~~**AND** ,~~ CLASS B **AND CLASS C** AEROPLANES

Justification:

This paragraph does apply to Category C airplanes as well, see AMC OPS 1.570(e)(1) and (f)(1).

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.340.A(c) En-Route requirements - Aeroplanes p. 306-307

comment *517* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.340.A(c): change as follows:

1. For Performance Class A aeroplanes, the net flight path should take account

of the following criteria:

a. the ~~**flight path**~~ **net flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track ~~**or**~~ by a vertical interval of at least 2 000 ft; and

b. the necessary increase of the width margins of sub-paragraph a. to 18.5 km (10 nm) if the navigational accuracy does not meet the 95% containment level;

c. the engine is assumed to fail at the most critical point along the route;

d. account is taken of the effects of winds on the **net** flight path;

e. fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and

f. the aerodrome where the aeroplane is assumed to land after engine failure should meet the following criteria:

i. the performance requirements at the expected landing mass are met; and

ii. weather reports or forecasts, or any combination thereof, and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

Justification:

Editorial. Current text does not fit the intent.

comment *771* comment by: *ECA - European Cockpit Association*

Comment: delete paragraph 1. and replace with following text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

a. the one engine inoperative en-route net flight path data shown in the Aeroplane Flight Manual, appropriate to the meteorological conditions expected for the flight complies with either (i) or (ii) at all points along the route (Appendix 1 to AMC OPS.CAT.340.A(c))

i. The gradient of the net flight path must be positive at at least 1 000 ft above all terrain and obstructions along the route within 9,3 km (5 nm) on either side of the intended track; or

ii. The net flight path must permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with OPS 1.515 or 1.520 as appropriate, the net flight path clearing vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 nm) on either side of the intended track in accordance with subparagraphs 1 to 4 below:

1. the engine is assumed to fail at the most critical point along the route;

2. account is taken of the effects of winds on the flight path;

3. fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and

4. the aerodrome where the aeroplane is assumed to land after engine

failure should meet the following criteria:

- the performance requirements at the expected landing mass are met; and

- weather reports or forecasts, or any combination thereof, and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing; and

b. the necessary increase of the width margins of sub-paragraph a(i) and a(ii) to 18.5 km (10 nm) if the navigational accuracy does not meet the 95% containment level;

c. The net flight path must have a positive gradient at 1500 ft above the aerodrome where the landing is assumed to be made after engine failure; and

d. In meteorological conditions requiring the operation of ice protection systems, the effect of their use on the net flight path must be taken into account.

Justification:

The original EU-OPS contains three climb gradient requirements which should be included. To assure a safe landing a minimum climb gradient of the net flight path to be positive above the intended aerodrome of landing is essential and should be included.

The original requirement from EU-OPS 1.500 provides two alternatives (b) and (c) requiring either a positive gradient 1000 ft above all terrain or a drift down procedure clearing all terrain by at least 2000 ft. Both methods are referred to in Appendix 1 to AMC OPS.CAT.340.A(c). The text from EU-OPS 1.500(b) should therefore be explicitly included as an option under 1.a.

Although one could argue that the Essential Requirements would require to consider the effect of anti ice systems, it is explicitly mentioned in AMC OPS.CAT.340.A(d) for aircraft with three or more engines and as such should be included here as well.

comment *1507* comment by: *Airbus*

Paragraph 1 (performance class A): it is unclear why the requirement for a positive gradient at 1500ft above the landing aerodrome [ref. EU OPS 1.500(a)] has been omitted.

OPS 1 & TGL 44 provisions have to be accurately transposed.

comment *1727* comment by: *ECA - European Cockpit Association*

Comment on paragraph 2.a.: delete and replace as follows:

2. For Performance Class B aeroplanes, the flight path should take account of the following criteria:

a. ~~**the relevant minimum altitudes for safe flight should be stated in the OM to a point 1 000 ft above an aerodrome;**~~ **an operator should ensure that the aeroplane is capable of continuing flight above the relevant minimum altitudes for safe flight to a point 1000 ft above an**

aerodrome at which the performance requirements can be met;

Justification:

The current proposed wording under 2.a. is partially copied from EU-OPS 1.540(a) and does not reflect the original intent.

The requirement for publishing of minimum safe altitudes is already included in GM OPS.CAT.340.A(b) and need not be repeated.

comment *3282* comment by: *AEA*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *3284* comment by: *AEA*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *3285* comment by: *AEA*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to

meteorological conditions (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *4645* comment by: *KLM*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *4648* comment by: *KLM*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *4649* comment by: *KLM*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *4819* comment by: *TAP Portugal*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *4820* comment by: *TAP Portugal*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *4821* comment by: *TAP Portugal*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *5023* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *5024* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *5026* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *5252* comment by: *Virgin Atlantic Airways*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path. [Ref to OPS 1.500(b)]

Proposal:

Realign with EU-OPS 1.500

comment *5588* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*a. **the flight path** should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

comment *5589* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

*d. **account is taken of the effects of winds on the flight path**;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *5590* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account

of the following criteria:

d. ***account is taken of the effects of winds on the flight path****;*

Comment:

d. account is taken of the effects of winds on the flight path; - reference to **meteorological conditions** (icing) has been deleted. Should be added.Ref to OPS 1.500(a)

Proposal:

Realign with EU-OPS 1.500

comment *6859* comment by: *Icelandair*

Relevant Text:

1. For Performance Class A aeroplanes, the net flight path should take account of the following criteria:

a. ***the flight path*** *should clear obstacles (Appendix 1 to AMC OPS.CAT.340.A(c)) within 9.3 km (5 nautical miles (nm)) on either side of the intended track or by a vertical interval of at least 2 000 ft; and*

Comment:

a. the flight path – should be **NET** flight path.Ref to OPS 1.500(b)

Proposal:

Realign with EU-OPS 1.500

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.340.A(c) En-Route requirements - Aeroplanes - Appendix 1 p. 307-308

comment *5096* comment by: *M Wilson-NetJets*

Original text:

see NPA Appendix 1 AMC OPS.CAT.340.A(c)

Suggested new text:

No suggested text

Comment/suggestion:

Appendix 1 Reference should be Appendix 1 to……. Figure 2 refers to paragraph 3 which does not exist.

comment *6078* comment by: *DGAC*

Amend the title as follows :

« Appendix 1 **to** AMC OPS.CAT.340.A(c) En-Route requirements – Aeroplanes »

(1) :

Proposal : Amend the first sentence as follows

For performance class A and C aeroplanes, the high terrain or obstacle analysis required in AMC OPS.CAT.A.340(c) **should** ~~may~~ be carried out by making a detailed analysis of the route.

Justification :

When applying the AMC and its appendix, there is no option available not to apply this provision. The wording "should" instead of "shall" is only the mark of soft law (AMC) versus hard law (IR)

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.340.A(d) En-route requirements - Aeroplanes p. 308

comment *1728* comment by: *ECA - European Cockpit Association*

Comment AMC OPS.CAT.340.A(d): change as follows:

1. For Performance Class A **and Class C** aeroplanes:

Justification:

The intent of EU-OPS 1.585 and EU-OPS 1.505 is the same except for the climb gradient reduction specified for Class C aeroplanes and the use of net flight path for Class A aeroplanes. The original text in these requirements is similar but not the same. As the effects of ice protection systems on the flight path are of equal importance to Class C aeroplanes and the requirement to fly level for 15 minutes over the aerodrome of intended landing requires a positive gradient the suggested amendment reflects best practices and is a clarification.

comment *1730* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.340.A(d): add new paragraph 6 as follows:

6. For Class B aeroplanes the available rate of climb of the aeroplane shall be taken to be 150 ft per minute less than that specified.

Justification:A similar statement is included in AMC OPS.CAT.340.A(c) for the one engine inoperative case and should be included for the two engine inoperative case as well and in line with EU-OPS 1.585(e).

comment *2365* comment by: *Dassault Aviation*

Technical comment:

Page 308 AMC OPS.CAT.340.A(d) bullet 3: En-route requirements aeroplanes. This comment is to be read in connection to the comment made above on paragraph OPS.CAT.340(d) of page 69 of the NPA2009-02b. We propose to change the 90 minutes criteria by 180 minutes criteria, taking into account increase engines reliability as well as airframe-engine combination over the past decades, as follows: "The two engines are assumed to fail at the most

critical point of that portion of the route where the aeroplane is more than ~~90 minutes~~ 180 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met".

comment *3286* comment by: *AEA*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

*a. the net flight path **and flight path** should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track; and*

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …
- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path **~~and flight path~~** should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

comment *3789* comment by: *AUSTRIAN Airlines*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

*a. the net flight path **and flight path** should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track; and*

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines

long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …
- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path* ~~***and flight path***~~ *should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

comment *4033* comment by: *UK CAA*

Page No: 308

Paragraph No:

AMC OPS.CAT.340.A.(d)

Comment:

It is suggested that the improved text which was developed and agreed by the JAA Performance Sub-Committee should be considered in the development of the implementing rules for air operations.

Justification:

Provides clarification of the requirement:-

In paragraph 4, it is proposed to clarify that the "required fuel reserves" which must be available on reaching the alternate aerodrome, are specified in paragraph (5).

It is also proposed to amend paragraph (5) to specify the power or thrust setting which should be assumed when determining the fuel requirements. It is clearly appropriate to specify the thrust or power level when establishing a fuel consumption requirement and the proposed direct reference to a 'cruise' setting instead of an implied setting necessary for level flight represents the same intent. This proposed amendment would in addition harmonise the JAR with the FAR. There are no cost implications associated with this proposal.

Proposed Text (if applicable):

4 Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves ***of paragraph 5 below****, if a safe*

procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes ***at cruise power or thrust as appropriate****.*

comment *4652* comment by: *KLM*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

a. the net flight path ***and flight path*** *should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track; and*

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …
- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path* ***~~and flight path~~*** *should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

comment *4822* comment by: *TAP Portugal*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

a. the net flight path ***and flight path*** *should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either*

side of the intended track; and

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …
- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path **and flight path** should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

comment *5027* comment by: *Deutsche Lufthansa AG*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

*a. the net flight path **and flight path** should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track; and*

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …

- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path **~~and flight path~~** should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

comment *5591* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

2. For Performance Class A and Class C aeroplanes, the net flight path or flight path respectively should take into account the following:

*a. the net flight path **and flight path** should clear vertically, by at least 2 000 ft all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track; and*

3. The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

4. Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

5. The expected mass of the aeroplane at the point where the two engines are assumed to fail should not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

Comment:

The text is unclear;

- the beginning 1.505(b) is missing; "**The two engine inoperative flight path must permit the aeroplane to continue the flight** …

- 1.505(a) is missing.

Proposal:

1 a) - delete "and flight path".: ". *the net flight path **~~and flight path~~** should clear vertically*"

3,4,5 - By adding the missing wordings should make the text understandable

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC1 OPS.CAT.345.A(a)(1) Landing requirements - Aeroplanes p. 309

comment *2882* comment by: *M Wilson-NetJets*

Original text:

DESTINATION AND ALTERNATE AERODROMES

1. For Performance Class A aeroplanes, the required missed approach gradient may not be achieved by all aeroplanes when operating at or near maximum certificated landing mass and in engine-out conditions. Operators of such aeroplanes should consider mass, altitude and temperature limitations and wind for the missed approach.

Suggested new text:

DESTINATION AND ALTERNATE AERODROMES

1. For Performance Class A aeroplanes, the required missed approach gradient may not be achieved by all aeroplanes when operating at or near maximum certificated landing mass and in One Engine Inoperative conditions. Operators of such aeroplanes should consider mass, altitude and temperature limitations and wind for the missed approach.

Comment/suggestion:

The use of "Engine Out Conditions" terminology might be misinterpreted as more than one engine inoperative.

comment *4039* comment by: *UK CAA*

Page No: 309

Paragraph No:

AMC1 OPS.CAT.345.A(a)(1) (Please see the UK CAA comment on AMC OPS.CAT.316.A(a)(4))

Comment:

It is suggested that the improved text which was developed and agreed by the JAA Performance Sub-Committee should be considered in the development of the implementing rules for air operations.

Justification:

The revised guidance material below complements the proposals in the previous comment and provides further clarification of the requirement.

Proposed Text (if applicable):

~~1. For Performance Class A aeroplanes, the required missed approach gradient may not be achieved by all aeroplanes when operating at or near maximum certificated landing mass and in engine-out conditions. Operators of such aeroplanes should consider mass, altitude and temperature limitations and wind for the missed approach.~~

~~2. As an alternative method, the operator may use an increase in the decision altitude/height or minimum descent altitude/height and/or a contingency procedure (AMC1 OPS.GEN.320.A(b)) providing a safe route and avoiding obstacles.~~

1. The missed approach procedure of an instrument approach as shown on instrument approach charts, is normally based on an obstacle clearance surface which has a minimum slope of 2.5% or more, caused by obstacle, ATC,

noise or other constraints. The intent of the requirement of JAR-OPS 1.510(b) is to ensure that the required missed approach climb gradient will be achieved before reaching the obstacle clearance surface. This may not be achievable by all aeroplanes when operating at or near maximum certificated landing mass, and in engine-out conditions and when significant changes in flap setting and speed are necessary to achieve the missed approach climb configuration. Operators should therefore consider mass, altitude and temperature limitations for the missed approach, at aerodromes which are critical due to obstacles in the missed approach areas. An increase in the decision altitude/ height or minimum descent altitude/height may as a result be required.

2. A missed approach climb gradient other than that required by JAR-OPS 1.510(b), but not less than that required by JAR-OPS 1.510(a), may be used if the operator can demonstrate that the obstacle situation along the intended missed approach flight path does so allow.

comment *7084* comment by: *IACA International Air Carrier Association*

2.

Complies with former IEM JAR-OPS 1.510 (b) and (c), but "alternative method" does not need to be "approved" anymore.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC2 OPS.CAT.345.A(a)(1) Landing requirements - Aeroplanes p. 309-310

comment *520* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1): This AMC material is not mature and should be completely revised.

Justification:

AMC2 OPS.CAT.345.A(a)(1) contains a mixture of the requirements from the original EU-OPS 1.515 but contains several errors or incomplete statements and should be completely revised.

2.a. does not specify when the 60% or 70% factors should be applied

2.b should explicitly reference the factors under 2.a.

2 is a repetition of 6.

5. Should be reformatted to indicate when the 70% factor is applicable

7. should be rephrased in accordance with EU-OPS 1.515(c)(2). Additionaly EU-OPS required full compliance with EU-OPS 1.515(a),(b) and (c) for the designated alternate. The current proposal limits this requirement to a safe landing which can be interpreted in various ways. The text should be formatted in line with the original requirement.

8. The original EU-OPS 1.515(d) required two alternates that satisfy the requirements of EU-OPS 1.515(a),(b) and (c). The current proposal limits this to a safe landing which can be interpreted in various ways. As such paragraph 8 should be reformatted in accordance with EU-OPS 1.515(d).

comment *531* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)(5)(a): change as follows:

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. ~~**the altitude at the aerodrome**~~ **The pressure altitude and ambient temperature at the aerodrome**;

comment *532* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)(1): change as follows:

1. To determine the landing distance, the operator should use ~~**either**~~ pressure altitude ~~**or geometric altitude**~~ **and ambient temperature** for the operation and it should be reflected in the OM.

Justification:

Should also be upgraded to OPS.GEN or OPS.CAT

comment *533* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)(2): change as follows:

2. For Performance Class A and B aeroplanes, two considerations ~~**in determining**~~ should be taken into account **in determining** ~~**for**~~ the maximum permissible landing mass at the destination and alternate aerodromes:

Justification:

Rephrased to more proper English.

comment *534* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)(4): change as follows:

4. ~~**Threshold limit of the landing distance available.**~~ An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

Justification:

This first sentence is of no use.

comment *535* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)(5):

Clarify:

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within **70 %** of the landing distance available at the destination, an operator should take account of the following:

Justification:

It is not clear where the "70%" applies to.

comment *536* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)8: change as follows:

8. If an operator of a Performance Class A aeroplane~~s~~ is unable to land ~~**on the most favourable runway, in still air,**~~ **in accordance with 2.a above** for a destination aerodrome having a single runway where a landing depends upon ~~**a specified wind component**~~ **the expected headwind**, an aeroplane may be dispatched if 2 alternate aerodromes are designated which **permit a safe landing**. Before commencing an approach to land at the destination aerodrome, the pilot-in-command should ensure that a safe landing can be made.

Justification:

1. "aeroplanes" must be "aeroplane".

2.Clarify that the inability is with respect to expected landing mass and that the 60%-rule is still applicable.

3. To clarify what is meant with "specified wind component", and to assure that the higher allowed landing mass is not based on just any wind but on the expected wind.

4. "permit a safe landing" should be changed into a more strict wording.

comment *537* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.CAT.345.A(a)(1)6: remove pt. "6."

~~**6. When dispatching an aeroplane on a dry runway, an operator should assume that:**~~

~~**a. the aeroplane should land on the most favourable runway, in still air; and**~~

~~**b. the aeroplane should land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and considering other conditions such as landing aids and terrain.**~~

Justification:

Point "2." says it all already.

comment *1509* comment by: *Airbus*

Paragraph 2.a says that, for performance class A and B aeroplanes, the aeroplane mass should be such that on arrival the aeroplane can be landed within 60% or 70% (***as applicable***) of the landing distance available (etc.). The applicability criteria for 60%, respectively 70%, should be specified. EU OPS 1.515(a) (Class A) specifies 60% for turbojet, and 70% for turboprop. EU OPS 1.550(a) (Class B) specifies 70%.

comment *1510* comment by: *Airbus*

We assume paragraph 5 applies to all performance classes. If such is the case, replace "within 70% of the landing distance available at the destination" by "within 60% or 70% (as applicable) of the landing distance available at the destination".

comment *1511* comment by: *Airbus*

- Paragraphs 1, 4, 5, 6, and 7 are presumably applicable to all performance classes.
- Paragraph 2 is applicable to performance class A and B aeroplanes.
- Paragraphs 3 and 9 are applicable to performance class B and C aeroplanes.
- Paragraph 8 is applicable to performance class A aeroplanes.

The structure of the performance provisions in OPS 1 and TGL 44, with a clear split between performance classes, is much more user-friendly.

comment *1703* comment by: *Dassault Aviation*

Technical comment.

Page 309 AMC2 OPS.CAT.345.A(a)(1) §5: is the 70% factor for the landing distance also applicable to turbojet motor powered airplanes ? Under JAR/EU-OPS1, we remind that 70% was for turbo-prop, and 60% was for turbo-jet. We suspect that the applicability of the 70% (turboprop) is missing. Another comment is on §2 where we would like EASA underline that the two conditions 2a and 2b are only applicable at flight planning. We understand from the text that there is no requirement for determining in flight the safe margin to add to the landing distance available defined by paragraph OPS.CAT.345.A.

comment *1769* comment by: *claire.amos*

Point 7 'safe landing'

Not specific on factors that dictate a safe landing as previous regulation.

comment *1770* comment by: *claire.amos*

Point 5

Includes the requirement to include the assessment of slope regardless of gradient. Currently only if over +/- 2%.

comment *2792* comment by: *IDRF e.V. (association of regional airports)*

Item 2.a. reads "...60% or 70% (as applicable)..." but misses to specify, when 60% or 70% do apply as the factor unless we assume item 5 is the missing specification.

Item 5 allows a 70% factor for the aeroplanes when the altitude, the wind, the runway conditions and the slopes (local conditions) are considered. To follow the definition of aeroplanes this could be either a turboprop or a jet.

For clarification we suggest to rephrase this AMC.

comment *2883* comment by: *M Wilson-NetJets*

Original text:

the aeroplane mass should be such that on arrival the aeroplane can be landed within 60% or 70% (as applicable) of the landing distance available on the most favorable (normally the longest) runway in still air. Regardless of the wind conditions, the maximum landing mass for an aerodrome/aeroplane configuration at a particular aerodrome cannot be exceeded; and

Suggested new text:

the aeroplane mass should be such that on arrival the aeroplane can be landed within 60% for turbo-jet powered aeroplanes or 70% for turbo-prop aeroplanes of the landing distance available on the most favorable (normally the longest) runway in still air. Regardless of the wind conditions, the maximum landing mass for an aerodrome/aeroplane configuration at a particular aerodrome cannot be exceeded; and

Comment/suggestion:

The paragraph stipulates to use 60% or 70% as a factor for the landing distance but uses the word "as applicable" to use either the 60% or 70%. This applicability is nowhere defined. It is clear from the JAR and EU-OPS history but not from this text.

comment *3287* comment by: *AEA*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *3288* comment by: *AEA*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *3792* comment by: *AUSTRIAN Airlines*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *3866* comment by: *AUSTRIAN Airlines*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *4036* comment by: *UK CAA*

Page No: 309 of 464

Paragraph No:

AMC2 OPS.CAT.345.A(a)(1)

Comment:

The restructuring of the performance requirements has in general made it very difficult to follow the requirements for a given type of operation and class of aeroplane. The process has resulted in the original JAR-OPS 1 text being incorrectly laid out so that important parts of the landing requirements have been lost. For example, the landing distance parameters specified in paragraph 5 a, b and c should be taken into account when assessing the landing distance regardless of whether a 60% or 70% limit is applicable, but as written it only applies to the 70% case.

Justification:

The layout of the new text contain errors.

Proposed Text (if applicable): Preferably, the structure of JAR-OPS 1 should be retained. Otherwise the existing text should be transferred to rule material and corrected as follows:-

*4. **~~Threshold limit of the~~** Landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold **~~within 60%. of the landing distance available~~***

(i) for turbo-jet aeroplanes within 60%. of the landing distance available

(ii) for propeller driven aeroplanes within 70% of the landing distance available

at the destination aerodrome and at any alternate aerodrome

*5. **~~When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination~~**, **When showing compliance with paragraph 4 above,** an operator should take account of the following:…;*

comment *4041* comment by: *UK CAA*

Page No: 310

Paragraph No:

AMC2 OPS.CAT.345 A (a)(1) 8

Comment:

Important text has been lost from that in JAR-OPS /EU-OPS 1.515(d), which must be reinstated.

Justification:

The alleviation provided by this paragraph is significant and was only accepted for JAR-OPS 1.515(d) if the compensating inflight recheck of landing compliance in full compliance with all the landing requirements of JAR-OPS 1.510 and 515 are also complied with.

Proposed Text (if applicable): If an operator of a Performance Class A aeroplane~~s~~ is unable to land on the most favourable runway, in still air, for a destination aerodrome having a single runway where a landing depends upon a specified wind component, an aeroplane may be dispatched if 2 alternate aerodromes are designated which permit a safe landing. Before commencing an approach to land at the destination aerodrome, the pilot-in-command ~~*should ensure that a safe landing can be made*~~*. must satisfy himself that a landing can be made in full compliance with OPS.CAT.345.A.*

comment *4655* comment by: *KLM*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n** **determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *4657* comment by: *KLM*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *4825* comment by: *TAP Portugal*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *4827* comment by: *TAP Portugal*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *5028* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *5029* comment by: *Deutsche Lufthansa AG*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the

threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *5357* comment by: *Virgin Atlantic Airways*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C).

Proposal:

Realign with EU-OPS 1.515

comment *5592* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*2. For Performance Class A and B aeroplanes, two considerations i**n determining should be taken into account for the** maximum permissible landing mass at the destination and alternate aerodromes:*

Comment:

2. - The sentence is not understandable – something is missing after "determining".

Proposal:

Realign with EU-OPS 1.515

comment *5593* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

4. Threshold limit of the landing distance available. An operator of turbo-jet powered aeroplanes should ensure that the landing mass of that aeroplane for the estimated time of landing allows a full stop landing from 50 ft above the threshold within 60% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

5. When ensuring that the aeroplane is able to operate a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination, an operator should take account of the following:

a. the altitude at the aerodrome;

b. not more than 50% of the head-wind component or not less than 150% of the tail-wind component;

c. the runway surface condition and the type of runway surface; and

d. the runway slope in the direction of landing.

Comment:

- a, b, c and d are applicable also for 4. – not only for 5.
- Ref to OPS 1.515(a)(2); 5 is applicable only for turbo props.
- d covers only the cases where slope is greater than +/- 2%; it has been mentioned in 9 (for Class Band C). Should be cleared.

Proposal:

Realign with EU-OPS 1.515

comment *5594* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *5932* comment by: *ERA*

European Regions Airline Association Comment

The reason for the application of 70% margin is unclear (cf JAR-OPS 1.515(a)(2). Therefore, ERA members would welcome further clarification.

comment *6080* comment by: *DGAC*

Proposed Text:

See appended proposal (new definition of demonstrated landing distance and new AMC OPS.CAT.345.A replacing AMC2 OPS.CAT.345.A(a)(1) and AMC OPS.CAT.345.A(a)(2).

Justification:

- The text of these two AMCs has been copied from various paragraphs of JAR-OPS 1 subparts G, H and I and associated AMCs and has been arranged in manner such that the initial intent and consistency have been lost (even though the requirements in JAR-OPS 1 had a few shortcomings in the way they were written).

- when the text was rearranged, in many places, "landing distance available" is used instead of "landing distance required".

- The two AMC can be gathered in one single AMC, subdivided into dry runways, wet runways and contaminated runways

- The text is difficult to read and understand

- There is a repetition of text between paragraphs 2.a and 4, 5 of AMC2 OPS.CAT.345.A(a)(1)

- The text of paragraphs 5.a to d of AMC2 OPS.CAT.345.A(a)(1) applies in fact to the whole of the two AMCs

- paragraphs 7 and 8 of AMC2 OPS.CAT.345.A(a)(1) poorly worded: it is not the operator that lands or not on the runway, it is the airplane! The operator is able or not to show compliance with the applicable requirement.

As a consequence, it is suggested to rephrase the text of the two AMCS.

comment *6184* comment by: *Virgin Atlantic Airways*

Relevant Text:

2. For Performance Class A and B aeroplanes, two considerations in determining should be taken into account for the maximum permissible landing mass at the destination and alternate aerodromes:

Comment:

two considerations in determining * should

*in determining what?

Proposal:

Please clarify

comment *6691* comment by: *Ryanair*

Paragraph 4

The sentence "threshold limit of the landing distance available " does not make any sense

comment *7209* comment by: *SWISS AERODROMES ASSOCIATION*

Para. 2.a) quotes "60 or 70 %" of the landing distance available. It must be clear that both jets and turboprops can use a factor of 70 %, as specified in Para 5.

comment *7307* comment by: *ANE (Air Nostrum) OPS QM*

The reason for the application of 70% margin is unclear (cf JAR-OPS 1.515(a)(2). Therefore, we would

welcome further clarification.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.345.A(a)(2) Landing requirements - Aeroplanes p. 310-311

comment *524* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(a)(2)1: change as follows:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways **forecasted** at arrival should be at least 115%

of the required landing distance~~, determined in accordance with the type of aeroplane that will operate the landing.~~ **for a dry runway.**

Justification:

The final sentence of the proposed text does not seem to fit the intent.

comment *525* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(a)(2)5: change as follows:

5. The landing distance available in case~~s~~ of **a** contaminated runway~~s~~ **forecasted** at arrival should ~~in all cases be determined by using appropriate data from the AFM or equivalent data from the aircraft manufacturer.~~ **be at least 115% of the landing distance determined in accordance with approved contaminated landing distance data or equivalent accepted by the Authority.**

Justification:

Landing distances for a forecasted contaminated runway should have at least a 15% margin as required by EU-OPS 1.520.

comment *538* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(a)(2)(4): change as follows:

4. For a Performance Class B and C aeroplane, the landing distance ~~available~~ **required** in case of wet runways at arrival should be multiplied by a factor of 1.5.

Comment on (a)(2)(5); delete paragraph and replace with following text:

For a Performance Class A aeroplane the landing distance available in case of a contaminated runway at arrival should be at least 115% of the landing distance required determined in accordance with appropriate data from the AFM or equivalent data from the aircraft manufacturer.

Add new paragraph as follows:

For a Performance Class B and Class C aeroplane the landing distance available in case of a contaminated runway at arrival should be at least the landing distance required determined in accordance with appropriate data from the AFM or equivalent data from the aircraft manufacturer.

Justification:

Landing distances for a forecasted contaminated runway should have at least a 15% margin as required by EU-OPS 1.520.

The text under 4 contains a typing error as the required multiplication factor should be 1.15 instead of 1.5 and references the landing distance required, not the landing distance available.

Paragraphs 2 and 6 contain the same requirement and can be combined into a single paragraph applicable to Performance Class A and Class B aircraft.

comment *539* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(a)(2)(1): change as follows:

1. For a Performance Class A aeroplane, the ~~**landing distance available**~~ **maximum permissible landing mass** in case of wet or contaminated runways at arrival **shall be determined in accordance with AMC2OPS.CAT.345.A(a)(1) where the landing distance available should be** at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Justification:

Clarify the fact that the maximum permissible landing mass is affected and to make a relation with dry runway calculations.

comment *1512* comment by: *Airbus*

In paragraph 1, what is the meaning of "determined in accordance with the type of aeroplane that will operate the landing"?

Reference should be made to AMC2 OPS.CAT.345.A(a)(1) instead of "type of aeroplane".

comment *3078* comment by: *M Wilson-NetJets*

Original text:

5. The landing distance available in cases of contaminated runways at arrival should in all cases be determined by using appropriate data from the AFM or equivalent data from the aircraft manufacturer.

Suggested new text:

5. The landing distance available in cases of contaminated runways at arrival should in all cases be determined by using appropriate data from the AFM or equivalent data from the aircraft manufacturer (if available).

Comment/suggestion:

The stipulation of the mandatory and sole use of AFM or manufacturer equivalent data is contradictory to OPS.CAT.345.A (a)(2)(ii). Furthermore, older aeroplane types do not have this data published.

comment *3289* comment by: *AEA*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *3796* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *4043* comment by: *UK CAA*

Page No: 310

Paragraph No:

AMC OPS.CAT.345.A(a)(2) para 1.

Comment:

Para 1 implies that the same factor of 115% only be applied to performance data for wet or contaminated data. Different rules apply to wet and contaminated runways. Amend para 1, insert new para 2 and re-number existing paras 2 to 6.

Justification:

EU-OPS differentiates between wet and contaminated landing performance requirements

Proposed Text (if applicable):

1. For a Performance Class A aeroplane, the landing distance available in case of wet runways at arrival should be at least 115% of the required ***dry*** landing distance, determined in accordance with the type of aeroplane that will operate the landing.

2. For a Performance Class A aeroplane, the landing distance available in case of contaminated runways at arrival should be at least equal to the greater of the distance derived from 1. above or 115% of the required contaminated landing distance, determined in accordance with the type of aeroplane that will operate the landing.

~~2~~***3.*** For a Performance Class A aeroplane, a landing distance on a wet runway shorter than that required by 1. above, but not less than that required for

dry runways, may be used if the AFM includes specific additional information about landing distances on wet runways.

~~3~~***4.*** For a Performance Class A aeroplane, a landing distance on a specially prepared contaminated runway shorter than that required by 1. above, but not less than that required for dry runways, may be used if the AFM includes specific additional information about landing distances on contaminated runways.

~~4~~***5.*** For a Performance Class B and C aeroplane, the landing distance available in case of wet runways at arrival should be multiplied by a factor of 1.5.

~~5~~***6.*** The landing distance available in cases of contaminated runways at arrival should in all cases be determined by using appropriate data from the AFM or equivalent data from the aircraft manufacturer.

~~6~~***7.*** For a Performance Class B aeroplane, a landing distance on a wet runway shorter than that required by ~~4~~***5.*** and ~~5~~***6.*** above combined, but not less than that required for dry runways may be used only if the AFM includes specific additional information about landing distances on wet runways.

comment *4045* comment by: *UK CAA*

Page No: 310 of 464

Paragraph No:

AMC OPS.CAT.345.A(a)(2) (4)

Comment:

In JAR/EU-OPS 1, the factor is 1.15 for paved runways.

Justification:

Self-explanatory.

Proposed Text (if applicable):

AMC OPS.CAT.345.A(a)(2) (4)

For a Performance Class B and C aeroplane, the landing distance available in case of wet ***paved*** runways at arrival should be multiplied by a factor of *1.**1**5*.

comment *4661* comment by: *KLM*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *4826* comment by: *British Airways Flight Operations*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

The meaning of this sub paragraph is unclear.

Proposal:

Replace sub-paragraphs 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4828* comment by: *TAP Portugal*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *5030* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *5359* comment by: *Virgin Atlantic Airways*

Relevant Text:

1. For a Performance Class A aeroplane, the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with the type of aeroplane that will operate the landing.

Comment:

What does this mean?

Propose to replace 1, 2 and 3 by ; OPS 1.520 a, b, c, d and e.

Proposal:

Realign with EU-OPS 1.520

comment *5934* comment by: *ERA*

European Regions Airline Association Comment

The provisions of JAR-OPS 1.515 (b) and (e) are not properly reflected because AMC OPS.CAT.345.A(a)(2) paragraph 1 combines criteria for wet and contaminated runway. ERA members consider this an error which needs to be corrected

comment *6080* comment by: *DGAC*

Proposed Text:

See appended proposal (new definition of demonstrated landing distance and new AMC OPS.CAT.345.A replacing AMC2 OPS.CAT.345.A(a)(1) and AMC OPS.CAT.345.A(a)(2).

Justification:

- The text of these two AMCs has been copied from various paragraphs of JAR-OPS 1 subparts G, H and I and associated AMCs and has been arranged in manner such that the initial intent and consistency have been lost (even though the requirements in JAR-OPS 1 had a few shortcomings in the way they were written).

- when the text was rearranged, in many places, "landing distance available" is used instead of "landing distance required".

- The two AMC can be gathered in one single AMC, subdivided into dry runways, wet runways and contaminated runways

- The text is difficult to read and understand

- There is a repetition of text between paragraphs 2.a and 4, 5 of AMC2 OPS.CAT.345.A(a)(1)

- The text of paragraphs 5.a to d of AMC2 OPS.CAT.345.A(a)(1) applies in fact

to the <u>whole</u> of the two AMCs

- paragraphs 7 and 8 of AMC2 OPS.CAT.345.A(a)(1) poorly worded: it is not the operator that lands or not on the runway, it is the airplane! The operator is able or not to show compliance with the applicable requirement.

As a consequence, it is suggested to rephrase the text of the two AMCS.

comment *6083* comment by: *DGAC*

(4.) What is this factor 1.5?

<u>Proposal</u>:

Amend the text as follows:

"For a Performance Class B and C aeroplane, the landing distance available in case of wet runways at arrival should be multiplied by a factor of ~~**1.5**~~ **<u>1.15</u>**."

<u>Justification:</u>

EU-OPS 1.520 (for PC-A), 1.555 (for PC-B) and 1.600 (for PC-C) use the percentage 115% or a factor of 1.15 (which is another way to say the same thing) but the factor 1.5 is never used.

comment *6696* comment by: *Ryanair*

<u>Paragraph 1</u>

The sentence "...the landing distance available in case of wet or contaminated runways at arrival should be at least 115% of the required landing distance, determined in accordance with a type of aeroplane that will operate the landing" does not make any sense. It should say *"115% of dry RLD...".*

comment *7308* comment by: *ANE (Air Nostrum) OPS QM*

The provisions of JAR-OPS 1.515 (b) and (e) are not properly reflected because AMC OPS.CAT.345.A(a)(2) paragraph 1 combines criteria for wet and contaminated runway. ERA members consider this an error which needs to be corrected

B. II. Draft Decision - Part-OPS - Subpart B - Section III - GM OPS.CAT.345.A(a)(2) Landing requirements - Aeroplanes p. 311

comment *1514* comment by: *Airbus*

We understand that this GM is applicable to performance class B and C aeroplanes, by reference to AMC OPS.CAT.345.A(a)(2) paragraph 4. This should be specified.

comment *1733* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.CAT.345.A(a)(2): correct as follows:

WET AND CONTAMINATED RUNWAYS

The use of the wet factor (~~**1.5**~~ **1.15**) is, in case of doubt, recommended because it may not be possible for a pilot to determine accurately the degree of wetness (sometimes as much as 60%, 1.6 factor) of the grass, particularly when airborne.

Justification:

The wet factor is erroneously stated as 1.5 instead of 1.15.

The 60% factor indicates the increase in landing distance that is possible on slippery types of grass runways. As the text currently reads it seems to reflect a measure of wetness.

comment *2884* comment by: *M Wilson-NetJets*

Original text:

WET AND CONTAMINATED RUNWAYS

The use of the wet factor (1.5) is, in case of doubt, recommended because it may not be possible for a pilot to determine accurately the degree of wetness (sometimes as much as 60%, 1.6 factor) of the grass, particularly when airborne.

Suggested new text:

WET AND CONTAMINATED GRASS RUNWAYS

The use of the wet factor (1.5) is, in case of doubt, recommended because it may not be possible for a pilot to determine accurately the degree of wetness (sometimes as much as 60%, 1.6 factor) of the grass, particularly when airborne.

Comment/suggestion:

The subtitle does not clearly indicate that the paragraph pertains to grass runways.

comment *3682* comment by: *Civil Aviation Authority of Norway*

Paragraph No:

GM OPS.CAT.345.A (a)(2) Wet and Contaminated Runways

Comment:

The comment on applying a wet factor of 1.5 as read can be taken to apply to all aeroplanes when it only applies to Performance B and C aircraft. Performance A aircraft uses a factor of 1.15. See Page 310.

Justification:

Clarification of application of the rule.

Proposed Text

(if applicable):

Add at the start of the sentence, " For a Performance Class B or C aircraft, the use of the wet factor (1.5) …. 2

comment *4048* comment by: *UK CAA*

Page No: 311

Paragraph No:

GM OPS.CAT.345.A(a)(2)

Comment:

It is not immediately clear that paragraph is refering to landings on wet **grass** runways. This should be made clearer, recognising that JAR/EU-OPS recommended a factor of 1.6.

Justification:

Self-explanatory.

Proposed Text (if applicable):

GM OPS.CAT.345.A(a)(2) Landing on Wet Grass Runways Class B aeroplanes

~~The use of the wet factor (1.5) is, in case of doubt, recommended because it may not be possible for a pilot to determine accurately the degree of wetness (sometimes as much as 60%, 1.6 factor) of the grass, particularly when airborne~~

1 When landing on very short grass which is wet, and with a firm subsoil, the surface may be slippery, in which case the distances may increase by as much as 60% (1.60 factor).

2 As it may not be possible for a pilot to determine accurately the degree of wetness of the grass, particularly when airborne, in cases of doubt, the use of the wet factor (1.15) is recommended.

comment *6084* comment by: *DGAC*

This paragraph only applies to wet grass : il should be clarified in the title.

The correct factor is 1.15 and not 1.5.

Proposed Text:

Amend the text as follows: "The use of the wet factor **(~~1.5~~ 1.15)…"**

Justification:

EU-OPS 1.520 (for PC-A), 1.555 (for PC-B) and 1.600 (for PC-C) use the percentage 115% or a factor of 1.15 (which is another way to say the same thing) but the factor 1.5 is never used.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.345.A(b) Landing requirements - Aeroplanes p. 311

comment *527* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(b)1: delete

AMC OPS.CAT.345.A(b) Landing requirements - Aeroplanes

STEEP APPROACH

~~**1. For Steep Approach procedures, the operator should use landing distance data, as appropriate, based on a screen height of less than 50 ft, but not less than 35 ft.**~~

2. For operators of Performance Class A aeroplanes, the following criteria should be considered:

Justification:

The proposed text under 1. Is a repetition of the requirement under OPS.CAT.345.A(b).

comment *1704* comment by: *Dassault Aviation*

Technical comment.

Pages 27, 69 and 311 (resp. OPS.GEN.010 §67, OPS.CAT.345.A §(b) and AMC OPS.CAT.345.A(b)) - Steep Approach and Screen Heights: these operational paragraphs consider that the landing distances data are based on a screen height of less than 50 feet but not less than 35 feet. It is to be noted that this 35-50 feet interval may be inadequate versus some airworthiness certification requirements. For example, NPA 25B-267 dealing with Steep Approach, allows screen heights from 35 feet up to 60 feet for the determination of landing distances data. Although it is a NPA, it is taken as it is through a Certification Review Item (CRI) therefore becoming an airworthiness certification bases on certain programs. The proposal is - if a maximum screen height needs to be mentioned - to increase the 50 feet proposed in the NPA 2009-02 to the value of 60 feet.

comment *4053* comment by: *UK CAA*

Page No: 311

Paragraph No:

AMC OPS.CAT.345.A(b) Para 2

Comment:

EU-OPS 1.550 (a) (1) refers to Appendix 1 to EU-OPS 1.550 (a) (1), which covers Performance Class B aircraft steep approaches. This is a repeat of what is stated for Performance Class A aircraft, but is not included in the AMC.

Amend "Performance Class A" to read "Performance Class A and B".

Justification:

Omission.

Proposed Text (if applicable):

2. For operators of Performance Class A ***and B*** aeroplanes, the following

criteria should be considered:

a. the AFM should state the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria;

b. a suitable glidepath reference system comprising at least a visual glidepath indicating system should be available at each aerodrome at which steep approach procedures are to be conducted; and

c. c. weather minima should be specified and approved for each runway to be used with a steep approach. Consideration should be given to the following:

i. the obstacle situation;

ii. the type of glidepath reference and runway guidance such as visual aids, Microwave landing system (MLS), 3D–NAV, Instrument Landing System (ILS), Localiser (LLZ), VHF Omnidirectional Radio Range (VOR), Non-directional Beacon (NDB);

iii. the minimum visual reference to be required at Decision Height (DH) and Minimum Descent Altitude (MDA);

iv. iv. available airborne equipment;

v. v. pilot qualification and special aerodrome familiarisation;

vi. AFM limitations and procedures; and

vii. missed approach criteria.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC OPS.CAT.345.A(c) Landing requirements - Aeroplanes p. 311-312

comment *528* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.345.A(c)2d: change as follows:

d. Additional conditions that are deemed necessary for a safe operation taking into account the aeroplane type characteristics, ~~**topographic**~~ **orographic** characteristics in the approach area, available approach aids and missed approach/baulked landing considerations may be required for type of operations. Such additional conditions may be, for instance, the requirement for Visual Approach Slope Indicator/Precision Approach Path Indicator (VASI/PAPI) – type visual slope indicator system.

Justification:

Orographic effects can be of particular influence to short landing operations. As such the text should be amended to reflect the original text contained in Appendix 1 to EU-OPS 1.515(a)(4).

comment *1705* comment by: *Dassault Aviation*

Technical comment.

Page 312 AMC OPS.CAT.345.A(c) §2.b.i: Short Landings: we suspect that the

technical rationale for a vertical distance of 3 meters maximum between the path of the pilot's eye and the path of the lowest part of the wheel (other than Appendix 1/2 to EU/JAR-OPS 1.515) is the blind area during the approach. An aeroplane equipped with a radio altimeter with associated altitude call outs could positively mitigate this blind area, thus the 3 meters could be increased to 5 meters. We therefore propose a modification to this AMC OPS.CAT.345.A(c) §2.b.i as follows (underlined): "Short landing operation will only be approved for aeroplanes where the vertical distance between the path of the pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 meters. This vertical distance could be increased to 5 meters for those aeroplanes equipped with an operative radio altimeter with associated altitude call outs."

comment *2797* comment by: *M Wilson-NetJets*

Original text:

1.a the use of the safe area should be approved by the airport authority;

Suggested new text:

The safe area used to increase the LDA shall be coordinated with the airport authority and a procedure shall be established with that airport authority so that any changes to that safe area are immediately reported to the operator.

Comment/suggestion:

The use of safe areas for short landing operations (SLO) is essential for short runway aerodromes. The safety of operations at an aerodrome are the mutual responsibility of the aeroplane operator and the airdrome operator. But the final decision to operate or not is with the aeroplane operator based on the information given by the aerodrome operator. Therefore, the text should be revised to reflect the correct chain of responsibility.

comment *2814* comment by: *M Wilson-NetJets*

Original text:

2. The following criteria for operators of Performance Class A may be needed to be applied to be able to conduct short landing operations:
a. Demonstration of the need for Short Landing Operations. There should be a clear public interest and operational necessity for the operation, either due to the remoteness of the airport or to physical limitations relating to extending the runway.

Suggested new text:

Delete all text

Comment/suggestion:

Delete. EASA is mainly responsible for ensuring the safety of aviation within the EU, by simultaneously providing an equal economic opportunity for each operator. "clear public interest" in itself is not an instrument to regulate aviation safety. Furthermore, "a clear public interest" might differ in quantity and quality from operator to operator based on the number and origin of the passengers being transported. This provides per definition an unfair

commercial advantage or disadvantage from operator to operator.

comment *2815* comment by: *M Wilson-NetJets*

Original text:

b. Aeroplane and Operational Criteria.

i. Short landing operation should only be used for aeroplanes where the vertical distance between the path of the pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m;

Suggested new text:

b. Aeroplane and Operational Criteria.

i. Short landing operation should only be used for aeroplanes where the vertical distance between the path of the pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m. **Where aeroplanes are equipped with radio-altimeters and the flight crew is provided with automatic and accurate radio-altimeter call-outs from 50 feet to touchdown at intervals of 10 feet, this vertical distance may be increased to 5 m;**

Comment/suggestion:

Falcon and Gulfstream aeroplanes cannot fly SLO because the eye to main wheel height is more than 3 meters. Modern aeroplanes with EGPWS radio-altimeter call-outs provide the flight crew with significantly more awareness of their altitude above the safe area where, in combination with the requirements for a safe area, the level of safety is absolutely guaranteed when such onboard equipment is available and used.

comment *4050* comment by: *UK CAA*

Page No: 312 of 464

Paragraph No:

AMC OPS.CAT.345.A(c)

Comment:

This important text should be reinstated as rule material, because it was contained in an Appendix to a rule in JAR/EU-OPS 1. In addition, in paragraph 2 it is implied that the criteria for short landing operations may or may not be applied. This is the wrong emphasis – the criteria must be applied.

Justification:

The short landing provisions are an alleviation which must be backed up by sufficient justification and compensating criteria.

Proposed Text (if applicable): *2. The following criteria for operators of Performance Class A* ~~***may***~~ ***must*** *be* ~~***needed to be***~~ *applied to be able to conduct short landing operations:*

comment *6460* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

The distance of 3 m is not relevant for some aircrafts including business jets.

Proposal

We propose to change 2.b.i for " Short landing operation should only be used for aeroplanes where the vertical distance between the path of pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m or have a maximum passenger seating configuration of 19 and a MTOM < 45 360 kg.

Justification

obvious

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC1 OPS.CAT.355.H Performance applicability - Helicopters p. 313-314

comment *4319* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

4a: is it a balked or baulked landing (editorial)?

comment *5376* comment by: *ALFA-HELICOPTER*

4a: is it a balked or baulked landing (editorial)

comment *5689* comment by: *ADAC Luftrettung GmbH*

4a: is it a balked or baulked landing (editorial)

comment *5859* comment by: *Norsk Luftambulanse*

4.a. is it a balked or baulked landing? (editorial)

B. II. Draft Decision - Part-OPS - Subpart B - Section III - GM2 OPS.CAT.355.H Performance applicability - Helicopters p. 316-317

comment *363* comment by: *AgustaWestland*

GM2 OPS.CAT.355.H 1.b makes reference to AC29-2C MG12.

This MG has been withdrawn. The requirements for OEI HOGE capability are

now defined in AC29-2C,Chg 2 at page D-158 in paragraph (12)

comment *1075* comment by: *REGA*

Human external cargo (HEC) with twin engine helicopters: The requirements do not take into consideration the limitations that could exist for All Engine Operating (AEO) Hover Out of Ground Effect (HOGE), and One Engine Inoperative (OEI) performance. Especially when helicopters are operated at higher altitudes and when higher temperatures exist.

Most of the helicopter (e.g. BK117, EC145) used for HEMS operations are not able to achieve the Performance Class 1 requirements in hover flight (HOGE). Quite none of those helicopters are able to hover out of ground effect OEI at their standard mission weights.

In contrast to the performance requirements for HHO operations (OPS.SPA.025.HHO): The rules do not take into account the mentioned performance limitations.

Proposal

Except for HHO/HEC operations at a HEMS Operating Site, HEC operations performed as Commercial Air Transport (CAT) shall be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the suspended person(s)/cargo, third parties, or property.

comment *5666* comment by: *HDM Luftrettung gGmbH*

see seperate proposal from OEAMTC

comment *5861* comment by: *Norsk Luftambulanse*

1.b: does this imply PC1 for HEC in HEMS? See seperate proposal Human External Cargo Draft from OEAMTC

B. II. Draft Decision - Part-OPS - Subpart B - Section III - AMC3 OPS.CAT.355.H Performance applicability - Helicopters p. 317-318

comment *388* comment by: *AgustaWestland*

Para 2. AMC1 OPS.CAT.355.H 2.a.i. and ii. do not exist. Reference should probably be made to a.and b.

comment *505* comment by: *EHOC*

Paragraph 2.

Text should be that:

"...the requirements of AMC1 OPS.CAT.355.H 2.a. and b. are met."

Paragraph 4.b.i

The text does not work well due the use (in the referenced material) to DPATO it would be better as:

"i. a balked landing can be carried out meeting the provision of AMC1 OPS.CAT.355.H 2.a. and b."

Paragraph 4.c.

The text does not work well due the use (in the referenced material) to DPATO it would be better as:

"c. The part of the landing after which the requirement of b.i cannot be met should be conducted in sight of the surface."

comment *6085* comment by: *DGAC*

Proposed Text:

Amend text as follows: "An operator should ensure that from DPATO or no later than 200 ft above the take-off surface, with the critical power-unit inoperative the requirements of AMC1 OPS.CAT.355.H ~~**2.a.i. and ii.**~~ **2.a and 2.b** are met.

Justification:

Wrong reference. There is no (i) and (ii) in paragraph 2.

When the text of this AMC was copied from JAR-OPS 3 subpart H, the link to the exposure time alleviation has been removed.

Proposed Text:

Amend text as follows:

"1 b. The take-off should be conducted in such a way that a safe forced landing can be executed until the point where safe continuation of the flight is possible, **except as provided in section SPA.SFL**." […]

"2 b.ii. the helicopter can perform a safe forced landing, **except as provided in section SPA.SFL**."

comment *6524* comment by: *ADAC Luftrettung GmbH*

AMC3 OPS.CAT.355.H (2) Take-off Flight Path

Es wird hier auf Bedingungen gemäß AMC1 OPS.CAT.355.H, 2.a.i und ii verwiesen. Falscher Verweis, die Punkte OPS.CAT.355.H, 2.a.i und ii existieren nicht.

B. II. Draft Decision - Part-OPS - Subpart B - Section III - GM3 OPS.CAT.355.H Performance applicability - Helicopters p. 318-328

comment *392* comment by: *AgustaWestland*

Para 2. OPS.CAT.350.H does not exist.

Para 3. Note.

CS 29.67(a)(2) prescribes a ROC of 150ft/min at 1000 ft

above the TO surface but not at Vy but at a speed selected by the applicant

comment *2529* comment by: *Royal Aeronautical Society*

Paragraphs 6.6.1 and 6.6.3 both omit 'it' where this is needed in each first subparagraph. **It is suggested that 'it' is inserted between 'if' and 'is' in each subparagraph text in brackets thus: '(or the unique Vtoss value if it is not variable)'.**

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.405 Hand fire extinguishers – Motor-powered aircraft p. 331

comment *506* comment by: *EHOC*

General

It is not clear whether points 2 and 6 in AMC OPS.CAT.405 are complimentary.

Certainly if if the Halon 1211 meets the requirement as being 'suitable for both flammable fluid and electrical equipment' it is not clear why there are two sets of requirements.

comment *3290* comment by: *AEA*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *3694* comment by: *Civil Aviation Authority of Norway*

Comment:

Paragraph 2, as written, is slightly confusing.

Justification:

Clarification.

Proposed Text

(if applicable):

"**There should be at least one fire extinguisher installed in the cockpit and this should be suitable for fighting both flammable fluid and electrical fires**".

comment *3798* comment by: *AUSTRIAN Airlines*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *4055* comment by: *UK CAA*

Page No: 331

Paragraph No:

AMC OPS.CAT.405(2)

Comment:

First sentence of paragraph 2 is confusing. A suggested alternative is provided below.

Justification:

Clarification.

Proposed Text (if applicable):

"There should be at least one fire extinguisher **installed in the cockpit and this should be suitable for fighting both flammable fluid and electrical fires**".

comment *4056* comment by: *UK CAA*

Page No: 331

Paragraph No:

AMC OPS.CAT.405 (6),(7) and (8).

Comment:

Inconsistent symbology for Halon 1211. Bromochlorodiflouromethane should be written with a "lowercase" 2 i.e $CBClF_2$

Justification:

Clarification and consistency.

comment *4663* comment by: *KLM*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *4829* comment by: *TAP Portugal*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level

comment *5031* comment by: *Deutsche Lufthansa AG*

Comment:

We agree. Halon based fire extinguishers are currently the only available solution which meets the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *5360* comment by: *Virgin Atlantic Airways*

Comment:

We agree. Halon based fire extinguisher are currently the only available solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *5597* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *5938* comment by: *ERA*

European Regions Airline Association Comment

The ERA Directorate confirm Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level

comment *6632* comment by: *KLM Cityhopper*

Comment:

We agree. Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level.

comment *7311* comment by: *ANE (Air Nostrum) OPS QM*

We confirm Halon based fire extinguisher are currently the only avaibable solutions which meet the aviation industry's stringent safety requirements. Before viable alternatives are available they should continue to be used in the interest of flight safety. We urge EASA to ensure that the EU does not take any decisions to phase out halon based extinguishers unless viable alternatives are available which have been endorsed by ICAO at global level

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.406.A Safety harness - Aeroplanes p. 331

comment *1508* comment by: *British Parachute Association*

We suggest that the following words are added to the end of the sentence "The safety harness should be an upper torso restraint system."

"....except in the case of parachutists who may be secured in accordance with AMC.OPS.COM.406 Restraining Devices."

This will ensure consistency with *AMC.OPS.COM.406* and also ensure that parachutists wearing parachute equipment are not inappropriately restrained.

comment *6131* comment by: *DGAC*

Proposal: Add "and a CRD for a person younger than 24 months".

Justification: in accordance with AMC.OPS.GEN.405 (a)(4)

comment *6897* comment by: *Flybe*

This section does not include a definition of the required shoulder harness. Some aircraft (Dash 8 series) are equipped with a 3 point harness on the jump seat for crew members and this is approved within the aircraft certification.

An additional definition of the type of harness should be include.

"The harness shall be a four point harness for operating crew; however, flight deck jump seats may be equipped with a three point diagonal shoulder strap"

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.410 Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415 Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft p. 332

comment *4001* comment by: *HDM Luftrettung gGmbH*

GM OPS GEN 310:

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *4478* comment by: *Directflight Limited*

NPA 2009-2b.

AMC OPS.CAT.410 Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415 Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft, and;

GM OPS.CAT.410.A Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415.A Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft – Aeroplanes.

Table 1A GM OPS.CAT.410. & 415. – Aeroplanes, indicates against item 4 columns (e), (f) and (g), note *****, that "Neither three pointers, nor drum pointer altimeters satisfy the requirement."

At present numerous aircraft are operating with these alternative altimeters under Article 8(2) Regulation (EEC) No 3922/1991 Exemptions. Flights by these (individually designated) aircraft are restricted to flights below 10,000 ft barometric altitude, and are subject to the aircraft being fitted with two fully serviceable sensitive pressure altimeters.

Referring to:-

GM OPS.CAT.410.H Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415.H Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft – Helicopters.

Table 1H GM OPS.CAT.410. & 415. – Helicopters, does not indicate that the altimeters mentioned above are unsuitable. Unpressurised General Aviation aircraft and IFR helicopters share this airspace with similar levels of cruising performance. In operations below 10,000 ft there should not be any distinction between rotary and fixed wing flights regarding altimeter requirements.

The AMC and GM should be modified to align the requirements for aircraft operating solely below 10,000 ft (if necessary using further distinction by MTOM or speed). The mandatory fitting of counter drum-pointer altimeters to fleets of general aviation aircraft which operate predominantly at very low level, but nevertheless must be capable of IFR flight is unwarranted and disproportionate.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM OPS.CAT.410.A Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415.A Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft - Aeroplanes p. 332-333

comment *842* comment by: *Reto Ruesch*

Instrument for night VFR

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *1312* comment by: *Air-Glaciers (pf)*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *1883* comment by: *SHA (AS)*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *1953* comment by: *Berner Oberländer Helikopter AG BOHAG*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2172* comment by: *Heliswiss*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2857* comment by: *Philipp Peterhans*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2941* comment by: *Pascal DREER*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *4058* comment by: *UK CAA*

Page No: 332

Paragraph No:

GM OPS.CAT.410.A and GM OPS.CAT.410.H

Comment:

The system of attaching notes by referring to asterisks is unwieldy and subject to error.

Justification:

Clarity.

Proposed Text (if applicable):

Delete asterisks, insert Notes.

* ***(Note 1)*** For single pilot night VFR night operation one sensitive pressure altimeter may be substituted by a radio altimeter.

** ***(Note 2)*** Required for helicopters with a maximum certificated take-off mass (MCTOM) exceeding 3 175 kg or having a maximum passenger seating configuration (MAPSC) of more than 9.

*** ***(Note 3)*** The pilot heater failure annunciation applies to any helicopter issued with an individual Certificate of Airworthiness after 1 August 1999. It also applies before that date when: the helicopter has a MCTOM exceeding 3 175 kg and a maximum approved passenger seating configuration greater than 9.

**** ***(Note 4)*** Required for helicopters with a maximum certificated take-off mass (MCTOM) exceeding 3 175 kg or required for any helicopters when operating over water; when out of sight of land or when the visibility is less than 1500 m .

***** ***(Note 5)***For helicopters with a maximum certificated take-off mass (MCTOM) exceeding 3175 kg, CS-29 1303(g) may require either a gyroscopic rate-of-turn indicator combined with a slip-skid indicator (turn and bank indicator) or a standby attitude indicator satisfying the requirements. (However, the original type certification standard should be referred to determine the exact requirement.)

****** ***(Note 6)*** For IFR operation only

******* ***(Note 7)*** For VFR night operations only.

comment *5817* comment by: *Ph.Walker*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *6087* comment by: *DGAC*

Proposal : Amend note ***** as follows :

"***** Neither three pointers, nor drum pointer altimeters**, nor counter-pointer altimeter** satisfy the requirement**, unless for non pressurized non complex-motor-powered aeroplanes, operated up to FL 100, when such deviation is authorised by the airspace authority. In such a case, both altimeters should be of the same kind.**."

Justification:

French DGAC has notified to the commission such exemption from § EU-OPS 1.652(c) related to sensitive pressure counter drum-pointer altimeters (as of former TGL 33 R1), according to article 8-2 of Regulation (EEC) 3922/91 for

operators operating in a restricted area within the Caribbean Area (the West Indies) as air traffic in this airspace is less heavy than within European Airspace.

comment *6135* comment by: *DGAC*

Proposal:

Column (d), line 6 "Heated pitot system"

- add "applicable to aeroplanes first issued with an individual certificate of airworthiness on or after 1st april 1999.
- adapt the number according for the number of pilots: 1 for single pilot, 2 when 2 pilots are required.

comment *6136* comment by: *DGAC*

Proposal: columns (c) and (d) could merge as they are similar. This option would require to insert the criteria on a note such as:

****** applicable to MTOM > 5700 kg, maximum pax > 9 with individual certificate of airworthiness issued on or after 1st april 1999.

comment *6142* comment by: *DGAC*

Proposal:

Rewrite note ***** as follows:

"*Three-pointer, drum-pointer and counter-pointer altimeters do not satisfy the requirement, except for non-pressurized aeroplanes, with a MTOW ≤ 5700 kg, operating ≤ FL100 and under the applicable airspace requirement.*"

Justification: avoid excessive cost for retrofit while respecting safety recommendations from accident investigation boards (TGL28, TGL33)

comment *6159* comment by: *DGAC*

Proposal:

Line 5, column g

Add "*applicable to aeroplanes first issued with an individual certificate of airworthiness on or after 1st April 1998*"

comment *6161* comment by: *Hans MESSERLI*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be

a radio altimeter."

comment *6163* comment by: *DGAC*

Proposal:

Line 7, column g

- Add "applicable to aeroplanes first issued with an individual certificate of airworthiness on or after 1st april 1998"
- Adapt the number according to the number of pilots: 1 for single pilot, 2 when 2 pilots are required

comment *6383* comment by: *Trans Héli (pf)*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *6962* comment by: *Christian Hölzle*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM OPS.CAT.410.H Flight instruments and equipment for VFR flights – Motor powered aircraft & OPS.CAT.415.H Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft - Helicopters p. 333-334

comment *947* comment by: *Aersud*

Comment

In the notes to the table, there is the indication of 6 (six) asterisks saying "For IFR operation only" but in the table none of the equipments listed have the indication of 6 (six) asterisks.

Proposal

Please control if there are some mistake or if the indications of the "IFR operation only" are missed.

Note

Priority: **H**

comment *1204* comment by: *Stefan Huber*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *1261* comment by: *Air Zermatt*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *1681* comment by: *Dassault Aviation*

Editorial comment.

Page 334: "MPSC" instead of "MAPSC".

comment *1806* comment by: *Heli Gotthard AG Erstfeld*

GM Ops Cat 410 Instrument for night VFR

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2039* comment by: *Heliswiss AG, Belp*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2161* comment by: *Dirk Hatebur*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2176* comment by: *Heliswiss NV*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2438* comment by: *Jan Brühlmann*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2475* comment by: *Catherine Nussbaumer*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *2532* comment by: *Aerocorp Limited*

The helicopter types we operate have no facility for the fitment of either pitot heaters or failure indicators. Such regulation would preclude any night VFR operations and training, both of which have been safely carried out for many years. As flight in icing conditions is forbidden, pitot heaters are superfluous, in any event. The writer regularly positions helicopters at night during the long winter nights. This would seriously injure the company's commercial viability.

comment *2569* comment by: *Walter Mayer, Heliswiss*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *3927* comment by: *FOM ANWB MAA*

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3. Editorial: don't use stars (unclear) but a,b,c,..for clarity

comment *4060* comment by: *UK CAA*

Page No: 333

Paragraph No:

GM OPS.CAT.410 & 415 Table1H

Comment:

Notes omitted from item 10 'attitude indicator' in table.

Justification:

Items omitted which clarify table.

Proposed Text (if applicable):

10 Attitude Indicator 1**** 2**** 1******* 2*******

Or for clarity (see other UK CAA comments):

10 Attitude Indicator 1(Note 4) 2(Note 4) 1(Note 7) 2(Note 7)

comment *4125* comment by: *Benedikt SCHLEGEL*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *4322* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3. Editorial: don't use stars (unclear) but a,b,c,..for clarity

comment *4422* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Chart Holder should be for IFR only

comment *4563* comment by: *Christophe Baumann*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *5380* comment by: *ALFA-HELICOPTER*

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3. Editorial: don't use stars (unclear) but a,b,c,..for clarity.

comment *5679* comment by: *HDM Luftrettung gGmbH*

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3.

Editorial: don't use stars (unclear) but a,b,c,..for clarity

comment *5692* comment by: *ADAC Luftrettung GmbH*

Chartholder for NVFR? Don't use the stars (unclear) here but a,b,c (editorial

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3. Editorial: don't use stars (unclear) but a,b,c,..for clarit

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No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *5757* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

TABLE 1H GM OPS.CAT.410 & 415 - HELICOPTERS

INSTRUMENT

7 Pitot heateat failure annuciato

Comment:

Two spelling error

Proposal (including ***new text***):

7 Pitot ~~heateat~~ ***heat*** failure ~~annuciator~~ ***annunciato***

comment *5862* comment by: *Norsk Luftambulanse*

410 & 415 Table: Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3. Editorial: don't use stars (unclear) but a,b,c,..for clarity

comment *6345* comment by: *Heliswiss International*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *6346* comment by: *HSD Hubschrauber Sonder Dienst*

Table 1H GM OPS.CAT.410 & 415 Helicopters:

Remove night VFR requirement for Chartholder.

Editorial: the stars are confusing, use a, b, c, ectr.

comment *6631* comment by: *Heliswiss International*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter.

comment *7008* comment by: *Swiss Helicopter Group*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *7073* comment by: *Eliticino SA*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *7216* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

Remove night VFR requirement for chartholder, it is not a requirement in JAR-OPS 3.

Editorial: don't use stars (unclear) but a,b,c,..for clarity

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.415(a)(4) Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft p. 334-335

comment *354* comment by: *ECA - European Cockpit Association*

Comment: change as follows

STANDBY ~~**ALTITUDE**~~ **ATTITUDE** INDICATOR

Justification:

mixing up of technical terms by EASA expert

comment *355* comment by: *ECA - European Cockpit Association*

Comment on the paragraph "AMC OPS.CAT.415(a)(4) Flight instruments and equipment for VFR night flights and IFR flights – Motor powered aircraft" regarding "f. be appropriately illuminated during all phases of operation" :

Suggest to review text regarding "all phases of operation".

Justification:

In IFR, during VMC conditions, there is no need for the standby artificial horizon to be illuminated

comment *2751* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial: STANDBY ALTITUDE INDICATOR should read STANDBY A**T**TITUDE INDICATOR

comment *7086* comment by: *IACA International Air Carrier Association*

Editorial: STANDBY ALTITUDE INDICATOR should read STANDBY ATTITUDE INDICATOR.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.416 Airborne weather equipment p. 335

comment *1845* comment by: *Airbus SAS*

As EASA has already set the technical standard in the regulation with saying "... hazardous weather conditions regarded as detectable with airborne radar equipment.",

==> Airbus considers that this AMC does not add any value and proposes to delete AMC OPS.CAT.416.

==> If EASA should follow the Airbus comment on OPS.CAT.416 (CRT no.1844) and decides to keep AMC OPS.CAT.416, the title would need to be adapted for consistency reasons to read: "Airborne weather detecting equipment".

comment *3291* comment by: *AEA*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *3799* comment by: *AUSTRIAN Airlines*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *4665* comment by: *KLM*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *4830* comment by: *TAP Portugal*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *5032* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *5598* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The airborne weather equipment should be an airborne weather radar.

Comment:

This AMC is superfluous and does add nothing to the requirements

Proposal:

Delete AMC OPS.CAT.416

comment *6244* comment by: *Virgin Atlantic Airways*

Relevant Text:

The airborne weather equipment should be an airborne weather radar

Comment:

This AMC is superfluous and does add nothing to the requirement

Proposal:

Delete AMC OPS.CAT.41

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.417.A Windshield wipers - Aeroplanes p. 335

comment *111* comment by: *Air Southwest*

Is this really necessary

OPS.CAT.417.A and AMC OPS.CAT.417.A use 54 words on 2 widely separated sheets of paper to state exactly the same as EU-OPS 1.645 does in 42 words on one sheet of paper. The AMC is totally unnecessary and should be combined with the basic requirement in OPS.CAT.417.A.

comment *357* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.417.A : change as follows:

~~**The means used to maintain clear a clear portion of the windshield**~~

~~**during precipitation should be windshield wipers or an equivalent**~~

Windshield wipers or an equivalent should be used to maintain a clear portion of the windshield during precipitation.

comment *1847* comment by: *Airbus SAS*

This AMC does not really add valuable information. Further, it has to be kept in mind that, as an AMC for CAT, it is directed to professional operators and equipment manufacturers with an adequate technical knowledge.

==> Airbus proposes to delete this AMC.

comment *3292* comment by: *AEA*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.

comment *3801* comment by: *AUSTRIAN Airlines*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.A

comment *4668* comment by: *KLM*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.A

comment *4831* comment by: *TAP Portugal*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.A

comment *5033* comment by: *Deutsche Lufthansa AG*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.A

comment *5599* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

The means used to maintain a clear portion of windshield during percepitation should be windshield wipers or equivalent

Comment:

This AMC is superfluous and does not add anything to the requirements

Proposal:

Delete AMC.OPS.CAT.417.A

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.418.H Radio altimeters - Helicopters p. 335

comment *98* comment by: *EUROCOPTER*

The first comment is linked to comment n° 97 made on OPS.CAT.418.H. The reason of the proposed modification is explained in comment made on OPS.CAT.418.H

The second comment concerns the fact that the AMC states that *'the audio*

warning should be a voice warning'. This is not what is written in JAR-OPS 3 since JAR-OPS 3.660 states "*audio voice warning, or other means acceptable to the Authority"*. Imposing a voice warning in the published AMC would be too restrictive by imposing a definite technology and would have the consequences of making obsolete already NAA approved definitions based on audio tone warnings. In another hand the idea that operators and NAAs would use the new concept of alternate AMCs proposed by EASA in NPA 2008-22C in order to make audio tone warnings acceptable would be too complicated. Consequently, since audio warnings cover tone warnings and voice warnings, proposal is to use the words 'audio alerting device' and 'audio warning' instead of 'voice warning' in the AMC

Wording modification proposals

AMC OPS.CAT.418.H

AUDIO ***~~VOICE~~*** *ALERTING DEVIC*

The audio warning required in OPS.CAT.418.H should ***~~be a voice warning~~*** ***be active below a preset height***

VISUAL WARNING DEVIC

The visual warning required in OPS.CAT.418.H should be active at a height selectable by the pilot

comment *507* comment by: *EHOC*

Editoria

Editorial: old numbering used in the reference.

comment *4063* comment by: *UK CAA*

Page No: 33

Paragraph No:

AMC OPS.CAT.418.H

Comment:

Reference in text incorrect

Justification:

Typographical error

Proposed Text (if applicable):

AMC OPS.CAT.~~H.~~ 418.***H***

comment *5062* comment by: *SNEH Organisation representing all french commercial helicopters operators*

The first comment is linked to the comment made on OPS.CAT.418.H. The reason of the proposed modification is explained in comment made on OPS.CAT.418.H

The second comment concerns the fact that the AMC states that 'the aufio warning should be a voice warning'. This is not what is written in JAR OPS 3 since JAR OPS 3.660 states "audio voice warning, or other means acceptable to the authority". Imposing a voice warning in the published AMC would be too restrictive by imposing a definite technology and would have the consequences of making obsolete already NAA approved definitions based on audio ton warnings. In another hand the idea that operators and NAAs would use the new concept of alternate AMCs proposed by EASA in NPA 2008-22C in order to make audio tone warnings acceptable would be too complicated. Consequently, since audio warnings cover tone warnings and voice warnings, proposal is to remove the requirement of a 'voice warning' in the AMC

Wording modification proposals :

AMC OPS.CAT.418.H

AUDIO VOICE ALERTING DEVICE

The audio warning required in OPS.CAT.418.H should be a voice warning be active below a preset height.

VISUAL WARNING DEVICE

The visual warning required in OPS.CAT.418.H should be active at a height selectable by the pilot.

comment *6485* comment by: *DGAC*

Proposal:

Delete this AMC.

Justification:

Consistency with JAR-OPS 3.660 which states "audio voice warning or other means acceptable to the Authority". Imposing a voice warning in the published AMC would be too restrictive by imposing a definite technology and would have the consequence of making obsolete already NAA-approved definitions based on audio tone warnings. Consequently, since audio warnings cover tone warnings and voice warnings, we propose to remove the AMC.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC1 OPS.CAT.420.A(a) Flights over water – Motor powered aircraft p. 335

comment *110* comment by: *Air Southwest*

Paragraph 1 states: Landplanes should be equipped with lifejackets ..... when flying over water at a distance > 50 nm from shore."

OPS.GEN.420(b) requires lifejackets when over water beyond gliding distance from the shore and when taking off or landing over water

It ould appear that AMC1 is less restrictive than the basic regulation (OPS.GEN.420(b)).

EU OPS 1.825 is much clearer and unambiguous.

comment *4062* comment by: *UK CAA*

Page No: 335

Paragraph No:

AMC1 OPS. CAT. 420.A(a)

Comment:

Paragraph 1 does not read as well as it might. A suggested revised version is given.

Justification:

Clarification.

Proposed Text (if applicable):

"**When flight over water at a distance of more than 50 nautical miles from the shore is planned, landplanes should be equipped with life jackets incorporating a survivor locator light**".

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.420.H(b) Flights over water - Motor powered aircraft p. 336-337

comment *508* comment by: *EHOC*

General

The ETSO for a liferaft used in 'a hostile environment' was provided/amended by the JAA/EASA recently.

It must therefore be ascertained that this method of compliance does not cut across the ETSO for liferafts specified for use in a hostile environment.

What is the status of this AMC with respect to the ETSO?

Paragraph 4.

It would appear that there is a misunderstanding in this text; the generally accepted meaning of 'equipment used for making distress signals' (mirrors, flares, etc.) does not include the ELT(S). The text in this paragraph should only contain the method of compliance for ELT(S)s.

"4. At least one survival Emergency Locator Transmitter (ELT(S)) for each life-raft carried (but not more than a total of 2 ELTs are required), capable of performing in accordance with AMC OPS.GEN.430."

comment *3688* comment by: *Civil Aviation Authority of Norway*

Comment:

The text is clumsy and should be rewritten.

Justification:

Clarity.

Proposed Text

(if applicable):

4. ~~The equipment for making distress signal~~ ***Each life-raft should*** ~~be~~ ***contain*** at least one survival Emergency Locator Transmitter (ELT(S)) for each life-raft carried (but not more than a total of 2 ELTs are required), capable of performing in accordance with AMC2 OPS.GEN.430.

comment *4065* comment by: *UK CAA*

Page No: 337

Paragraph No:

AMC OPS.CAT.420.H (b) 4

Comment:

The text is confusing and should be rewritten.

Justification:

Clarity.

Proposed Text (if applicable):

4. ~~The equipment for making distress signal~~ ***Each life-raft should*** ~~be~~ ***contain*** at least one survival Emergency Locator Transmitter (ELT(S)) for each life-raft carried (but not more than a total of 2 ELTs are required), capable of performing in accordance with AMC2 OPS.GEN.430.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM OPS.CAT.426.H Crew Survival Suits - Helicopters p. 337-339

comment *6079* comment by: *Irish Aviation Authority*

Comment:

This very important guidance material should be made applicable to both OPS.GEN and OPS.COM operations or as an absolute minimum applicable to OPS.COM.

Justification:

Provision of important potential life saving guidance material.

Proposed text:

Amend text to make it applicable to OPS.GEN and OPS.COM as well as OPS.CAT.

comment *7519* comment by: *Civil Aviation Authority of Norway*

GM OPS.CAT.426.H Crew Survival Suits – Helicopters

ESTIMATING SURVIVAL TIME

Recommendation:

Delete GM OPS.CAT.426.H Crew Survival Suits – Helicopters**.** T

This GM is adopted directly from JAR OPS 3, and was published before ETSO 2C-502, -503 and -504 were issued. This text is not compatible with the use of approved survival suit which is required to be Class B in accordance with the mentioned ETSO.

GENERAL RECOMMENDATION

It should be considered to require use of survival suit which meets the Class A standard on flights in polar conditions or on flights with longer response time.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM1 OPS.CAT.440 High altitude flights - Oxygen requirements - Motor powered aircraft p. 341

comment *509* comment by: *EHOC*

Paragraph 2.

Table 2 is applicable to aircraft - if this text is also applicable to helicopters, perhaps the wording should be 'aircraft' not 'aeroplane'.

comment *888* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1. 1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)
2. 2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severly hampered by this "guidance material".

comment *1848* comment by: *Airbus SAS*

The following comment on GM1 OPS.CAT.440 focuses on inconsistencies with the requirement OPS.CAT.440. It is also introduce there as comment no.1849:

The allocation of GM sentences to OPS.CAT.440 Table 1 seem to be incorrect, or table 1 points may at least be insufficiently clarified:

- With reference to Table 1 point 5., GM sentence 1 specifies a quantity of necessary oxygen for a period of 10 min descent from max certified operating altitude to 10000 ft, followed by 20 min at 10000ft.

- OPS.CAT.440 table 1 point 5 specifies oxygen required for 10 % of the passengers for the remainder of the flight between 10000 and 14000 ft , after the initial 30 min at these altitudes.

=> There is a need to better clarify the time/altitude relations.

- With reference to Table 1 point 4., GM sentence 4 specifies the minimum necessary quantity of oxygen for a constant rate of descent from max certified operating altitude to 15000 ft in 10 minutes.

- OPS.CAT.440 table 1 point 4 requires minimum oxygen supply for 30 % of passenger for the entire flight between 14000 and 15000 ft.

=> Also for these details of regulation and GM, the relation is difficult to understand.

==> Airbus proposes to re-investigate OPS.CAT.440 and related GM1 for consistency and clarity of wording.

comment *2390* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Same comment as under OPS.CAT.440 on untidiness and lack of clarity.

The GM does not provide any guidance, on the contrary, it is confusing .

Clarification is required:

OPS.CAT.440 Table 1 No. 5 permits the following scenario for planning in the event of crossing Greenland/Hindukush/Himalayas/Andes where emergency escape routings are required:

Emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft.

The GM1 item 1 is unclear: it could be interpreted as breaking the 30 minutes as mentioned in Table 1 of OPS.CAT.440 down to 10 minutes for an emergency descent plus another 20 minutes of …what?...without any oxygen required ? Whatever is intended, planning operations over mountainous terrain is very difficult and may be severely hampered by this "guidance material".

Proposal:

"between" shall be replaced

by "exceeds…but does not exceed"

comment *3293* comment by: *AEA*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *3803* comment by: *AUSTRIAN Airlines*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *4074* comment by: *UK CAA*

Page No: 341

Paragraph No:

GM1 OPS.CAT.440

Comment:

The references to Tables 1 & 2 of OPS.CAT.440 Oxygen Requirements are incorrect.

Justification:

Incorrect references.

Proposed Text (if applicable):

GM1 OPS.CAT.440 High altitude flights - Oxygen requirements - Motor powered aircraft

CLARIFICATION OF THE OXYGEN REQUIREMENTS IN TABLE 1 OPS.CAT.440. ~~AND TABLE 2 OPS.CAT.440~~.

1. The required minimum supply in ***Table 1*** ~~OPS.CAT.440. 5 and Table 2 OPS.CAT.440.4~~. ***OPS.CAT.440.1(b)(1) and 2(a)*** is the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10 000 ft in 10 minutes and followed by 20 minutes at 10 000 ft.

2. The required minimum supply in ***Table 1*** ~~2 OPS.CAT.440. 4~~ ***OPS.CAT.440.1(b)(2)*** is the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 10 000 ft in 10 minutes followed by 110 minutes at 10 000 ft.

3. Passenger numbers are passengers actually carried, including infants under the age of 2 years.

4. The required minimum supply in Table 1 OPS.CAT.440. 4 is the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 15 000 ft in 10 minutes.

comment *4671* comment by: *KLM*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may

be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *4833* comment by: *TAP Portugal*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *5034* comment by: *Deutsche Lufthansa AG*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *5607* comment by: *Swiss International Airlines / Bruno Pfister*

Comment:

The guidance material contradicts the rule.

Looking at oxygen requirements for pressurized aeroplanes only, we find that the requirements of Table 1 OPS.CAT.440 No. 5 (page 78) on the one hand and GM1 OPS.CAT.440 No. 1 appear to contradict each other directly, i.e.:

1.) No. 5 of Table 1 permits the following scenario: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft. (Remember this is for planning purposes: emergency escape routings for crossing Greenland/Hindukush/Himalayas/Andes!!)

2.) It is unclear what No. 1 of the GM1 intends to clarify. (After all, Nr.5 of Table 1 basically addresses level flight!!) It could be interpreted as breaking the 30 minutes (in Table 1, No. 5) down to 10 minutes for an emergency descent plus another 20 minutes of …what?...no oxygen required?

Whatever is intended, planning the operation across very difficult terrain may be severely hampered by this "guidance material".

Proposal:

Realign with EU-OPS

comment *7092* comment by: *IACA International Air Carrier Association*

1.

Same comment as under OPS.CAT.440 on squalidness, "between" shall be replaced by "exceeds…but does not exceed"

The GM does not provide any guidance, on the contrary, it is confusing:

OPS.CAT.440 Table 1 No. 5 permits the following scenario for planning in the event of crossing Greenland/Hindukush/Himalayas/Andes where emergency escape routings are required: emergency descent within the time covered by passenger-oxygen down to 14.000 ft, continuation of flight without any normal passenger-oxygen for another 30 minutes, thereafter descent to 10.000 ft.

The GM1 item 1 is unclear: it could be interpreted as breaking the 30 minutes as mentioned in Table 1 of OPS.CAT.440 down to 10 minutes for an emergency descent plus another 20 minutes of …what?...without any oxygen required ?

Whatever is intended, planning operations over mountainous terrain is very difficult and may be severely hampered by this "guidance material".

Proposal: replace "Between" by "exceeds…but does not exceed"

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM OPS.CAT.440(b)(1) High altitude flights - Oxygen requirements - Motor powered aircraft p. 341

comment *4067* comment by: *UK CAA*

Page No: 341

Paragraph No:

GM OPS.CAT.440(b)(1)

Comment:

The GM should be amended to refer to an OPS.GEN AMC.

Justification:

Clarity.

Proposed Text (if applicable):

GM OPS.CAT.440(b)(1) High altitude flights - Oxygen requirements - Motor powered aircraft

QUICK DONNING MASKS (See AMC OPS.GEN.440(a)).

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.447.A First aid oxygen - Aeroplanes p. 342

comment *7096* comment by: *IACA International Air Carrier Association*

1.

It should be clarified whether AMC OPS.447.A para.1 is applicable or in which way the mellow wording of the Guidance Material should lower the case. How do we calculate?

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - GM OPS.CAT.447.A First aid oxygen - Aeroplanes p. 342

comment *2394* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Paragraph 1. Text segment - "when the amount of oxygen has been exhausted" does not specify 'which' oxygen.

EU-OPS only requires First Aid Oxygen 'when a crew member is carried'. This is not specified in the NPA - there is no point in mandating it's carriage if there

is nobody on board to administer it.

Proposal:

Correct the NPA appropriately in accordance with EU-OPS.

comment *7095* comment by: *IACA International Air Carrier Association*

1.

Text segment - "when the amount of oxygen has been exhausted" does not specify 'which' oxygen. EU-OPS only requires First Aid Oxygen 'when a crew member is carried'. This is not specified in the NPA - there is no point in mandating it's carriage if there is nobody on board to administer it.

Proposal: correct NPA in accordance with EU-OPS.

comment *7098* comment by: *IACA International Air Carrier Association*

2. and 3.

It should be clarified whether AMC OPS.447.A para.1 is applicable or in which way the mellow wording of the Guidance Material should lower the case. How do we calculate?

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.457.A Emergency medical kit – Aeroplanes p. 342-344

comment *776* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.457.A:

2. The following should be included in the EMKs:

(...)

xviii. Automated external defibrillator.

Clarify:

An automated external defibrillator should be carried in all flights. ECA wonders whether this applies to all kind of operations, irrespective of the size of the aircraft.

comment *1515* comment by: *British Airways*

Comment:

Paragraph 2.a.xiv states a requirement for an intubation set to be included in the Emergency Medical Kit. This is not an ICAO requirement and in our view should not be included in the list. Airlines which choose to include such equipment in their kit are of course able to do so.

Justification: On the advice of international experts on resuscitation, we believe that the risks associated with attempts at intubation in the unsuitable environment of an aircraft (confined space, inadequate lighting, noise and vibration, etc) far outweigh the potential benefits.

Proposed text:

Delete paragraph 2.a.xiv

comment *1518* comment by: *British Airways*

Comment:

Paragraph 2.a.xvi states a requirement for blood glucose testing equipment. While airlines may choose to include such equipment, it is a not an essential requirement and should not be included in a regulatory document. In those situations where hypoglycaemia is suspected, a therapeutic trial of oral or, if necessary, intravenous glucose can be given without the need for testing of blood glucose. Hyperglycaemia cannot be treated onboard a commercial aircraft.

Justification:

The regulatory requirements for an emergency medical kit should be limited to those items which can be justified as essential.

Proposed text:

Delete paragraph 2.a.xvi

comment *1519* comment by: *British Airways*

Comment:

Paragraph 2.a.xviii states a requirement for an automated external defibrillator. While such devices may be lifesaving and many airlines choose to carry them, there is insufficient evidence of benefit to justify their inclusion in a regulatory document. The carriage of an AED is not an ICAO requirement.

Justification:

The regulatory requirement should be limited to those items of medical equipment for which there is clear evidence of benefit in airline operations.

Proposed text:

Delete paragraph 2.a.xviii

comment *1522* comment by: *British Airways*

Comment:

Paragraph 2.c.xii states a requirement for a bronchial dilator in injectable and inhaled form. The requirement for both forms cannot be justified - generally the inhaled form is appropriate for airline use.

Justification:

There is little medical requirement for an injectable bronchial dilator and a regulatory requirement to carry both injectable and inhaled forms in an airline extended medical kit cannot be justified.

Proposed text:

Amend paragraph 2.c.xii to read, "Bronchial dilator - injectable or inhaled form

comment *1523* comment by: *British Airways*

Comment:

Paragraph 2.c.xv states a requirement to carry anti-arrythmic medication. Such medication should not normally be used without adequate monitoring equipment which would not routinely be available on a commercial aircraft.

Justification:

The regulatory requirement for medication to be included in an airline medical kit should be confined to that which can safely be used in an emergency medical event on board a commercial aircraft in flight.

Proposed text:

Delete paragraph 2.c.xv

comment *1525* comment by: *British Airways*

Comment:

Paragraph 2.c.xvi states a requirement for antihypertensive medication. Acute and life-threatening hypertension is rare and its safe and effective management requires the use of medical monitoring equipment which would not be available on a commercial aircraft. Treatment for hypertension which is not life-threatening should not be necessary on an aircraft.

Justification:

The regulatory requirement for medication to be included in an airline medical kit should be confined to that which is required and can safely be used in an emergency medical event on board a commercial aircraft in flight.

Proposed text:

Delete paragraph 2.c.vi

comment *1526* comment by: *British Airways*

Comment:

Paragraph 2.d reitierates a requirement to carry an automated external defibrillator on board the aircraft. While such devices may be lifesaving and many airlines choose to carry them, there is insufficient evidence of benefit to justify their inclusion in a regulatory document. The carriage of an AED is not an ICAO requirement.

Justification:

The regulatory requirement should be limited to those items of medical equipment for which there is clear evidence of benefit in airline operations.

Proposed text:

Delete paragraph 2.d

comment *2359* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.a.ix states a requirement for urinary catheter (2 sizes) and anaesthetic gel.

Justification:

Stipulating that 2 sizes of urinary catheter should be carried is inappropriate as with the advent of new products airlines have the option to include urinary catheters or intermittent urinary catheter which are one size and can be used for both sexes.

Proposed text:

One or more urinary catheter(s), appropriate for either sex, and anaesthetic gel

comment *2361* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.a.xi states a requirement for Bag Valve Masks (masks 2 sizes: 1 for adult, 1 for children)

Justification:

Resuscitation Pocket Mask (RPM) have been successfully used on adults and children, are widely available and their use taught to crew universally. Effective BVM ventilation requires a level of skill and is better performed as a 2 person technique – in a confined space this is not practicable. Use of the RPM with overhead CPR is a recognised technique.

Proposed text:

xi. Resuscitation Pocket Masks with oxygen inlet **or** BVM

comment *2363* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.a.xiv states a requirement for the EMK to hold an intubation set.

Justification:

The resuscitation Council (UK) Edition 5 states "Tracheal intubations should be used only when trained personnel are available to carry out the procedure with a high level of skill and confidence" (http://www.resus.org.uk/pages/als.pdf page 52). The aircraft environment is not suitable due to the confined space, lack of appropriate lighting and noise and poses a potential risk to health (by

delaying ventilation) in unskilled hands. A laryngoscope requires a battery and therefore may not be a reliable tool to use which will require a wide variety of blades appropriate from infants to elderly. To prevent delay oxygenation would suggest that a mask, oropharyngeal or nasopharyngeal airways are sufficient.

Proposed text:

Delete 2.a.xiv

comment *2366* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.a.xviii states a requirement for an Automated External Defibrillator (AED).

Justification:

The UK's Aviation Health Unit does not support the mandatory carriage of AEDs. http://www.caa.co.uk/default.aspx?catid=923&pagetype=70&gid=924&faqid=929 Though in some individual cases AED use has resulted in succesful resuscitation (3 cases in 10 years at Virgin Atlantic), this is a complex issue and more scientific research needs to be done before AEDs are made compulsory.

Proposed text:

Remove xviii. Automated External Defibrillator and allow airlines to amke their own decision

comment *2368* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.b states ACLS Cards (summarising and depicting the current algorithm for Advanced Cardiac Life Support) yet the current routine medications are not listed in section c. Medications.

Justification:

ACLS instructions are inappropriate for on board use. They also include some drugs which are not mandatory for carriage on board and are also inappropriate without ability to monitor and analyse rhythms.

Proposed text

Remove "ACLS cards" and (if anything) replace with "instruction in basic life support"

comment *2369* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.c.xii states a requirement for a bronchial dilator in injectable and inhaled form.

Justification:

Airlines should be required to carry a bronchial dilator, the preparation to be their choice based on local emergency treatment guidelines. The suggestion to carry injectable and inhaled products is not warranted. Following evaluation of in-flight data the preference of inhaled products would be nebules and not an inhaler. An inhaler is available for use by one person only, carrying multiples of the small lightweight nebules for inhalation is more appropriate as aircraft have return sectors and it is the treatment of choice for bronchospasm.

Proposed text:

Amend paragraph 2.c.xii to read, "Bronchial dilator – injectable, inhaled or inhalation preparation.

comment *2371* comment by: *Virgin Atlantic Airways Ltd*

Comment:

section 2.c.xv gives a requirement to include anti-arrhythmic medication. This group of medications should only be administered by appropriately qualified staff in a clinical environment that has adequate monitoring. The aircraft environment does not fulfil this. In addition the term "Antiarrythmic" is too generic and vague to be a useful instruction

Justification:

It is unsafe to administer anti-arrhythmic medication where medical history is relatively unknown in inappropriate surroundings, without the required support by appropriately medically qualified support.

Proposed text:

Delete paragraph 2.c.xv

comment *2372* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.c.xvi gives a requirement for antihypertensive medication. Acute and life-threatening hypertension is rare and its safe and effective management requires the use of medical monitoring equipment which would not be available on a commercial aircraft. Even ascertaining an accurate blood pressure on board is almost impossible. Treatment for hypertension which is not life-threatening should not be necessary on an aircraft.

Justification:

There is no benefit for this to be included as a regulatory requirement

Proposed text:

Delete paragraph 2.c.vi

comment *2374* comment by: *Virgin Atlantic Airways Ltd*

Comment:

Section 2.c.viii states the requirement for sedative/anticonvulsant, injectable, rectal **and** oral forms of sedative. The requirement to carry 3 preparations of one medication is on past in-flight data unnecessary.

Justification:

It is reasonable to carry sedative/consultants for rectal use and for emergency IV/IM use. Oral use of medication is the slowest route of absorption therefore unnecessary. If being used to treat severe muscular or joint discomfort a NSAID such as Diclofenac Sodium IM is more appropriate according to current research.

Proposed text:

Sedative/ anticonvulsant rectal, injectable or oral. [to allow the carrier to decide]

comment *2736* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.a.ix states a requirement for urinary catheter (2 sizes) and anaesthetic gel.

Justification:

Stipulating that 2 sizes of urinary catheter should be carried is inappropriate as with the advent of new products airlines have the option to include urinary catheters or intermittent urinary catheter which are one size and can be used for both sexes.

Proposed text:

One or more urinary catheter(s), appropriate for either sex, and anaesthetic gel

comment *2737* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.a.xi states a requirement for Bag Valve Masks (masks 2 sizes: 1 for adult, 1 for children)

Justification:

Resuscitation Pocket Mask (RPM) have been successfully used on adults and children, are widely available and their use taught to crew universally. Effective BVM ventilation requires a level of skill and is better performed as a 2 person technique – in a confined space this is not practicable. Use of the RPM with overhead CPR is a recognised technique.

Proposed text:

xi. Resuscitation Pocket Masks with oxygen inlet **or** BVM

comment *2738* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.a.xiv states a requirement for the EMK to hold an intubation set.

Justification:

The resuscitation Council (UK) Edition 5 states "Tracheal intubations should be used only when trained personnel are available to carry out the procedure with a high level of skill and confidence" (http://www.resus.org.uk/pages/als.pdf page 52). The aircraft environment is not suitable due to the confined space, lack of appropriate lighting and noise and poses a potential risk to health (by delaying ventilation) in unskilled hands. A laryngoscope requires a battery and therefore may not be a reliable tool to use which will require a wide variety of blades appropriate from infants to elderly. To prevent delay oxygenation would suggest that a mask, oropharyngeal or nasopharyngeal airways are sufficient.

Proposed text:

Delete 2.a.xiv

comment *2739* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.a.xviii states a requirement for an Automated External Defibrillator (AED).

Justification:

The UK's Aviation Health Unit does not support the mandatory carriage of AEDs. http://www.caa.co.uk/default.aspx?catid=923&pagetype=70&gid=924&faqid=929 Though in some individual cases AED use has resulted in successful resuscitation (3 cases in 10 years at Virgin Atlantic), this is a complex issue and more scientific research needs to be done before AEDs are made compulsory.

Proposed text:

Remove xviii. Automated External Defibrillator and allow airlines to make their own decision

comment *2740* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.b states ACLS Cards (summarising and depicting the current algorithm for Advanced Cardiac Life Support) yet the current routine medications are not listed in section c. Medications.

Justification:

ACLS instructions are inappropriate for on board use. They also include some drugs which are not mandatory for carriage on board and are also inappropriate without ability to monitor and analyse rhythms.

Proposed text

Remove "ACLS cards" and (if anything) replace with "instruction in basic life support"

comment *2741* comment by: *Virgin Atlantic Airways*

Comment: Section 2.c.xii states a requirement for a bronchial dilator in injectable and inhaled form.

Justification:

Airlines should be required to carry a bronchial dilator, the preparation to be their choice based on local emergency treatment guidelines. The suggestion to carry injectable and inhaled products is not warranted. Following evaluation of in-flight data the preference of inhaled products would be nebules and not an inhaler. An inhaler is available for use by one person only, carrying multiples of the small lightweight nebules for inhalation is more appropriate as aircraft have return sectors and it is the treatment of choice for bronchospasm.

Proposed text:

Amend paragraph 2.c.xii to read, "Bronchial dilator – injectable, inhaled or inhalation preparation.

comment *2742* comment by: *Virgin Atlantic Airways*

Comment:

section 2.c.xv gives a requirement to include anti-arrhythmic medication. This group of medications should only be administered by appropriately qualified staff in a clinical environment that has adequate monitoring. The aircraft environment does not fulfil this. In addition the term "Antiarrythmic" is too generic and vague to be a useful instruction

Justification:

It is unsafe to administer anti-arrhythmic medication where medical history is relatively unknown in inappropriate surroundings, without the required support by appropriately medically qualified support.

Proposed text:

Delete paragraph 2.c.xv

comment *2743* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.c.xvi gives a requirement for antihypertensive medication. Acute and life-threatening hypertension is rare and its safe and effective management requires the use of medical monitoring equipment which would not be available on a commercial aircraft. Even ascertaining an accurate blood pressure on board is almost impossible. Treatment for hypertension which is not life-threatening should not be necessary on an aircraft.

Justification:

There is no benefit for this to be included as a regulatory requirement

Proposed text:

Delete paragraph 2.c.vi

comment *2744* comment by: *Virgin Atlantic Airways*

Comment:

Section 2.c.viii states the requirement for sedative/anticonvulsant, injectable, rectal **and** oral forms of sedative. The requirement to carry 3 preparations of one medication is on past in-flight data unnecessary.

Justification:

It is reasonable to carry sedative/consultants for rectal use and for emergency IV/IM use. Oral use of medication is the slowest route of absorption therefore unnecessary. If being used to treat severe muscular or joint discomfort a NSAID such as Diclofenac Sodium IM is more appropriate according to current research.

Proposed text:

Sedative/ anticonvulsant rectal, injectable or oral. [to allow the carrier to decide]

comment *4075* comment by: *UK CAA*

Page No: 343 and 344

Paragraph No:

AMC.OPS.CAT.457.A: Emergency medical kit – Aeroplanes. Content of Emergency Medical Kit. 2. a. xviii. and 2. d.

Comment: The document states that "the following should be included in the EMK" and at xviii an Automated external defibrillator (AED) is included. So it should not be included in the list of EMK equipment.

Justification:

ICAO Annex 6 Chapter 6 states that the evidence for mandatory carriage of AEDs is **not** available.

Proposed Text (if applicable):

Delete a. xviii and amend d. to **"The carriage of AEDs should be determined by operators on the basis of a risk assessment taking into account the particular needs of the operation".**

comment *4076* comment by: *UK CAA*

Page No: 343

Paragraph No:

AMC.OPS.CAT.457.A: Emergency medical kit – Aeroplanes. Content of Emergency Medical Kit. 2. a. xiv.

Comment:

An intubation set is not required by ICAO and should not be a mandatory item in the EMK.

Justification:

It is rare for an intubation set to be usefully employed in an aircraft and attempts at using it may be unsafe.

Proposed Text (if applicable):

Delete 2. a. xiv.

comment *4077* comment by: *UK CAA*

Page No: 343

Paragraph No:

AMC.OPS.CAT.457.A: Emergency medical kit – Aeroplanes. Content of Emergency Medical Kit. 2. a. xvi.

Comment:

Blood glucose testing equipment is not required by ICAO and should not be a mandatory item in the EMK.

Justification:

If hypoglycaemia is suspected glucose can be given to an aircraft passenger without the need for blood glucose testing.

Proposed Text (if applicable):

Delete 2. a. xvi.

comment *4079* comment by: *UK CAA*

Page No: 343 and 344

Paragraph No:

AMC.OPS.CAT.457.A: Emergency medical kit – Aeroplanes. Content of Emergency Medical Kit. 2. c.

Comment

1) The list of medications should be more generic in description.

2) Some errors should be rectified.

3) Dosages MUST NOT be included

4) Proposal does not match the ICAO SARPS in Annexe 6, Chapter 6 that will be applicable from November 2009.

Specific comments: The carriage of both inhaled and injectable forms of bronchial dilator is unnecessary. Anti-arrhythmic medication cannot be safely used without cardiac monitoring which may not be available. Treatment of hypertension is not appropriate on an aircraft.

Justification

1) The name of medications may vary from State to State.

2) Dangerous practice, for example acetylsalicyl acid MUST NOT be injected.

3) Dose will vary according to individual and condition requiring treatment.

4) The proposal will be sub-ICAO from November 2009 unless amended.

Proposed Text (if applicable)

Amend AMC.OPS.CAT.457. 2. c. to:

i. Coronary vasodilator

ii. Antispasmodic

iii. Epinephrine/Adrenaline 1:1000

iv. Epinephrine/Adrenaline 1:10000 (if a cardiac monitor is available)

v. Adrenocorticosteroid – injectable

vi. Major analgesic

vii. Diuretic – injectable

viii. Antihistamine – oral and injectable form

ix. Anticonvulsant – injectable and rectal form

x. Sedative – injectable, rectal and oral form

xi. Medication for hypoglycaemia including dextrose 50% (or equivalent) – injectable 50ml, intramuscular/subcutaneous and oral form

xii. Antiemetic – injectable

xiii. Atropine – injectable

xiv. Bronchial dilator – injectable or inhaled form

xv. Acetylsalicylic acid – oral

xvi. Glyceryl trinitrate – oral

xvii. Beta-blocker – oral

xviii. Medication for post-partum bleedig

xix. Sodium chloride 0.9% (minimum 250ml)

Note: Epinephrine/Adrenaline 1:10000 can be a dilution of epinephrine 1:1000).

comment *5759* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

(a) Aeroplanes with a maximum passenger seating configuration of more than 30 shall be equipped with an emergency medical kit when any point on the planned route is more than 60 minutes flying time (at normal cruising speed) from an aerodrome at which qualified medical assistance is expected to be available.

Comment:

An AED should be on board all aeroplanes with a maximum passenger seating configuration of more than 30 in CAT operations irrespective of the flying time.

comment *7136* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

Paragraph text:

e. For security reasons, items such as scissors should be stored securely.

Comment:

This subparagraph is a copy from AMC2 OPS.GEN.455 First-aid kits. In the FAK the only item to be considered for secure storage are the scissors. In the EMK scalpels have been added to the items list and should also be included in the requirement for secure storage, as was proposed in JAA NPA-OPS 51.

Proposal:

e. For security reasons, items such as scissors ***and scalpels*** should be stored securely

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.457.A(b) Emergency medical kit – Aeroplanes p. 344

comment *112* comment by: *Air Southwest*

I think this should be included in the basic regulation OPS.CAT.457.A (see comment no 81).

comment *1528* comment by: *British Airways*

Comment:

This paragraph defines 'qualified personnel' (who may administer drugs from the emergency medical kit) as doctors, nurses or personnel with similar qualifications. Many airlines train some or all cabin crew to administer medication, some of which may be held in the extended medical kit, in specified situations and circumstances.

Justification:

The text as currently written would limit the use of medication from the extended medical kit to those with some form of formal qualification. There is accumulated evidence over many years that cabin crew can safely administer medication provided they have adequate training and information. This capability offers significant safety (health) benefits in a situation where qualified personnel may not be available.

Proposed text:

Amend text to read "Qualified personnel means health professionals acting within the limits of their training and expertise or cabin crew who have received training in administration of specified medication from the extended medical kit.

comment *2375* comment by: *Virgin Atlantic Airways Ltd*

Comment:

This states that "the Commander shall ensure that drugs are not administered except by qualified doctors, nurses or similarly qualified personnel".

Justification:

The text as currently written would limit the use of medication from the extended medical kit to those with some form of formal qualification. There is accumulated evidence over many years that cabin crew can safely administer medication provided they have adequate training and information and/or under the guidance of a specialist provider of ground to air medical advice. This capability offers significant safety (health) benefits in a situation where qualified personnel may not be available.

Proposed text:

Amend text to read "The EMK may only be opened with the permission of the commander to enable medically qualified volunteers, appropriately trained crew or personnel under instruction from a ground to air medical service provider to administer emergency treatments.

comment *2397* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

"Personnel" implies an employment relationship; doctors and nurses on-board are

passengers and not employed by the operator.

Proposal:

Change the wording to to "…by qualified

individuals."

comment *2745* comment by: *Virgin Atlantic Airways*

Comment:

This states that "the Commander shall ensure that drugs are not administered except by qualified doctors, nurses or similarly qualified personnel".

Justification:

The text as currently written would limit the use of medication from the extended medical kit to those with some form of formal qualification. There is accumulated evidence over many years that cabin crew can safely administer medication provided they have adequate training and information and/or under the guidance of a specialist provider of ground to air medical advice. This capability offers significant safety (health) benefits in a situation where qualified personnel may not be available.

Proposed text:

Amend text to read "The EMK may only be opened with the permission of the commander to enable medically qualified volunteers, appropriately trained crew or personnel under instruction from a ground to air medical service provider to administer emergency treatments.

comment *2746* comment by: *Virgin Atlantic Airways*

"..... carried on the flight deck"

Comment:

The flight deck is not an appropriate place to store the EMK, which will result in delays in gaining access to it. Furthermore it may result in a security risk with potential terrorists using ill health as a means of getting the cockpit door open.

Justification:

Suggest allowing the EMK to be securely stowed in the main cabin as there is nil delay gaining access in a medical emergency and reduces the potential security risk in accessing the flight deck.

Proposed text:

Amend to read: "It is the airlines responsibility to determine the most appropriate stowage for the EMK whereby it is stowed securely yet readily accessible in an emergency medical situation.

comment *3294* comment by: *AEA*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *3805* comment by: *AUSTRIAN Airlines*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *4080* comment by: *UK CAA*

Page No: 344

Paragraph No:

AMC.OPS.CAT.457.A(b): Emergency medical kit – Aeroplanes. Qualified Personnel.

Comment:

Cabin crew may be trained to administer medication in an emergency.

Justification:

Operators may wish to allow cabin crew to administer medication, so this sentence needs to be rewritten to permit this.

Proposed Text (if applicable):

Amend 457.A(b) to: 'Qualified personnel means doctors, nurses or personnel with **a** similar qualification **or cabin crew who have received training in the administration of medication from the EMK in circumstances specified by the operator'.**

comment *4672* comment by: *KLM*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *4835* comment by: *TAP Portugal*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *5035* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar

qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *5608* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Qualified personnel means doctors, nurses or personnel with similar qualifications

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *5942* comment by: *ERA*

European Regions Airline Association Comment

Qualified personnel means doctors, nurses or personnel with similar qualifications.

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Therefore consider adding 'cabin crew; to the list of qualified personnel'

comment *6636* comment by: *KLM Cityhopper*

Comment:

This is a new requirement which has no justification. Cabin crew should not have similar qualifications as doctors or nurses

Proposal:

Add '**cabin crew;** to the list of qualified personnel'

comment *7101* comment by: *IACA International Air Carrier Association*

"Personnel" implies an employment relationship; doctors and nurses on-board are passengers and not employed by the operator. Better is to write "…by qualified individuals."

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.457.A(c)(2) Emergency medical kit – Aeroplanes p. 344

comment *360* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.457.A(c)(2):

CARRYING UNDER SECURITY CONDITIONS

Where applicable the emergency medical kit should be carried on the flight deck.

ECA requests clarification:

In many aircrafts there is no room available in the flight deck:

comment *889* comment by: *Condor Flugdienst GmbH - FRA HO/R*

We, Condor Flugdienst GmbH, suggest that emergency medical kit shall **not** be carried on the flight deck.

Reason: Safety, security and "locked cockpit door concept"

comment *1530* comment by: *British Airways*

Comment:

Particularly since the advent of the locked flight deck door, the flight deck may not be the most appropriate place to carry an extended medical kit. Arguably this could even present a security risk, in that a faked medical emergency could be used as a pretext to persuade crew to open the flight deck door in flight. Conversely carriage on the flight deck may delay access to the extended medical kit in a genuine medical emergency. The airline should have the responsibility for determining the appropriately secure stowage for the extended medical kit.

Justification:

The flight deck may not be the most appropriate place to carry the extended medical kit, both in terms of security and accessibility.

Proposed text:

Amend to read: "The airline should determine the most appropriate location for the extended medical kit, taking into account the requirements for security and for accessibility of the kit in an emergency.

comment *2377* comment by: *Virgin Atlantic Airways Ltd*

"..... carried on the flight deck"

Comment:

The flight deck is not an appropriate place to store the EMK, which will result in

delays in gaining access to it. Furthermore it may result in a security risk with potential terrorists using ill health as a means of getting the cockpit door open.

Justification:

Suggest allowing the EMK to be securely stowed in the main cabin as there is nil delay gaining access in a medical emergency and reduces the potential security risk in accessing the flight deck.

Proposed text:

Amend to read: "It is the airlines responsibility to determine the most appropriate stowage for the EMK whereby it is stowed securely yet readily accessible in an emergency medical situation.

comment *2399* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Considering the "locked cockpit doors" and in-flight security, the rule should not

mandate the stowage of the Emergency Medical Kit in the flight deck, but should

permit alternate secure conditions.

comment *3295* comment by: *AEA*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where ~~applicable~~ **practicable** the emergency medical kit should be carried on the flight deck"*

comment *3806* comment by: *AUSTRIAN Airlines*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where **~~applicable~~** **practicable** the emergency medical kit should be carried on the flight deck"*

comment *4081* comment by: *UK CAA*

Page No: 344

Paragraph No:

AMC.OPS.CAT.457.A (c) 2: Emergency medical kit – Aeroplanes.

Comment:

The flight deck will often not be the most useful place to store the EMK.

Justification:

Locating the EMK on the flight deck may present difficulties in accessing it and may also have security implications when access is required.

Proposed Text (if applicable):

Amend to: '**The operator should determine where to store the EMK, taking accessibility and security issues into account'.**

comment *4674* comment by: *KLM*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where **~~applicable~~** **practicable** the emergency medical kit should be carried on the flight deck"*

comment *4834* comment by: *British Airways Flight Operations*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to use the text from EU-OPS

Proposal:

Retain the text in EU-OPS

*"Where ~~**applicable**~~ **practicable** the emergency medical kit should be carried on the flight deck"*

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4837* comment by: *TAP Portugal*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where ~~**applicable**~~ **practicable** the emergency medical kit should be carried on the flight deck"*

comment *5036* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where ~~**applicable**~~ **practicable** the emergency medical kit should be carried on the flight deck"*

comment *5609* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*Where **applicable** the emergency medical kit should be carried on the flight deck.*

Comment:

EU-OPS referred to '**where practicable'**. We urge EASA to stick to EU-OPS

Proposal:

Stick to EU-OPS

*"Where ~~**applicable**~~ **practicable** the emergency medical kit should be carried*

on the flight deck"

comment *7103* comment by: *IACA International Air Carrier Association*

Considering the "locked cockpit doors" and in-flight security, the rule should not mandate the stowage of the Emergency Medical Kit in the flight deck, but should permit alternate secure conditions.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.457.A(c)(3) Emergency medical kit – Aeroplanes p. 344

comment *2400* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Move to Part M as this is a Maintenance requirement

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC1 OPS.CAT.490.A Flight data recorder – Motor powered aircraft p. 344

comment *1466* comment by: *EHOC*

General

There does not appear to be (in AMC/GM) for Part GEN or CAT text that provides compliance with Attachment D to Annex 6 Part I or Attachment B to Annex 6 Part III; is this perhaps already contained in some other Part?

comment *1706* comment by: *Dassault Aviation*

Technical comment.

Page 344 AMC1 OPS.CAT.490.A (FDR): this AMC1, applicable to CAT operations, refers to AMC1 OPS.GEN.490.A applicable to GEN operations. That means that the level of FDR requirements for aeroplanes with first individual CoA ≥ 01 january 2010 is identical in GEN and in CAT operations. Is it in accordance with ICAO requirements (Annex 6 Part I and Part II) ?

comment *4047* comment by: *Airbus SAS*

In the first sentence of AMC1 to OP.CAT.490.A,

Airbus proposes to introduce an implementation date depending on the effectivity date of the rule instead of a fixed effectivity threshold of 1 January 2010, to read as following:

" LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER ***[insert date 2 years from the effective date of the final rule]***,…"

Rationale:

To record the parameters listed in Table 1 of AMC1 OPS.GEN.490.A and the additional parameters listed in Table 2 of AMC1 OPS.CAT.490.A shall be considered as a new requirement. These lists provide significant different from the current valid EU-OPS-1.715 requirements (Appendix 1 to OPS 1.715: Tables A1, A2, B, C and ED55). As a consequence, the applicant has to provide significant changes to the aircraft architecture. Not only the Recoding system must be changed, but also a couple of "source systems" (Navigation, Flight Control systems), which deliver the requested parameters, must be modified as well. This requires a significant lead-time to develop and to certify the required changes. Two years after the final introduction of the rule OPS.CAT.490 should be provided to implement the required changes to comply with the AMC1 OPS.CAT.490.A.

Further, AMC1.OPS.GEN.490.A date of effectiveness should correlate with the date of AMC1.OPS.CAT.490.A.

A corresponding comment has been given under CRT comment no. 4340 concerning AMC1 OPS.GEN.490.A.

comment *5725* comment by: *Airbus SAS*

AMC3 OPS.CAT.490.A Flight data recorder - Aeroplanes

and

AMC4 OPS.CAT.490.A Flight data recorder - Aeroplanes

contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS proposes to include the same requirement to "AMC1 OPS.CAT.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.CAT.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *6255* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC2 OPS.CAT.490.A Flight data recorder – Motor powered aircraft p. 344-347

comment *1707* comment by: *Dassault Aviation*

Technical and editorial comment.

Page 344 AMC2 OPS.CAT.490.A (FDR): since AMC1 OPS.CAT.490.A is for aeroplanes with first CoA ≥ 01 january 2010, this AMC2 OPS.CAT.490.A should read "LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 APRIL 1998 UP TO AND INCLUDING 31 DECEMBER 2009".

Additionally, there are typo error in §2, and §3.b where it is written AMCx **A** OPS.CAT.490, whereas it should rather read AMCx OPS.CAT.490**.A**.

Also, there should be an "or" at the end of §3.a, because it is an exclusivity between §3.a or §3.b.

Last, §3.b should rather read "The flight data recorder of the aeroplane can comply with AMC3 ~~A~~ OPS.CAT.490**.A** except that parameter**s 14 and** 15b in Table 1 AMC~~2~~**3** ~~A~~ OPS.CAT.490**.A** of this AMC need not to be recorded." Indeed, parameter 14 (OAT or TAT) has to be added here to match EU/JAR-OPS 1.715(g)(2) in which this parameter is actually missing since EU/JAR-OPS 1.715(g)(2) should itself match with EU/JAR-OPS 1.720(d) which contains parameter 14.

comment *2401* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

3. b. refers to a parameter 15b which does not exist or has been removed.

comment *3262* □ comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3297* comment by: *AEA*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *3808* comment by: *AUSTRIAN Airlines*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4051* comment by: *Airbus SAS*

Airbus proposes to rewrite the first sentence of AMC2 OPS.CAT.490.A to read:

"LIST OF PARAMETERS TO BE RECORDED FOR AEROPLANES FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 APRIL 1998 UP TO AND INCLUDING **[the date given in AMC1 OPS.CAT.490.A].**

Rationale:

The AMC2 should have a termination date, because of the existence of AMC1.

comment *4676* comment by: *KLM*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be

EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4836* comment by: *British Airways Flight Operations*

Relevant Text:

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Retain the EU-OPS wording

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4838* comment by: *TAP Portugal*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5037* comment by: *Deutsche Lufthansa AG*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5610* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5726* comment by: *Airbus SAS*

AMC3 OPS.CAT.490.A Flight data recorder - Aeroplanes

and

AMC4 OPS.CAT.490.A Flight data recorder - Aeroplanes

contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS proposes to include the same requirement to "AMC1 OPS.CAT.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.CAT.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *5947* comment by: *ERA*

European Regions Airline Association Comment

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Therefore propose retaining the EU-OPS wording.

comment *6256* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

comment *6641* comment by: *KLM Cityhopper*

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *6860* comment by: *Icelandair*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *7104* comment by: *IACA International Air Carrier Association*

3.b.

Refers to parameter 15b which has disappeared.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC3 OPS.CAT.490.A Flight data recorder – Motor powered aircraft p. 347-349

comment *1708* comment by: *Dassault Aviation*

Technical comment.

Page 348 AMC3 OPS.CAT.490.A (FDR) §2: the end of §2 says "…if any of the

following conditions are met", meaning §2.a or §2.b or §2.b. Therefore, the "and" at the end of §2.b should be replaced by "or". A "or" should also be placed at the end of §2.a.

comment *1709* comment by: *Dassault Aviation*

Technical comment.

Page 349 AMC4 OPS.CAT.490.A (FDR aeroplanes). This comment addresses Table 2 AMC4 OPS.CAT.490.A. This table 2 says it is applicable to aeroplanes with MTOM > 27 tons. However, aeroplanes between 5.7 tons and 27 tons first issued with an individual CoA after 01 january 1989 should also record parameters 6 to 15b of this table (see AMC4 OPS.CAT.490.A §1b). Also, parameters 6 to 15b of this table need also to be recorded for aeroplanes with a MTOM > 27 tons and first issued with an individual certificate of airworthiness after 30 september 1969 (see AMC4 OPS.CAT.490.A §1c). We propose therefore to modify the title of Table 2 AMC4 OPS.CAT.490.A as follows: "ADDITIONAL PARAMETERS FOR AEROPLANES WITH A MAXIMUM CERTIFICATED TAKE-OFF MASS EXCEEDING 27 000 KG AND FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY 1987 (PARAMETERS 6 TO 15b NEED ONLY BE RECORDED IF INDIVIDUAL CERTIFICATE OF AIRWORTHINESS HAS BEEN ISSUED AFTER 30 SEPTEMBER 1969 UP TO 1 JANUARY 1987). PARAMETERS 6 TO 15b ARE ALSO APPLICABLE FOR AEROPLANES WITH A MAXIMUM CERTIFICATED TAKE-OFF MASS EXCEEDING 5 700 KG BUT NOT EXCEEDING 27 000 KG AND FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY 1989".

comment *3262* comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3298* comment by: *AEA*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *3809* comment by: *AUSTRIAN Airlines*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4678* comment by: *KLM*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4836* □ comment by: *British Airways Flight Operations*

Relevant Text:

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Retain the EU-OPS wording

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4839* comment by: *TAP Portugal*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5038* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5611* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5727* comment by: *Airbus SAS*

AMC3 OPS.CAT.490.A Flight data recorder - Aeroplanes

and

AMC4 OPS.CAT.490.A Flight data recorder - Aeroplanes

contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by calculation from the other recorded parameters."

AIRBUS proposes to include the same requirement to "AMC1 OPS.CAT.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.CAT.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *6258* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

comment *6266* comment by: *Virgin Atlantic Airways*

Relevant Text:

2 .When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency...

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Realign to EU-OPS

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC4 OPS.CAT.490.A Flight data recorder p. 349-352

comment *3262* ☐ comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *3299* comment by: *AEA*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *3810* comment by: *AUSTRIAN Airlines*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4680* comment by: *KLM*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *4836* ☐ comment by: *British Airways Flight Operations*

Relevant Text:

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Retain the EU-OPS wording

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4844* comment by: *TAP Portugal*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5039* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5612* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *5728* comment by: *Airbus SAS*

AMC3 OPS.CAT.490.A Flight data recorder - Aeroplanes

and

AMC4 OPS.CAT.490.A Flight data recorder - Aeroplanes

contain following paragraph:

"When determined by the competent authority responsible for type certification or supplemental type certification and agreed by the Agency, the flight data recorder does not need to record individual parameters that can be derived by

calculation from the other recorded parameters."

AIRBUS proposes to include the same requirement to "AMC1 OPS.CAT.490.A Flight data recorder – Aeroplanes" and "AMC2 OPS.CAT.490.A Flight data recorder – Aeroplanes".

Rationale:

This requirement is common to all implementations. AIRBUS does not see, why this requirement should be dependent on the condition when an Aeroplane receives its First Issue of INDIVIDUAL CERTIFICATE OF AIRWORTHINESS.

comment *6259* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

comment *6861* comment by: *Icelandair*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC3 CAT.490.A and AMC4 OPS.CAT.490.A Flight data recorder - Appendix 1 p. 352

comment *3118* comment by: *Dassault Aviation*

Technical comment:

page 352 Appendix 1 to AMC3 CAT.490.A and AMC4 OPS.CAT.490.A (FDR): this Appendix makes reference to Table 1 of Appendix 1 to AMC3 OPS.GEN.490.A and AMC4 OPS.GEN.490.A for the performance specifications of the parameters to be recorded. First comment is editorial, since "OPS" is missing twice in the § references (one in the title to read AMC3 OPS.CAT.490.A, and second one in the text to read AMC3 OPS.GEN.490.A). Second comment is technical: the proposed text makes reference to Table 1 of Appendix 1 to AMC3 OPS.GEN.490.A and AMC4 OPS.GEN.490.A, and should

rather makes reference to the whole Appendix 1 to AMC3 OPS.GEN.490.A and AMC4 OPS.GEN.490.A. We therefore propose the following text: "*The parameters to be recorded should meet the performance specifications (designated ranges, recording intervals and accuracy limits) defined in ~~Table 1 of~~ Appendix 1 to OPS.GEN.490.A and AMC4 OPS.GEN.490.A.*"

comment *6260* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC1 OPS.CAT.490.H Flight data recorder p. 352

comment *1639* comment by: *EUROCOPTER*

Same comment as for AMC1 OPS.GEN.490.H

Wording modification proposal:

*LIST OF PARAMETERS TO BE RECORDED FOR HELICOPTERS FIRST ISSUED WITH AN INDIVIDUAL CERTIFICATE OF AIRWORTHINESS ON OR AFTER 1 JANUARY ~~**2010**~~ **2016**.*

Justification:

It is explained in page 24, item n° 80, of the Explanatory Note that the date of applicability of the ICAO type IVA FDR is postponed to 01.01.2010 because the ICAO SARP already require helicopters to be equipped with type IVA FDRs after 01.01.2005, and as a compromise solution resulting from the JAA NPA-OPS 67 (which proposed applicability from 01.01.2010).

Eurocopter would like to make the following comments:

- the date of 01.01.2005 written in ICAO Annex 6 Part III has never been realistic and implementable (some suppliers did not have compliant equipment at that time) and should be modified in accordance with the latest work done by the ICAO FLIRECP. Moreover, for most of ICAO States, this requirement and implementation date have not been transferred in in their national Operational Regulations up to now.

- as far as Europe is concerned, the date of 01.01.2010 written in JAA NPA-OPS 67 was proposed at the date of definition of this NPA, so in 2006; nevertheless such a requirement for FDRs Type IVA has never been included in JAR-OPS 3.

- today the implementation date for FDRs type IVA to be included in the future Part OPS cannot be the "copy and paste" of a date (01.01.2010) which was defined by JAA in 2006.

- it has to be noted that operators cannot, or will have big difficulties to modify the helicopters in order to retrofit Type IVA FDRs without the help of helicopter

manufacturers.

- There are important delays for retrofitting Type IVA FDRs on existing aircraft types because of significant technical difficulties to gather the requested data on sub systems (e.g. AFCS, Instrumentation, Navigation) which are:

* Performance of already installed high technology components (e.g. acquisition units) is no longer sufficient to cope with the new requirements. * A new step of technology is necessary (additional inputs, increased update rates, increased computation power).

* New equipment has to be developed and serialized to receive/structure the requested data.

* Installation (new or supplement for the existing one) has to be developed, qualified, certified and introduced into a serial production.

* New software has to be developed for a significant amount of legacy systems, which have to provide the necessary data.

Proposal: Eurocopter propose to postpone the applicability date of Type IVA FDRs to the one proposed by ICAO (Letter to States Ref SP 55/4-09/56 dated 24 July 2009), so 01.01.2016.

comment *6261* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC2 OPS.CAT.490.H Flight data recorder p. 352-355

comment *116* comment by: *tbone aviation a/s*

Propose new wording for section AMC OPS.CAT.515.A Microphones - AEROPLANESGENERAL:

The boom, throat or equivalent microphone should be worn in a position which permits use for two-way radio communications.

This new proposed wording include the "equivalent" phrase to allow the use of other and newer technologies compared to the boom microphone.

comment *1342* comment by: *EUROCOPTER*

The tables of parameters included in this AMC are the same as the tables included in AMC2 OPS.GEN.490.H.

Proposal: to simplify the wording as follows:

§ 1.a.: to replace 'Table 1 AMC2 OPS.CAT.490.H' by **'Table 1 AMC2**

OPS.GEN.490.H'

§ 1.b.: to replace 'Table 2 AMC2 OPS.CAT.490.H' by **'Table 2 AMC2 OPS.GEN.490.H'**

§ 1.d.: to replace 'Table 3 AMC2 OPS.CAT.490.H' by **'Table 3 AMC2 OPS.GEN.490.H'**

+

to delete Table 1 AMC2 OPS.CAT.490.H

to delete Table 2 AMC2 OPS.CAT.490.H

to delete Table 3 AMC2 OPS.CAT.490.H

comment *3262* ☐ comment by: *Eurocontrol CND*

Table 2 of AMC2 OPS.GEN.490.A

Lines 21 and 22 should contain GLS or be rephrased using XLS

Line 26 should also contain GLS Distance to threshold.

This is also valid for Table 1 of AMC3 OPS.GEN.490.A, Table 1 of AMC4 OPS.GEN.490.A, Table 2 AMC2 OPS.CAT.490.A (P. 346), Table 2 AMC3 OPS.CAT.490.A (P. 349), Table 2 AMC4 OPS.CAT.490.A (P. 351), Table 2 AMC2 OPS.CAT.490.H (P. 354).

In the entire FDR sections a review should be done whether additional parameters, such as selected channel (APV and GLS, S/GBAS ID, etc.) are necessary for GNSS operations.

Redefine all FDR sections after update from EUROCAE about new parameters required for GNSS

comment *6262* comment by: *Air Accidents Investigation Branch*

As with comments made on previous sections, the specific requirements detailing parameters, ranges, accuracies and resolutions must be part of the rule as opposed to guidance (AMC) if there is to be any standardisation in Europe. It is a retrograde step to change the requirements from a 'must' (under JAR-OPS) to a 'should' (under this NPA).

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.516 Crew member interphone system - Motor powered aircraft p. 355-356

comment *386* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.CAT.516.5.d: The requirement bolded is not clear:

Clarify meaning of text

d. ground personnel and at least two flight crew members. This interphone

system for use by the ground personnel should be, where practicable, **so located that the personnel using the system may avoid detection from within the aeroplane**;

comment *510* comment by: *EHOC*

Paragraph 4.

In the previous rule, the list of requirements was split between those which were applicable to crew members and others which were applicable to cabin crew members; in that text, item 4. was only applicable to cabin crew members; it is suggest that the text be amended to make this clear:

"4. For cabin crew members, have a means..."

comment *1710* comment by: *Dassault Aviation*

Technical comment.

Page 355 AMC OPS.CAT.516 Crew Member interphone system: This proposed AMC gives the characteristics of the crew member interphone system. One characteristic detailed in §5.a of this proposed AMC says that the crew member interphone system should provide a two-way communication between the flight crew compartment and each passenger compartment. Dassault Aviation would like to highlight to EASA that this AMC is not adapted to aeroplanes with small cabin such as business aviation aeroplanes, since the communication between the cockpit and the passenger compartment can easily be done orally and without the mean of a unique system. Dassault Aviation is therefore proposing that §5.a be not applicable to aeroplanes with a MPSC < 20 and MTOM < 45,360 kg. Last, §3 and §4 of this AMC requires the alerting system to incorporate aural or visual signals (§3) and a means to determine if the call is an emergency or a normal call (§4): for the same reasons outlined above - small cabin - aeroplanes with a MPSC < 20 and MTOM < 45,360 kg should be exempted from these sub-paragraphs.

comment *4803* comment by: *Virgin Atlantic Airways*

Relevant Text:

AMC OPS.CAT.516 states: "The cabin crew interphone system **should**:

2. Be operable at required cabin crew member stations close to floor level emergency exits;"

AMC OPS.CAT. 517 states: "The public address system **should**:

3. Have, for each floor level passenger emergency exit which has an adjacent cabin crew seat, a microphone operable by the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of exits allows unassisted verbal communication between seated cabin crew members;

4. Be **operable** within 10 seconds by a cabin crew member at each of those stations;"

Comment:

OPs 1.690(b)(4) states: The cabin crew interphone system **must** " be **readily accessible for use** at required cabin crew member stations close to each separate or pair of floor level emergency exits;"

OPs 1.695(b)(3) and (4) state: The PA system **must** "Have, for each floor level passenger emergency exit which ahs an adjacent cabin crew seat, a microphone **operable** by the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of exits allows unassisted verbal communication between seated cabin crew members;

Be **capable of operation** within 10 seconds by a cabin crew member at each of those stations in the compartment from which is use is accessible;"

Are we satisfied that the change from **'must'** to '**should'** is enough not to make '**operable'** instead of **'readily accessible'/'capable of operation'** no more onerous than at present? (MEL?)

Proposed Text:

This will depend on the answer to the above.

comment *6621* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

The requirement for the independant operation of public adress system and crew membrer ineterphone system should not apply for aeroplanes with a maximum passenger seating configuration < 19 and a maximum take off mass < 45 360 kg.

comment *7326* comment by: *ANE (Air Nostrum) OPS QM*

We request add **or** for clarification and therefore request to change the text 4 as follows:

4. Have a means for the recipient of a call to determine whether it is a normal call or an emergency call as following:

a. Lights of different colours; **or**

b. Codes defined by the operator (e.g. different number of rings for normal and emergency calls); **or**

c. Any other indicating signal acceptable to the competent authority responsible for type certification or supplemental type certification;

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC OPS.CAT.517 Public address system - Motor powered aircraft p. 356

comment *4803* □ comment by: *Virgin Atlantic Airways*

Relevant Text:

AMC OPS.CAT.516 states: "The cabin crew interphone system **should**:

2. Be operable at required cabin crew member stations close to floor level emergency exits;"

AMC OPS.CAT. 517 states: "The public address system **should**:

3. Have, for each floor level passenger emergency exit which has an adjacent cabin crew seat, a microphone operable by the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of exits allows unassisted verbal communication between seated cabin crew members;

4. Be **operable** within 10 seconds by a cabin crew member at each of those stations;"

Comment:

OPs 1.690(b)(4) states: The cabin crew interphone system **must** " be **readily accessible for use** at required cabin crew member stations close to each separate or pair of floor level emergency exits;"

OPs 1.695(b)(3) and (4) state: The PA system **must** "Have, for each floor level passenger emergency exit which ahs an adjacent cabin crew seat, a microphone **operable** by the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of exits allows unassisted verbal communication between seated cabin crew members;

Be **capable of operation** within 10 seconds by a cabin crew member at each of those stations in the compartment from which is use is accessible;"

Are we satisfied that the change from **'must'** to `**should'** is enough not to make `**operable'** instead of **'readily accessible'/'capable of operation'** no more onerous than at present? (MEL?)

Proposed Text:

This will depend on the answer to the above.

comment *6623* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

The requirement for the independant operation of public adress system and crew membrer ineterphone system should not apply for aeroplanes with a maximum passenger seating configuration < 19 and a maximum take off mass < 45 360 kg.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC1 OPS.CAT.525 Communication and navigation equipment for VFR as controlled flights, night flights and IFR flights – Motor-powered aircraft p. 356

comment *393* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.CAT.525:

ECA requests clarification:

Does that requirement to have 2 independent radio communications means apply to CAT only, not to COM? Why?

Inclusio of the same requirement in Part COM is more than desirable.

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC2 OPS.CAT.525.A Communication and navigation equipment for VFR as controlled flights, night flights and IFR flights – Motor-powered aircraft p. 357-358

comment *12* comment by: *KLM*

AMC2 OPS.CAT.525.A

4.An operator should ensure that aeroplanes conducting ETOPS etc.

This part has to be included in AMC20-6 and here should be a reference to AMC20-6 only like:

For ETOPS see AMC20-6.

comment *1768* comment by: *claire.amos*

Point 2

Is this a typing error? 1e and 1f (not that clear)

comment *2752* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

PARA 3.

Comment:

Currently this paragraph defines a shorthaul operation as those not operating across the North Atlantic.

Proposal:

Re-arrange the sentence: As per text in EU-OPS 1.865(c):

For short-haul operations in the NAT MNPS airspace not crossing the North Atlantic, any aeroplane may be equipped .....

comment *3265* comment by: *Eurocontrol CND*

AMC2 OPS.CAT.525.A

Line 1.b should be extended to GLS/replaced by XLS (Note that this allows an aircraft to be equipped with MLS, but not ILS, so GBAS should be treated the same way)

comment *4082* comment by: *UK CAA*

Page No: 358

Paragraph No:

AMC2 OPS.CAT.525.A and 525.H

Comment:

Sub-paragraphs AMC2 OPS.CAT.525.A (6) and AMC2 OPS.CAT.525.H (3) contain the same text.

Justification:

Repetition of requirements.

Proposed Text (if applicable):

AMC2 OPS.CAT.525.H Communication and navigation equipment for VFR as controlled flights, night flights and IFR flights – Motor-powered aircraft

ACCEPTABLE NUMBER AND TYPE OF COMMUNICATION AND NAVIGATION EQUIPMENT FOR HELICOPTERS

1. Helicopters should be equipped with: a. Two VOR receiving systems on any route, or part thereof, where navigation is based only on VOR signals; b. Two ADF systems on any route, or part thereof, where navigation is based only on NDB signals. c. Area Navigation equipment when area navigation is required for the route being flown (e.g. equipment required by OPS.SPA.001.SPN)

2. A helicopter may be operated without the navigation equipment specified in 1.a. and 1.b. above provided it is equipped with alternative equipment. The reliability and the accuracy of alternative equipment should allow safe navigation for the intended route.

3. VHF communication equipment, ILS Localiser and VOR receivers installed on helicopters to be operated under IFR should comply with ~~the following FM immunity performance standards: a. ICAO Annex 10 , Volume I – Radio Navigation Aids, and Volume III, Part II – Voice Communications Systems. b. Acceptable equipment standards contained in EUROCAE Minimum Operational Performance Specifications, documents ED-22B for VOR receivers, ED-23B for VHF communication receivers and ED-46B for LOC receivers and the corresponding RTCA documents DO-186, DO-195 and DO-196.~~ ***AMC2 OPS.CAT.525.A (6).***

comment *5119* comment by: *M Wilson-NetJets*

Original text:

(3) See text

Suggested new text:

No suggested text

Comment/suggestion:

"North Atlantics" should be "North Atlantic"

comment *7106* comment by: *IACA International Air Carrier Association*

3.

Currently this paragraph defines a short-haul operation as those not operating across the North Atlantic.

Proposal:

Re-arrange the sentence: As per text in EU-OPS 1.865(c):

"For short-haul operations in the NAT MNPS airspace not crossing the North Atlantic, any aeroplane may be equipped..."

B. II. Draft Decision - Part-OPS - Subpart B - Section IV - AMC3 OPS.CAT.525.H Communication and navigation equipment for VFR as controlled flights, night flights and IFR flights – Motor-powered aircraft p. 358

comment *511* comment by: *EHOC*

General

1. Editorial: In the list of document (CRT) this AMC is listed as 'AMC3 OPS.CAT.525.H' in the NPA is is 'AMC2...'

2. This AMC is far less comprehensive than the equivalent one for aeroplanes; whilst the text, on which this AMC was based, was also less comprehensive than for aeroplanes, it still contained enough objective text to ensure that the minimum equipment was specifed. For example, there was previously a requirement for:

"An approach aid suitable for the destination and alternate heliports.";

in the objective text of OPS.GEN.535, this appears to have been replaced by:

"(c) In Instrument Flight Rules (IFR) flights, an aircraft shall be provided with navigation equipment that provides guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing guidance for each aerodrome at which it is intended to land in IFR and for any designated alternate aerodromes.

There is no definition of a 'visual landing' although Cat II and Cat III have a reference to 'visual reference' - the text might have made reference to 'visual reference' except that this term has been removed from the approach requirements for non-precision and Cat I approaches (with the exception of ARA). (See also the comment in OPS.GEN.200.)

Paragraph 1.a.

There needs to be some guidance added on the use of GPS to satisfy the requirement for two VORs.

Paragraph 1.b.

There needs to be some guidance added on the use of GPS to satisfy the

requirement for two ADFs.

Paragraph 1.c.

Can 2 x GPS be used instead of the area nav and/or the other two navigation aids?

Paragraph 2.

This appears to be an objective statement than method of compliance and is therefore more suited to an IR than an AMC. There is a need to provide more comprehensive guidance explaining exactly how to satisfy the objective requirement for "two independent navigation aids" and another to indicate what "each phase of flight" is intended to mean. Most helicopters are now provided with GPS equipment that can satisfy the technical requirements for the objective text carried in the rule and this AMC. That situation needs to be legitimised.

Paragraph 3.

This is rule material under any circumstances and requires an IR. Guidance on compliance might be shown in either Annex 10 of the AEROCAE document.

comment *3686* comment by: *Civil Aviation Authority of Norway*

Comment:

Sub-paragraphs AMC2 OPS.CAT.525.A (6) and AMC2 OPS.CAT.525.H (3) contain the same text.

Justification:

Repetition of requirements.

B. II. Draft Decision - Part-OPS - Subpart C - Section II - AMC OPS.COM.116 Briefing of operational personnel AMC OPS.COM.116 Briefing of operational personnel p. 359

comment *2145* comment by: *Airbus S.A.S.*

AMC OPS.COM.116 refers to OPS.COM.115 "Briefing of operational personnel".

For consistency reasons, the AMC should be renamed as "OPS.COM.115".

If accepted, reference to this AMC should be renamed also in Appendix 1 to AMC.OPS.COM.270 (3)(c)(i).

B. II. Draft Decision - Part-OPS - Subpart C - Section II - AMC1 OPS.COM.270 Standard operating procedures - specialised operations other than the transport of persons, cargo or mail p. 359

comment *663* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.COM.270: This should be also included as AMC in OPS.CAT section.

Justification:

A comprehensive method for developing SOP's is described here. The question is why this is not also referred to Commercial Air transport Operations.

comment *6089* comment by: *DGAC*

COM is not restricted to aerial work (as specified in NPA 2009-02 A in the explanatory note). Some of the paragraphs of Subpart COM refer to "specialized tasks". It is not clear however whether all COM operations are considered as specialized tasks. If specialized task are only a fraction of COM operations, a definition of "specialized task" should be added somewhere. If specialized task and COM operations are the same concept, then the use of the terms "specialized tasks" should be avoided to remove confusion.

§(3) : What is "the procedure described in OR.GEN.005" refered to in §3? Indeed OR.GEN.005 does not exist. If it is intended to refer to the procedure for Acceptable means of compliance, replace "OR.GEN.005" with "OR.GEN.020" all over paragraph 3.

B. II. Draft Decision - Part-OPS - Subpart C - Section II - AMC2 OPS.COM.270 Standard operating procedures - specialised operations other than the transport of persons, cargo or mail p. 360-367

comment *664* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.COM.270: This should be also included as AMC in OPS.CAT section.

Justification:

A comprehensive method for developing SOP's is described here. The question is why this is not also referred to Commercial Air transport Operations.

comment *665* comment by: *ECA - European Cockpit Association*

Comment on AMC2 OPS.COM.270: on the Risk assessment diagram: For a more consistent assessment, some feedback of the implemented SOP should be included.

comment *6092* comment by: *DGAC*

Attachment #19

§(2)(a) : :

The text in this paragraph is derived from the text of A-NPA JAR-OPS 4, which was at that time drafted by the JAA HSC/HSST, with helicopter specific considerations.

A slightly different wording is required to ensure that the text fits all aircraft types used in COM operations.

Proposed Text:

Amend text as follows:

"a. The Aircraft. The category of aircraft to be used for the activity should be indicated (e.g. helicopter/aeroplane**/airship/balloon**, single/multi-engined, **not-powered,** other than complex motor-powered/complex motor-powered, **technologic features impacting handling characteristics – such as the type of antitorque system for helicopters** ~~**classic tail rotor/Fenestron/NOTAR equipped**~~). In particular, for helicopters, the necessary level of performance certification (Category A/B) should be specified."

DIAGRAM 1 - DEVELOPMENT OF A SOP BASED ON A RISK ASSESSMENT (RA)

What case is covered in the diagram when stated : « authority approval (if required) ». Does it mean that in some cases SOP do not have to be approved ?

This part of the diagram seems to cover the case of some COM operations that would not have to be certified and for which declaration of capability would be enough. If so, this case should be addressed in sections III (AOC) and section IV (DEC) of OR.OPS as well as in OPS.COM (see also comment on missing provision in the IR to implement the provision of recital (7) and article 8.2 of R216/2008 which empowers the Commission to develop the conditions for replacement of certification by declaration of capabilities in some cases, "taking into account the risks associated with the different types of operations, such as certain types of aerial works and local flights with small aircraft" (which is the principal of SOP development, and the title of the diagram)

(see pict1.jpg)

B. II. Draft Decision - Part-OPS - Subpart C - Section II - AMC2 OPS.COM.270 Standard operating procedures - specialised operations other than the transport of persons, cargo or mail - Appendix 1 to AMC OPS.COM.270 p. 368-372

comment *625* comment by: *ECA - European Cockpit Association*

Comment on Appendix 1 to AMC OPS.COM.270(2)(a): change as follows (editorial):

2. Helicopter and equipment:

a. The helicopter: The helicopter should be certificated according to CS/JAR/FAR 27 or 29 Category B standards; and for operations over a congested hostile environment according to CS/JAR/FAR 27 **or 29** Category A standards. The helicopter should be operated in accordance with the

performance requirements and applicable AMC OPS.COM material.

comment *843* comment by: *Reto Ruesch*

Check with Foca ECS

Swiss FOCA together with the industry has developed a training standard which is today the minimum requirement needed to achieve a acceptable level of safety. We propose the EASA to compare and adapt HELO ops to the Swiss FOCA standards. Www.ofac.admin.ch

comment *844* comment by: *Reto Ruesch*

HELO CAT A over hostile environment

A more precise definition of hostile and congested is definitely needed / the final decision shall be defined by national authorities following and RIA (Risk impact assessment).

comment *845* comment by: *Reto Ruesch*

HELO CAT A over hostile environment

HELO should be defined in Part Ops 3 and be left out of the Part OPS 1 as it is already complex enough. A mix of the 2 Parts is certainly not the best way to achieve safety and comprehension.

comment *846* comment by: *Reto Ruesch*

Load type 3 and 4 reduction of 10%. Proposition to adopt the Swiss FOCA ECS file.

Switzerland has already a Syllabus system for ECS, HCS, HHO which has proven it's value and safety record. EASA shall adopt the Swiss system. Www.ofac.admin.ch.

comment *847* comment by: *Reto Ruesch*

HELO work. Proposition to adopt the Swiss FOCA ECS file.

Switzerland has already a Syllabus system for ECS, HCS, HHO which has proven it's value and safety record. EASA shall adopt the Swiss system. Www.ofac.admin.ch.

comment *1138* comment by: *Heli Gotthard*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *1205* comment by: *Stefan Huber*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1207* comment by: *Stefan Huber*

Where is this document page 372 ?

comment *1262* comment by: *Air Zermatt*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1263* comment by: *Air Zermatt*

Point 8 of OPS COM 270 / Where is the OPS COM 050 ??

comment *1313* comment by: *Air-Glaciers (pf)*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1314* comment by: *Air-Glaciers (pf)*

Where is this document page 372 ?

comment *1371* comment by: *EUROCOPTER*

Comments on § 2.b. Equipment:

Comment n° 1: wording modification proposal :

i. *One cargo safety mirror or alternative means to see the* ***~~hook(s)~~ cargo***"

Comment n° 2:
The paragraph "*The helicopter may be equipped with:*

A. additional mirror(s);

B. a bubble window;

and C. supplementary hook(s) or multi-hook device(s)

should be transferred in a GM (Guidance Material) because of the use of "may".

comment *1601* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

3. b.

For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type.

Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *1807* comment by: *Heli Gotthard AG Erstfeld*

HELO Appendix to Ops Com 270 For ops with a maximum external load of 1500kg or above

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1808* comment by: *Heli Gotthard AG Erstfeld*

OPS Com 270 Point 8 of OPS COM 270 / Where is the OPS COM 050

Where is this document page 372 ?

comment *1884* comment by: *SHA (AS)*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1885* comment by: *SHA (AS)*

Where is this document page 372 ?

comment *1954* comment by: *Berner Oberländer Helikopter AG BOHAG*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *1955* comment by: *Berner Oberländer Helikopter AG BOHAG*

Where is this document page 372 ?

comment *2040* comment by: *Heliswiss AG, Belp*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2041* comment by: *Heliswiss AG, Belp*

Point 8 of OPS COM 270 / Where is the OPS COM 050

Where is this document page 372 ?

comment *2166* comment by: *Dirk Hatebur*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2169* comment by: *Dirk Hatebur*

Where is this document page 372 ?

comment *2175* comment by: *Heliswiss*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2177* comment by: *Heliswiss*

Where is this document page 372 ?

comment *2179* comment by: *Heliswiss NV*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2182* comment by: *Heliswiss NV*

Where is this document page 372 ?

comment *2439* comment by: *Jan Brühlmann*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2440* comment by: *Jan Brühlmann*

Where is this document page 372 ?

comment *2477* comment by: *Catherine Nussbaumer*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2480* comment by: *Catherine Nussbaumer*

Where is this document page 372 ?

comment *2570* comment by: *Walter Mayer, Heliswiss*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2571* comment by: *Walter Mayer, Heliswiss*

Where is this document page 372 ?

comment *2599* comment by: *Walter Mayer, Heliswiss*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2600* comment by: *Walter Mayer, Heliswiss*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *2606* comment by: *Catherine Nussbaumer*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2607* comment by: *Catherine Nussbaumer*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *2614* comment by: *Jan Brühlmann*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2626* comment by: *Air-Glaciers (pf)*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2627* comment by: *Air-Glaciers (pf)*

4 performance :b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *2726* comment by: *Heliswiss NV*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2727* comment by: *Heliswiss NV*

4 b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *2731* comment by: *Heli Gotthard*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *2859* comment by: *Philipp Peterhans*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *2860* comment by: *Philipp Peterhans*

Where is this document page 372 ?

comment *2942* comment by: *Pascal DREER*

For ops with a maximum external load of 1500kg or above:

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

Standard operating procedures - specialised operations other than the transport of persons, cargo or mail HELICOPTER EXTERNAL LOAD OPERATIONS (HELO)

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *2943* comment by: *Pascal DREER*

Point 8 of OPS COM 270 / Where is the OPS COM 050

Where is this document page 372 ?

4 Performance

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *3177* comment by: *Heli Gotthard AG Erstfeld*

Appendix 1 to AMC OPS.COM.270 Standard operating procedures - specialised operations other than the transport of persons, cargo or mail HELICOPTER EXTERNAL LOAD OPERATIONS (HELO)

3. b.For the four load types, the experience acquired on other helicopter types

is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *3178* comment by: *Heli Gotthard AG Erstfeld*

Appendix 1 to AMC OPS Com 270 4 Performance

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *3525* comment by: *Heliswiss AG, Belp*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *3526* comment by: *Heliswiss AG, Belp*

Performance

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *4003* comment by: *HDM Luftrettung gGmbH*

App 1 to AMC OPS COM 270:

For ops with a maximum external load of 1500kg or above

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4

comment *4005* comment by: *HDM Luftrettung gGmbH*

OPS COm 270:

Point 8 of OPS COM 270 / Where is the OPS COM 050 ?

Where is this document page 372 ?

comment *4083* comment by: *UK CAA*

Page No: 372

Paragraph No:

Appendix 1 to AMC OPS.COM.270 8

Comment:

The reference is incorrect.

Justification:

Editorial.

Proposed Text (if applicable):

OPS.COM.***350(a)***

comment *4126* comment by: *Benedikt SCHLEGEL*

No method of compliance is present; a suggested text is:"AMC OPS.CAT.415(a)(1)MEANS OF INDICATING ALTITUDE. For single pilot operations with helicopters, the additional means of indicating altitude may be a radio altimeter."

comment *4423* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Attachment #20

No regulation for HEC operation in this rule, there should be an regulation for HEC operation

comment *4565* comment by: *Christophe Baumann*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *4567* comment by: *Christophe Baumann*

Where is this document page 372 ?

comment *4631* comment by: *Christophe Baumann*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *4636* comment by: *Christophe Baumann*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *4967* comment by: *Benedikt SCHLEGEL*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *4968* comment by: *Benedikt SCHLEGEL*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *5063* comment by: *SNEH Organisation representing all french commercial helicopters operators*

page 369

3.b.

For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type.

Proposal :

We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 jours of flight as pilot-in-command for a load type.

comment *5220* comment by: *Philipp Peterhans*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *5222* comment by: *Philipp Peterhans*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *5390* comment by: *Berner Oberländer Helikopter AG BOHAG*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *5391* comment by: *Berner Oberländer Helikopter AG BOHAG*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *5818* comment by: *Ph.Walker*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight

experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *5915* comment by: *Dirk Hatebur*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *5917* comment by: *Dirk Hatebur*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *6162* comment by: *Hans MESSERLI*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *6307* comment by: *Hans MESSERLI*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *6310* comment by: *Hans MESSERLI*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *6335* comment by: *SHA (AS)*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *6336* comment by: *SHA (AS)*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *6386* comment by: *Trans Héli (pf)*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *6387* comment by: *Trans Héli (pf)*

Where is this document page 372 ?

comment *6416* comment by: *Trans Héli (pf)*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *6418* comment by: *Trans Héli (pf)*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *6486* comment by: *DGAC*

Proposal:

(3.b.) We propose to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

Justification:

For the four load types, the experience acquired on other helicopter types is not taken into consideration. We consider that a pilot having experience on a load type doesn't need so much experience when changing of helicopter type.

comment *6635* comment by: *Heliswiss International*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *6637* comment by: *Heliswiss International*

Where is this document page 372 ?

comment *6732* comment by: *Heliswiss International*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don’t need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *6735* comment by: *Heliswiss International*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *6869* comment by: *ALFA-HELICOPTER, spol. s r.o.*

The use of rope operations in HEMS is not mentioned in the text. Experience shows that employing rope operations in HEMS is a more effective way of saving lives during HEMS missions in special conditions. The main advantage of rope operations is the very low equipment weight and this is obvious especially in such demanding environments. Even if the occurrence of these missions is quite rare, we cannot exclude rope operations. Weight is the most essential feature of the majority of helicopters in HEMS operations – light twin-engine category A, 1st class performance certified helicopters.

The second big advantage of the equipment needed for rope operations is its lower price in comparison to hoist equipment.

comment *6964* comment by: *Christian Hölzle*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *7010* comment by: *Swiss Helicopter Group*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *7022* comment by: *Swiss Helicopter Group*

Where is this document page 372 ?

comment *7107* comment by: *Eliticino SA*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

comment *7117* comment by: *Eliticino SA*

Ops COM 050 referenced is missing!!!

comment *7174* comment by: *Swiss Helicopter Group*

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don’t need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *7175* comment by: *Swiss Helicopter Group*

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *7347* comment by: *new European Helicopter Association*

Points b and c shall be the same as for loads below 1500 kg. 10 h flight experience on type and 30 hours performing load types 1 and 2 before acting as PIC in loads 3 and 4.

3. b.For the four load types, the experience acquired on other helicopter types is not taken in consideration. We consider that a pilot having experience on a load type don't need so much experience when changing of helicopter type. Proposal : We suggest to divide by 2 the experience needed on the helicopter type, for pilots having more than 50 hours of flight as pilot-in-command for a load type.

comment *7348* comment by: *new European Helicopter Association*

4 Performance

b) this is not acceptable and not fulfillable. The modification shall be a reserve of power of at least 5% of the MTOM or at least 10% of the maximum sling load capacity.

comment *7357* comment by: *ADAC Luftrettung GmbH*

Point 8 of OPS COM 270 / Where is the OPS COM 050?

Where is this document page 372 ?

comment *7374* comment by: *Heli Austria*

1.b. i. Load type 1: short line, 20 metres (m) or less

ii. Load type 2: long line, more than 20 m;

10 metres would be far too short

20 meters should be just for the line (synthetic or steel) not considering the damper and the remote hook and the load attached to the remote hook

2. a. The helicopter:

Just require Category B as standard - the definition of Category B is in AMC OPS.GEN.010

For operations over a congested hostile environment require Category A as per AMC OPS.GEN.010.

In the current NPA you are not considering paragraph 2 of AMC OPS.GEN.010 and also CS/JAR/FAR 29 aircraft

Usually the larger 29 aircraft will be used for HELO in cities.

4.b. the current proposal would mean a reduction of about 800 kg for a helicopter like a Super Puma and 400 kg for a Bell medium.

Usually a reduction of 10%-15% of the mass of the load or 5% reduction of the MTOM is currently used for HELO

B. II. Draft Decision - Part-OPS - Subpart C - Section III - AMC OPS.COM.350.H(a)(2) Performance criteria helicopter p. 373

comment *2078* comment by: *Réseau de Transport d'Electricité - Services et Travaux Héliportés*

Proposal

Delete the last sentence or modify it by :

"Jettisoning the load is only permitted when prior approval is obtained from the owner(s) of property, **the tenant, the beneficiary of an easement or anyone who has the enjoyment of property** under the flight path."

Reason :

1 - In France, one property can belong to a large number of owners and it is often very difficult to find them all. Furthermore, it would be quite impossible to obtain the approval of each of them.

2 - In France, public utility easements can be obtained (e.g. for high-voltage lines) allowing to use a property without the approval of the owners or of the tenants.

comment *5066* comment by: *SNEH Organisation representing all french commercial helicopters operators*

Proposal

Delete the last sentence or modifiy it by :

"Jettisoning the load is only permitted when prior approval is obtained from the owner(s) of property, the tenant, the beneficiary of an easement or anyone who has the enjoyment of property under the flight path"

Reason

1- In France, one property can belong to a large number of owners and it is often very difficult to find them all. Furthermore, it would be quite impossible to obtain the approval of each of them.

2- In France, public utility easements can be obtaines (e.g. for high voltage lines) allowing to use a property without the approval of the owners or of the tenants.

comment *6489* comment by: *DGAC*

Proposal

Delete the last sentence or modify it by :

"Jettisoning the load is only permitted when prior approval is obtained from the owner(s) of property, **the tenant, the beneficiary of an easement or anyone who has the enjoyment of property** under the flight path."

Justification :

1 – In France, one property can belong to a large number of owners and it is often very difficult to find them all. Furthermore, it would be quite impossible to obtain the approval of each of them.

2 – In France, public utility easements can be obtained (e.g. for high-voltage lines) allowing to use a property without the approval of the owners or of the tenants.

B. II. Draft Decision - Part-OPS - Subpart C - Section IV p. 374

comment *6981* comment by: *Christian Hölzle*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

B. II. Draft Decision - Part-OPS - Subpart C - Section IV - AMC OPS.COM.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes p. 374

comment *373* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.COM.465.A:

"AMC OPS.COM.465.A Terrain Awareness Warning System (TAWS) - Aeroplanes

DISABLING THE TAWS

The procedures for disabling the TAWS **should be included in a checklist**, which should be available during flight."

Comment:

The procedure for disabling the system should be a very simple one, thus not requiring of a checklist. In most aeroplanes, just pushing a button:

B. II. Draft Decision - Part-OPS - Subpart C - Section IV - GM OPS.COM.486 Emergency egress from the cockpit p. 374

comment *848* comment by: *Reto Ruesch*

Emergency egress

In smaller helicopter without a lot of space available in the cabin, the decision

shall be left to the manufacturer to find an acceptable site. Today the regulations are asking so many requirements that it will be very difficult to fullfil them all without redifining the cabin size.For that case in particular a crash axe is useless in most of the small helicopters due to the construction of the cabins (windows).

comment *1139* comment by: *Heli Gotthard*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1208* comment by: *Stefan Huber*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1264* comment by: *Air Zermatt*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1315* comment by: *Air-Glaciers (pf)*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1809* comment by: *Heli Gotthard AG Erstfeld*

GM ops Com 486 Emergency egress

Emergency egress : In smaller helicopters without a lot of available space in

the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1886* comment by: *SHA (AS)*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *1956* comment by: *Berner Oberländer Helikopter AG BOHAG*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2042* comment by: *Heliswiss AG, Belp*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2171* comment by: *Dirk Hatebur*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2178* comment by: *Heliswiss*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be

very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2183* comment by: *Heliswiss NV*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2441* comment by: *Jan Brühlmann*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2482* comment by: *Catherine Nussbaumer*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2572* comment by: *Walter Mayer, Heliswiss*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *2861* comment by: *Philipp Peterhans*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the

construction of the cabins (windows).

comment *2944* comment by: *Pascal DREER*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *3594* comment by: *Aero-Club of Switzerland*

We do not understand why the crash axe or crowbar should be located out of the sight of passengers.

Justifiction: If, after an emergency landing for instance. the pilot is disabled and the cabin cannot be used, someone else must take action. This could be passenger using the crash axe or the crowbar.

comment *4008* comment by: *HDM Luftrettung gGmbH*

GM OPS COM 486:

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *4127* comment by: *Benedikt SCHLEGEL*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *4570* comment by: *Christophe Baumann*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the

construction of the cabins (windows).

comment *5819* comment by: *Ph.Walker*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *6167* comment by: *Hans MESSERLI*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *6639* comment by: *Heliswiss International*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *7029* comment by: *Swiss Helicopter Group*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the construction of the cabins (windows).

comment *7119* comment by: *Eliticino SA*

Emergency egress : In smaller helicopters without a lot of available space in the cabin, the decision shall be left to the manufacturer to find an acceptable site. Today the regulations are imposing so many requirements that it will be very difficult to fullfil them all without redefining cabin size. In this particular case, a crash axe is useless in most of the small helicopters because of the

construction of the cabins (windows).

comment *7359* comment by: *ADAC Luftrettung GmbH*

B. II. Draft Decision - Part-OPS - Subpart C - Section IV - AMC OPS.COM.487 Crash mitigation equipment p. 374

comment *1582* comment by: *EUROCOPTER*

AMC OPS.COM.487, request that the helicopter is fitted with crash mitigation equipment such as crash-absorbing seats and self-sealing fuel tanks. Comments are:

- This requirement is disproportionate and, if maintained as such, will forbid Aerial Work operations to many helicopter types in Europe because of the dramatic induced development costs for operators to retrofit crash mitigation equipment. As a matter of fact, only a few helicopter types would be compliant to this requirement thanks to having been certificated in accordance with recent certification bases.

- In addition we do not see the befefit of self-sealing fuel tanks in terms of crash mitigation.

Proposal: to delete AMC OPS.COM.487:

~~***AMC OPS.COM.487 Crash mitigation equipment***~~

~~***TYPES OF CRASH MITIGATION EQUIPMENT***~~

~~***Crash mitigation equipment should be certified in accordance with a recognised standard. It should include items which are necessary for reducing the consequences of a crash and should include such items as crash-absorbing seats and self-sealing fuel tanks.***~~

B. II. Draft Decision - Part-OPS - Subpart C - Section IV - GM OPS.COM.488 Personal protective equipment p. 374

comment *1071* comment by: *REGA*

Attachment #21

See attachment

comment *1346* comment by: *EUROCOPTER*

Proposal: Title should be changed as:

"***Individual ~~personal~~*** *protective equipment*"

This wording should also be used in the text of requirement.

Reason: consistency with OPS.COM.488 title

B. II. Draft Decision - Part-OPS - Subpart D p. 375

comment *3812* comment by: *AUSTRIAN Airlines*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailled text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

B. II. Draft Decision - Part-OPS - Subpart D - Section I - AMC OPS.SPA.020.GEN (b)(4) Application for a specific approval p. 375

comment *572* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.SPA.020.GEN (b)(4): change as follows:

OPERATIONAL ~~**PREOCEDURES**~~ **PROCEDURES**

Justification:

Editorial, procedures i.s.o. preocedures

comment *995* comment by: *CAA-NL*

Comment CAa-NL:

Typo "PREOCEDURES"

B. II. Draft Decision - Part-OPS - Subpart D - Section II p. 376

comment *3301* comment by: *AEA*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailled text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

comment *4682* comment by: *KLM*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailled text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

comment *4841* comment by: *British Airways Flight Operations*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailed text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4845* comment by: *TAP Portugal*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailled text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

comment *5040* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Entire section II

Operations in areas with specific navigation performance

Comment:

Reference to detailed text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

comment *5363* comment by: *Virgin Atlantic Airways*

Relevant Text:

Entire section II Operations in areas with specific navigation performance.

Comment:

Reference to detailed text from the ICAO PBN or EASA AMC 20 should not be copied. Instead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents.

comment *5614* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Entire section II Operations in areas with specific navigation performance

Comment:

Reference to detailled text from the ICAO PBN or EASA AMC 20 should not be copied. In-stead those documents should only be referred as a reference in guidance material. This is important to avoid contradictions when those documents evolve.

Proposal:

Delete the detailed text and replace with a simple reference to the EASA AMC 20 documents

B. II. Draft Decision - Part-OPS - Subpart D - Section II - AMC OPS.SPA.001.SPN(c)(3) Operations in areas with specified performance based navigation p. 376

comment *1540* comment by: *AIRBUS*

The wording "operational procedures" has been selected in lieu of the wording "operating procedures" used in the regulation. For consistency reasons, the same wording should be used.

comment *2276* comment by: *Austro Control GmbH*

The obviously printing error in General 1 should be corrected:

Radar Navigation shall read *Area (Random) Navigation (RNAV)*

comment *2719* comment by: *AOPA-Sweden*

As GA pilots and aircraft owners, we don't have an operations manual, and don't see a need of it either.

comment *4084* comment by: *UK CAA*

Page No: 376

Paragraph No:

AMC OPS.SPA.001.SPN(c)(3) Title. (See also UK comments on GM1 OPS.SPA.001.SPN GENERAL and Tables 1 - 3)

Comment:

Title is incorrect.

See UK CAA comments on OPS.SPA.001.SPN (page 90). This merges Performance Based Navigation (PBN) with Minimum Navigation Performance

Specification (MNPS) areas. They have different implementation rules.

Justification:

Ensure that title change from OPS.SPA.001.SPN is read across to AMC.

Proposed Text (if applicable):

AMC OPS.SPA.001.SPN(c)(3) **Operations in areas with specified ~~performance based~~ navigation *performance*.**

comment *6094* comment by: *DGAC*

There is not always an OPS Manual

=> Add after "operations manual": "**when required by Annex IV to Regulation (EC) No 216/2008 (Essential requirements for air operations), or in a procedures manual**".

comment *6463* comment by: *FNAM (Fédération Nationale de l'Aviation Marchande)*

Comment

RNAV means : "Area Navigation" and not "Radio Navigation"

Proposal

The definition must be corrected.

Justification

Obvious

comment *7625* comment by: *AOPA UK*

As GA pilots and aircraft owners, we don't have an operations manual, and don't see a need of it either.

B. II. Draft Decision - Part-OPS - Subpart D - Section II - GM1 OPS.SPA.001.SPN Operations in areas with specified performance based navigation p. 376-379

comment *13* comment by: *KLM*

GM1 OPS.SPA.001.SPN

1. Radar Navigation ?

This has to be Area Navigation (RNAV)

comment *14* comment by: *KLM*

Last row in the table says:

Specific requirements concerning the positioning function

Is this in order of priority or else, please specify in the box.

comment *411* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.SPA.001.SPN: change as follows:

GENERAL

1. There are two kinds of Navigation Specifications: ~~**Radar**~~ **Area** Navigation (RNAV) specifications and Required Navigation Performance (RNP) specifications. Indeed, a**n** RNP system is an RNAV system which has an onboard navigation performance monitoring and alerting function. This function allows the flight crew to detect when the RNP system is not achieving, or cannot guarantee with a sufficient level of integrity, the navigation performance (both lateral and longitudinal). The navigation performance is characterised by the Total System Error (TSE).

Justification:

RNAV means Area Navigation, not Radar Navigation.

comment *574* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.SPA.001.SPN(2): change as follows (editorial):

2. RNAV and RNP specifications are designated as RNAV X (e.g. RNAV 1) or RNP X (e.g. RNP 4). If two Navigation Specifications share the same value for X, they may be distinguished by use of a prefix, e.g. Advanced-RNP 1 and Basic-RNP 1. For both RNAV and RNP designations the expression 'X' refers to the lateral navigation accuracy in nautical miles that is expected to be achieved at least 95 percent of the flight time by the population of aircraft operating within the airspace, route or procedure. The existing navigation specifications ~~**are**~~ **and** the relative requirements are summarised in table 1 and table 2 below.

comment *575* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.SPA.001.SPN table 1.: change as follows (editorial):

2 navigation system**s** using: - GNSS - DME/DME - DME/DME/IRS

Justification:

Under minimum equipment, RNAV 1, 'two system'shall be 'two systems'

comment *802* comment by: *KLM*

In table 3 reference is made to AMC 20-16 P-RNAV. This is a non-existing chapter in AMC 20.

Only to valid documentation reference should be made.

comment *966* comment by: *KLM*

Why all this information on PBN while a reference to the ICAO PBN manual would be sufficient.

comment *1539* comment by: *AIRBUS*

The acronym RNAV has been improperly defined as Radar Navigation. The correct definition should be Area Navigation.

comment *2530* comment by: *Royal Aeronautical Society*

Paragraph 1 states incorrectly that the 'R' in 'RNAV' stands for 'Radar'. **It is suggested that the word 'Area' should replace 'Radar' in the first line of subparagraph 1.**

comment *2718* comment by: *AOPA-Sweden*

See comments above under OPS.SPA.001.SPN

comment *2753* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial: Para 1. First sentenece There are two kinds of Navigation specifications:

~~**Correct:**~~

~~Radar~~ Area Navigation (RNAV).....

comment *3300* comment by: *AEA*

Relevant Text:

1. There are two kinds of Navigation Specifications: ***Radar Navigation (RNAV)*** *specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area*** *navigation (RNAV)*'

comment *3421* comment by: *EHOC*

Paragraph 1.

Editorial: RNAV is not Radar Navigation but Area Navigation.

comment *3814* comment by: *AUSTRIAN Airlines*

Relevant Text:

1. There are two kinds of Navigation Specifications: ***Radar Navigation (RNAV)*** *specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area*** *navigation (RNAV)'*

comment *3909* comment by: *Airbus S.A.S.*

Table 3 of GM1 OPS.SPA.001.SPN addresses RNP AR APCH, which is not considered in Table 1 and 2.

Table 1 and 2 should be improved to include provisions for RNP AR APCH.

comment *3912* comment by: *Airbus S.A.S.*

Typo error in Table 1 of GM1 OPS.SPA.001.SPN.

The last column related to PBN Requirements, should read "Error > 2-0.6 NM," instead of "Error > 2-0.6

NM,"

comment *3915* comment by: *Airbus S.A.S.*

Typo error in Table 1 of GM1 OPS.SPA.001.SPN.

The last column related to "On Board Performance Monitoring and Alerting", should read "Error > 2-0.6 NM," instead of "Error > 2-0,6NM,"

comment *3926* comment by: *Airbus S.A.S.*

The wording "Error > 2-0.6 NM" contained in the last column of Table 1 of GM1 OPS.SPA.001.SPN, is not clear.

Airbus understanding is that 2 NM refers to Initial, Intermediate, MA and 0.6

NM refers to final approach.

An explanation or definition for these values would be needed.

comment *3982* comment by: *Airbus S.A.S.*

Paragraph GM1 OPS.SPA.001.SPN states, at bullet 2:

"If two Navigation Specifications share the same value for X, they may be distinguished by use of a prefix, e.g. Advanced-RNP 1 and Basic-RNP 1."

Wording "Advanced-RNP 1 and Basic-RNP 1" is not current.

EASA should provide definitions, or replace "Advanced-RNP 1" and "Basic-RNP 1".

Moreover, RNP value could be below 1 (which is not clear in the proposed text).

In this case, even if RNAV and RNP are using the same specifications, the ording is "RNP APCH" and not "Advnced" or "Basic" RNP.

EASA should amend the proposed text in order to consider these aspects.

comment *3984* comment by: *Airbus S.A.S.*

Table 1 of

GM1 OPS.SPA.001.SPN should be improved with provisions for RNP APCH below 0.3

comment *4085* comment by: *UK CAA*

Page: 376

Paragraph No:

GM1 OPS.SPA.001.SPN GENERAL (See also UK CAA comment on AMC OPS.SPA.001.SPN(c)(3) and GM1 OPS.SPA.001.SPN Tables 1-3)

Comment:

Para 1. RNAV is referred to as "Radar Navigation". This is incorrect. RNAV refers to "Area Navigation". The key difference between RNAV and RNP is the "requirement" for the aircraft to have an onboard navigation performance and alerting system to alert the crew.

Para 2. There are multiple RNAV and RNP standards, which apply to different phases of flight. The operator needs to know how these standards apply to him and which special approvals cover which aspects of flight. Each special approval will need it's own AMC. It is not clear from the guidance material here how the PBN approvals are structured and what AMC material applies to which PBN approval. A very good diagram is provided in the ICAO PBN Manual, DOC 9613, Vol II, Part A, Chapter 1, Table II-A-1-1, Application of Navigation Specification by Flight Phase. This is reproduced as new Table 1 (see UK CAA Comment on GM1 OPS.SPA.001.SPN Tables 1-3) with some additional information regarding EASA guidance material. This new Table 1 describes the

PBN navigation specifications and relates them to the different flight phases, but also defines groupings relationships i.e. "En-route (Oceanic/remote and continental), Arrival, Approach (Initial, Intermediate, Final and Missed) and Departure. Existing Table 3 is a synthesis of this ICAO table, but being a list does not show the structure and mixes current and future standards, which needs to be clarified. The core aspects of Table 3 have been added to this paragraph (Para 2) and into a new Table 1 and the current Table 3 should be deleted. The reader needs to see the structure of approvals from the new Table 1 and be directed to where the AMCs are for the approvals needed. Existing Tables 1 and 2 give detail that is not required in this document and include misleading and incorrect information; they should be deleted.

Further comments on the Tables is provided by a following UK CAA comment.

Justification:

PBN DOC 9613, Abbreviations, Page I-(xviii) defines RNAV as Area Navigation not radar navigation.

Need to improve clarity of general explanation of terminology and its application to the phases of flight.

Reference ICAO DOC 9613 Part A General Chapter 1 Introduction, Table II-A-1-1 Application of navigation specification by flight phase.

Proposed Text (if applicable):

GENERAL

1. There are two kinds of Navigation Specifications: ***Area Navigation*** ~~Radar Navigation~~ (RNAV) ~~specifications~~ and Required Navigation Performance (RNP)***, which are fundamentally similar.*** ~~specifications. Indeed, a RNP system is an RNAV system which has an onboard navigation performance monitoring and alerting function. This function allows the flight crew to detect when the RNP system is not achieving, or cannot guarantee with a sufficient level of integrity, the navigation performance (both lateral and longitudinal). The navigation performance is characterised by the Total System Error (TSE).~~ ***The key difference between them is that RNP specifications require the aircraft to have an on-board performance monitoring and alerting system that provides some automated assurance functions to the flight crew. These functions monitor the system performance and alert the flight crew when the required RNP requirements are not met, or cannot be guaranteed with a sufficient level of integrity. The RNAV and RNP performance is characterised by the Total System Error (TSE). This is the distance between the desired position and the aircraft true position measured in nautical miles, which is expected to be achieved at least 95% of the flight time by the population of aircraft operating within the airspace, route or procedure.***

2. ***The structure of*** RNAV and RNP ***navigation*** specifications ~~are designated as RNAV X (e.g. RNAV 1) or RNP X (e.g. RNP 4). If two Navigation Specifications share the same value for X, they may be distinguished by use of a prefix, e.g. Advanced RNP 1 and Basic RNP 1. For both RNAV and RNP designations the expression 'X' refers to the lateral navigation accuracy in nautical miles that is expected to be achieved at least 95 percent of the flight time by the population of aircraft operating within the airspace, route or procedure. The existing navigation specifications are the relative requirements are summarised in table 1 and table 2 below.~~ ***can be classified by phases of flight as detailed in Table 1*** (new). (New Insert reproduced from PBN manual, ICAO Doc 9613

Table II-A-1-1.)***. There are multiple RNAV and RNP approvals that apply to different phases of flight. Some of these special approvals are in current use, some are under development, and some apply to emerging standards for which AMC have yet to be defined. For each current navigation specification requiring approval by the competent authority, EASA Acceptable Means of Compliance is defined in the EASA AMC 20 series documents as listed below and shown in Table 1.***

Oceanic/Remote. RNAV10 (Designated and Authorised as RNP10). AMC for RNAV10(RNP10) is provided at EASA AMC 20-12, "Recognition of FAA order 8400.12a for RNP10 Operations". It has been agreed that RNAV10 airspace be called RNP10 for historical reasons, though technically it should be RNAV10 as there is no requirement for on-board monitoring and *alerting systems. RNAV10 can support 50nm track spacing. For an aircraft to operate in RNAV10(RNP10) airspace it needs to be fitted with a minimum of 2 independent Long Range Navigation Systems (LRNS). Each LRNS should in principle have a Flight Management System that utilises positional information from either an approved GNSS or an approved IRS or mixed combination. The mix of sensors: pure GNSS, pure IRS or mixed IRS/GPS determines pre-flight and in-flight operation and contingencies in the event of system failure.*

b. Oceanic/Remote. RNP-4. This is an emerging standard. Guidance is provided in ICAO DOC 9613 and EASA AMC material has yet to be defined. RNP-4 is the oceanic/remote navigation specification to support 30nms track spacing. To meet the more accurate navigation requirement 2 independent LRNS are required for which GNSS sensors are mandated. Additional aircraft requirements may also be required other than HF to operate in RNP-4 designated airspace. The requirements may include use of Automatic Dependent Surveillance (ADS) and/or Controller Pilot Direct Data Link Communication (CPDLC). Appropriate country Air Information Publication (AIP) needs to be consulted. Proposed AMC will need to subject to the EASA AMC approval process.

c. RNAV5 (B-RNAV). AMC for RNAV5 is provided in AMC 20-4. Airworthiness Approval and Operational Criteria for the Use of Navigation Systems in European Airspace Designated for the Basic-RNAV Operations.

d. RNAV1 (P-RNAV). AMC for RNAV1 (P-RNAV) is provided in AMC 20-16, " Airworthiness and Operational approval for precision RNAV operations in designated European Airspace."

e. ***Basic –RNP1. Future standard to be implemented. Guidance material is provided in Doc 9613.***

f. Advanced –RNP1 Future standard to be implemented. Guidance material is provided in Doc 9613.

g. RNP APCH. AMC for RNP APCH approaches is provided in AMC 20-27, Airworthiness and Operational approval for RNP approach (RNP APCH) operations.

RNP AR APCH. AMC for RNP AR APCH is provided in AMC20-26 " Airworthiness and operational approval for RNP Authorisation Required Approaches (RNP AR APCH) operations".

3. Guidance material for the global performances specifications, approval process, aircraft requirement (e.g. generic system performances, accuracy, integrity, continuity, signal-in-space, RNP navigation specifications required for the on-board performance monitoring and alerting system), requirements for specific sensor technologies, functional requirements, operational procedures, flight crew knowledge and training and navigation databases integrity requirements, can be found in:

   a. ICAO Doc 9613 Performance Based Navigation Manual, and

   b. EASA AMC 20 as indicated in above and in ***Table 1*** (new).

comment *4086* comment by: *UK CAA*

Page: 376-379

Paragraph No:

GM1 OPS.SPA.001.SPN Tables 1,2 and 3 (see also UK CAA comments on AMC OPS.SPA.001.SPN(c)(3) and GM1 OPS.SPA.001.SPN GENERAL)

Comment:

See comments on Para 1 and 2 at previous UK CAA comment on GM1 OPS.SPA.001.SPN GENERAL. This follows on.

There are multiple RNAV and RNP approvals that apply to different phases of flight. The operator needs to know how these apply to him and which special approvals cover which aspects of flight and each of which will, in turn, need it's own AMC. New Table 1 is based on the ICAO PBN Manual, DOC 9613, Vol II, Part A, Chapter 1, Table II-A-1-1, Application of Navigation Specification by Flight Phase. This new Table 1 describes the PBN navigation specifications and relates them to the different flight phases, but also defines groupings relationships i.e. "En-route (Oceanic/remote and continental), Arrival, Approach (Initial, Intermediate, Final and Missed) and Departure. Existing Table 3 is a synthesis of this ICAO table, but being a list does not show the structure and mixes current and future standards, which needs to be clarified. The core aspects of Table 3 have been added to Para 2 (**see COMMENT B**) and into a new Table 1 and the current Table 3 should be deleted. The reader needs to see the structure of approvals from the new Table 1 and be directed to where the AMCs are for the approvals needed.

Existing Tables 1 and 2 have the same title and give detail that is not required in this document, including misleading and incorrect information: they should be deleted. Tables 1 and 2 describe relative detail of some of the requirements but not all. It is information that is essentially already contained within ICAO PBN Manual, Doc 9613. Unless the terms used are explained the 2 tables are confusing and do not add value. It is trying to do too large a task that cannot be fitted on a single sheet of A4 paper. For example, the AMC and guidance information in the tables needed should be declarative not comparative and should not selectively pick information unless there are associated issues that need describing. It is not clear in Table 1 what Equipment malfunction "Major" means nor Continuity "Major" and "Minor", or that this adds value. The On Board Performance Monitoring and Alerting requirement for RNP has already

been stated. This adds little value and is only looking at one parameter of many. The minimum equipment definition of a Long Range Navigation System (LRNS) ignores the requirement for a Flight Management System (FMS). It is also in conflict with IR statements of minimum equipment. A display is required for RNP-10 because one of the requirements for a LRNS is that it is able to display aircraft position relative to track. Tables 1 and 2 should be deleted.

Justification:

Improved clarity of general explanation of terminology and its application to the phases of flight.

Reference ICAO DOC 9613 Part A General Chapter 1 Introduction, Table II-A-1-1

Distinguish clearly between current AMC guidance and that yet to be provided for future standards.

Deletion of existing tables 1, 2 and 3 is necessary to eliminate superfluous information and avoid confusion.

Proposed Text (if applicable):

Delete Tables 1, 2 and 3. Replace with new Table 1.

Table 1 - Application of navigation specification by flight phase.

~~*NAVIGATION SPECIFICATION*~~	*FLIGHT PHASE*								
	Enroute		**Arrival**	**Approach**				**Departure**	**EASA AMC**
	Oceanic / Remote	**Continental**		**Initial**	**Intermediate**	**Final**	**Missed**		
RNAV10	10								AMC 20-12
RNP 4	4								To be developed.
RNAV 5		5	5						AMC 20-4
RNAV2		2	2					2	Future provision.
RNAV1		1	1	1	1		1	1	AMC 20-16
BASIC-RNP 1			1	1	1		1	1	Future provision.
Advanced–RNP1									Future provision.
RNP APCH				1	1	0.3	1		AMC 20-27
RNP AR APCH				1	1	0.3	1		AMC20-26

Notes:

in NMs.

2. RNAV5 is an en-route navigation specification, which may be used for the initial part of the STAR outside 30nms and above Minimum Safe Altitude.

Some EASA AMC guidance is under development or earmarked for future provision.

comment *4683* comment by: *KLM*

Relevant Text:

*1. There are two kinds of Navigation Specifications: **Radar Navigation (RNAV)** specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area** navigation (RNAV)'*

comment *4846* comment by: *TAP Portugal*

Relevant Text:

*1. There are two kinds of Navigation Specifications: **Radar Navigation (RNAV)** specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area** navigation (RNAV)'*

comment *5044* comment by: *Deutsche Lufthansa AG*

Relevant Text:

*1. There are two kinds of Navigation Specifications: **Radar Navigation (RNAV)** specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area** navigation (RNAV)'*

comment *5110* comment by: *M Wilson-NetJets*

Original text:

(1) There are two kinds of Navigation Specifications: Radar Navigation (RNAV) specifications and Required Navigation Performance (RNP) specifications. Indeed, a RNP system is an RNAV system which has an onboard navigation performance monitoring and alerting function. This function allows the flight crew to detect when the RNP system is not achieving, or cannot guarantee with a sufficient level of integrity, the navigation performance (both lateral and longitudinal). The navigation performance is characterized by the Total System Error (TSE).

Suggested new text:

No suggested text

Comment/suggestion:

RNAV is incorrectly worded as "Radar Navigation"

comment *5365* comment by: *Virgin Atlantic Airways*

Relevant Text:

*1. There are two kinds of Navigation Specifications: **Radar Navigation (RNAV)** specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area** navigation (RNAV)*'

comment *5615* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

*1. There are two kinds of Navigation Specifications: **Radar Navigation (RNAV)** specifications and Required Navigation Performance (RNP) specifications.*

Comment:

This is a type-error which should read 'Area navigation (RNAV)'

Proposal:

Editorial should read '***Area** navigation (RNAV)*'

comment *5950* comment by: *ERA*

European Regions Airline Association Comment

This may be a typo ? the first sentence in Paragraph 1 should read:

1. There are two kinds of Navigation Specifications: Area Navigation (RNAV) specifications and Required Navigation Performance (RNP) specifications.

comment *6095* comment by: *DGAC*

At the last PBN meeting (april 2009) it has been decided to include in the RNP APCH Nav specs, LPV (or APV SBAS) approach, so that 2012, SBAS Nav specs will be included in the PBN manual, AMC 20-28 defining ops and airworthiness criteria for SBAS operations will be issued. Therefore, the table 3 should include reference to AMC 20-28.

Table 1 and Table 2 are maybe too technical to be included in this AMC.

Furthermore information contained in table 1 and table 2 can be found in the AMC 20's which are introduced in table 3. There is always a risk of inconsistency in duplicating information.

We suggest therefore removing Table 1 and Table 2 from this AMC.

comment *6316* comment by: *Lufthansa CityLine GmbH*

This may be a typo ? Paragraph 1 should read:

There are two kinds of Navigation Specifications: **Area** Navigation (RNAV) specifications and Required Navigation Performance (RNP) specifications.

comment *6682* comment by: *AIR FRANCE*

1. "There are two kinds of Navigation Specifications: **Radar** Navigation (RNAV) specifications and Required Navigation Performance (RNP) specifications". RNAV = Radar Navigation is a new concept, should be further developped!!!! :-)

comment *7111* comment by: *IACA International Air Carrier Association*

1.

RNAV stands for Area Navigation

comment *7435* comment by: *Axel Schwarz*

RNAV normally means "Area Navigation", not "Radar Navigation".

comment *7474* comment by: *Ryanair*

General 1.

Typo: Radar Navigation (RNAV)

comment *7626* comment by: *AOPA UK*

As GA pilots and aircraft owners, we don't have an operations manual, and don't see a need of it either.

B. II. Draft Decision - Part-OPS - Subpart D - Section II - GM2 OPS.SPA.001.SPN Operations in areas with specified performance based navigation p. 379-380

comment *4087* comment by: *UK CAA*

Page No: 379

Paragraph No:

GM2 OPS.SPA.001.SPN Operations in areas with specified performance based navigation.

Comment:

As with GM1 OPS.SPA.001.SPN, this also mixes PBN concepts with MNPS. Equipment requirements for MNPS are defined at OPS.SPA.010.SPN. This GM2 implies its scope covers equipment requirements for Performance Based Navigation but confuses the issue by mentioning minimum performance specifications (MNPS). Reference to MNPS is inappropriate here.

The GM for aircraft equipment requirements for each PBN approval is too specific and detailed to be covered here. See proposals in the UK CAA comment on GM1 OPS.SPA.001.SPN. For example, equipment requirements for RNP10 are very different from RNAV5. The guidance is also in danger of mixing airspace requirements with PBN equipment requirements. Equipment requirements for PBN approval apply worldwide. There may be additional requirements to operate in specific airspace this is defined in AIP and regional documents. Reference to just Single European Sky and Eurocontrol related documents is inappropriate as they are regional airspace regulations.

The suggested revised guidance already points to equipment requirements via the AMC 20 series. This paragraph is confused, adds no value, and should be deleted.

Justification:

1. Mixing up of PBN requirements with MNPSA, which is not PBN.

2. There are multiple equipment requirements for PBN.

3. Mixing up regional airspace requirements with PBN equipment requirements.

Proposed Text (if applicable):

Delete whole GM2.

B. II. Draft Decision - Part-OPS - Subpart D - Section II - AMC OPS.SPA.010.MNPS Equipment requirements for operations in MNPS areas p. 380

comment *413* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.SPA.010.MNPS: change as follows:

AMC OPS.SPA.010.~~**MNPS**~~ **SPN** Equipment requirements for operations in MNPS areas

Justification:

The designation of this AMC should be AMC OPS.SPA.010.SPN, as the subpart is SPN, and not MNPS.

comment *1362* comment by: *EUROCOPTER*

This AMC is linked to OPS.SPA.010.SPN requirement and should be renamed **'AMC OPS.SPA.010.SPN'** (OPS.SPA.010.MNPS does not exist)

comment *1541* comment by: *AIRBUS*

Except in the Table 1 of GM1 OPS.SPA.001.SPN, the LRNS are not defined in this section.

comment *4089* comment by: *UK CAA*

Page No: 380

Paragraph No:

AMC OPS.SPA.010.MNPS

Comment:

Incorrect Title Reference. The AMC amplifies OPS.SPA.010.SPN.

The scope in the title has been in advertently widened to include potentially all MNPS equipment requirements rather than just navigation equipment requirements. For instance, long-range communications requirements are not mentioned nor are RVSM equipment requirements, or SSR. Amend the name to read, "Navigation Equipment Requirements ...". This follows from the IR.

The title refers to MNPS areas. There is only 1 MNPS area. It is singular and is known as MNPS airspace.

Reverse the order of Para 1 and 2 stating the unrestricted navigation requirement to have 2 LRNS, first. Special route apply to aircraft with just 1 LRNS and short range navigation aids, or short-range navigation aids alone.

Reference is required to the additional MNPS guidance material available. See suggested additional guidance material at: GM OPS.SPA.010.SPN Operations in

MNPS Airspace.

Justification:

Incorrect title reference.

Inappropriate title.

Greater clarity required regarding navigation equipment requirements.

Additional guidance material considered necessary.

Proposed Text (if applicable):

AMC OPS.SPA.010**.SPN Navigation** equipment requirements for operations in MNPS ***Airspace***

GENERAL

1. For unrestricted operations in MNPS airspace, the aircraft should be equipped with two independent Long Range Navigation Systems (LRNS).

2. For operation in MNPS airspace along notified special routes, the aircraft should be equipped with either one Long Range Navigation System (LRNS) ***and normal short-range navigation equipment, or for notified special routes to Iceland, normal short-range navigation equipment alone.***

GM OPS.SPA.010.SPN Operations in MNPS Airspace

Additional guidance material, including details of special routes, can be found in:

a. ICAO Regional Supplementary Procedures, Doc 7030.

b. ICAO Guidance for Air Navigation in the North Atlantic, NAT Doc 001, and

c. ICAO North Atlantic MNPS Airspace Operations Manual.

comment *7041* comment by: *Virgin Atlantic Airways*

Relevant Text:

AMC OPS.SPA.010.MNPS Equipment requirements for operations in MNPS areas

GENERAL

1. For operation in MNPS airspace along notified special routes, the aircraft should be equipped with one Long Range Navigation System (LRNS), unless otherwise specified in the ICAO air navigation agreements.

2. For unrestricted operations in MNPS areas, the aircraft should be equipped with two independent Long Range Navigation Systems (LRNS).

Comment: Swap items 1 and 2. The paragraph covering unrestricted operations should proceed the paragraph describing limited MNPS operations.

Proposed Text:

AMC OPS.SPA.010.MNPS Equipment requirements for operations in MNPS areas

GENERAL

1. For unrestricted operations in MNPS areas, the aircraft should be equipped with two independent Long Range Navigation Systems (LRNS).

2. For operation in MNPS airspace along notified special routes, the aircraft should be equipped with one Long Range Navigation System (LRNS), unless otherwise specified in the ICAO air navigation agreements.

B. II. Draft Decision - Part-OPS - Subpart D - Section III - AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace p. 381

comment *996* comment by: *CAA-NL*

This segment contains the same information as AMC2 to AR.OPS.300 point number 5. Please put the information under just one article.

comment *3302* comment by: *AEA*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3689* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3815* comment by: *AUSTRIAN Airlines*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *4356* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4685* comment by: *KLM*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *4722* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4848* comment by: *TAP Portugal*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *4963* □ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual

audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5045* comment by: *Deutsche Lufthansa AG*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *5367* comment by: *Virgin Atlantic Airways*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

Proposal:

Add definitions or explain terms

comment *5527* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5616* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

2. Each operator should take immediate action to rectify the conditions that cause an error. A report of such actions should be submitted to the competent authority, including an initial analysis of causal factors and measures taken to prevent repeat occurrences. Where necessary the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft),

b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

(1) No definitions of TVE and ASE are given

(2) In EU-OPS nothing specific was written about reporting of RVSM incidents

Proposal:

Delete as incident reporting is already covered in other chapters

comment *6527* comment by: *IATA*

2. Each operator should take immediate action to rectify the conditions that caus an error. A report of such actions should be submitted to the competent authority including an initial analysis of causal factors and measures taken to

prevent repeat occurrences. Where necessary

the need for follow up reports should be determined together with the competent authority. Occurrences that should be reported and investigated are errors of:

a. TVE equal to or greater than ±90 m (±300 ft), b. ASE equal to or greater than ±75 m (±245 ft), and

c. Assigned altitude deviation equal to or greater than ±90 m (±300 ft).

Comment:

EU-OPS contains nothing specific about reporting of RVSM incidents

Proposal:

Delete especially as incident reporting is

already covered.

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace,

the pilot should request a new clearance to

avoid entering this airspace.

Comment:

With a new clearance request it is often possible to enter or remain in RVSM.

Proposal:

Delete “to avoid entering this airspace”.

comment *6684* comment by: *AIR FRANCE*

2 a."TVE equal to or greater than ±90 m (±300 ft), b. ASE equal to or greater than ±75 m (±245 ft), and"

TVE and ASE are not defined in the terminology chapter. I don't know them.

B. II. Draft Decision - Part-OPS - Subpart D - Section III - GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace p. 381-384

comment *409* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.SPA.001.RVSM(b)(2):

See previous equipment requirements stated in EU-OPS 1.872. There is a discrepancy between what is required in the Implementing Rule, and the GM, regarding the need for a transponder.

It should therefore be stated clearly that the use of the transponder in RVSM airspace does not depend on the operators' will.

comment *576* comment by: *ECA - European Cockpit Association*

Comment on GM OPS.SPA.001.RVSM(b)(2)2: change text as follows: move 2. c. and d. under new point 3. Pre-Takeoff Procedures:

2. Pre-flight procedures

2.1 The following actions should be accomplished during the pre-flight procedure:

a. Review technical logs and forms to determine the condition of equipment required for flight in the RVSM airspace. Ensure that maintenance action has been taken to correct defects to required equipment;

b. During the external inspection of aircraft, particular attention should be paid to the condition of static sources and the condition of the fuselage skin near each static source and any other component that affects altimetry system accuracy. This check may be accomplished by a qualified and authorised person other than the pilot (e.g. a flight engineer or ground engineer);

~~**c. Before takeoff, the aircraft altimeters should be set to the QNH of the airfield and should display a known altitude, within the limits specified in the aircraft operating manuals. The two primary altimeters should also agree within limits specified by the aircraft operating manual. An alternative procedure using QFE may also be used. Any required functioning checks of altitude indicating systems should be performed. The maximum value for these checks should not exceed 23 m (75 ft).**~~

~~**d. before take-off, equipment required for flight in RVSM airspace should be operative, and any indications of malfunction should be resolved.**~~

3. Pre-Takeoff Procedures:

a. the aircraft altimeters should be set to the QNH of the airfield and should display a known altitude, within the limits specified in the aircraft operating manuals. The two primary altimeters should also agree within limits specified by the aircraft operating manual. An alternative procedure using QFE may also be used. Any required functioning checks of altitude indicating systems should be performed. The maximum value for these checks should not exceed 23 m (75 ft).

b. equipment required for flight in RVSM airspace should be operative, and any indications of malfunction should be resolved.

Justification

The header is preflight procedures, but text also concerns items before take-off, therefore not falling under pre-flight.

comment *580* comment by: *Association of Dutch Aviation Technicians NVLT*

GM OPS.SPA.001.RVSM

During the external inspection of aircraft, particular attention should be paid to the condition of static sources and the condition of the fuselage skin near each static source and any other component that affects altimetry system accuracy. This check may be accomplished by a qualified and authorised person other than the pilot (e.g. a flight engineer a by the 145-organisation authorised pilot or certifying staff);

Explenation: pls. use the formal name "certifying staff B1,A" i.s.o. ground engineer.

If a particular attention should be paid to the condition of static sources and the condition of the fuselage skin near each static source and any other component that affects altimetry system accuracy.

AMC M.A.301 -1- Continuing airworthiness tasks should be altered.

(a) a walk-around type inspection of the aircraft and its emergency equipment for

condition including, in particular, any obvious signs of wear, damage or leakage. In addition, the presence of all required equipment including emergency equipment should be established.

Proposed text:

(a) a walk-around type inspection of the aircraft with particular attention should be paid to the condition of static sources and the condition of the fuselage skin near each static source and any other component that affects altimetry system accuracy and its emergency equipment for condition including, in particular, any obvious signs of wear, damage or leakage. In addition, the presence of all required equipment including emergency equipment should be established.

comment *1542* comment by: *AIRBUS*

Paragraph 4.1.g: The paragraph 4.1 is based on the JAA TGL6, Appendix 4, Paragraph 5. The note related to the possibility to make use of automatic altimeter comparators has disappeared. It should be added in the paragraph 4.1.g.ii.

comment *1543* comment by: *AIRBUS*

Paragraph 7.2: The paragraph 7.2 refers to the wording "State Approval Agencies". For consistency reasons, this wording should be replaced by the terminology "Competent Authorities", as generally used by EASA.

comment *2720* comment by: *AOPA-Sweden*

(b) (2) 2.1.:

If the pilot is notified by ATC of altitude deviation, there has to be a discrepancy between the transponder encoder and the Air Data Computer. ATC can not, without a height monitoring radar make corrections. An item without any value. AOPA-S suggests a withdrawal of these items or a complete revision

comment *2721* comment by: *AOPA-Sweden*

(b) (6): What about "single pilot system" training?

comment *2755* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Para 4.1.b :

Comment:

It is considered unnecessary to wait until Transition Altitude before selecting 1013.2 (hpa)/29.92 if the flight is already cleared to a Flight Level. In addition the necessity of changing the Standby Altimeter at the same time is an unnecessary distraction at a time of high workload. The Standby altimeter should be left on Departure QNH and can be referred to should ATC ask for a passing Altitude and can be changed to 1013.25 (hpa)/29.92 prior to reaching the initial cleared Flight Level when the workload is less.

Proposal:

It is acceptable to change the the altimeters to 1013.2(hpa)/29.92 if the flight is already cleared to a Flight Level. The Standby Altimeter should be left on Departure/local QNH for reference should ATC require an intermediate Altitude readout, and should be changed to 1013.2 (hpa)/29.92 having passed the Transition Altitude and achieved the en route MSA and prior to reaching the initial Flight Level.

comment *3303* comment by: *AEA*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *3304* comment by: *AEA*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *3305* comment by: *AEA*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS and ATC are leading.

Proposal:

Remove articles C and D

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3690* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3816* comment by: *AUSTRIAN Airlines*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *3867* comment by: *AUSTRIAN Airlines*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *3868* comment by: *AUSTRIAN Airlines*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS and ATC are leading.

Proposal:

Remove articles C and D

comment *4090* comment by: *UK CAA*

Page No: 382

Paragraph No:

GM OPS.SPA.001.RVSM(b)(2) para 2.1 c last line

Comment:

The meaning could be better expressed and more in line with general Flight Manual terminology if the word 'difference' was used.

Justification:

Clarity

Proposed Text (if applicable):

'The difference between altimeter indications should not exceed 23 m (75 ft).'

comment *4357* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4687* comment by: *KLM*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *4688* comment by: *KLM*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *4690* comment by: *KLM*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of

static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS and ATC are leading.

Proposal:

Remove articles C and D

comment *4723* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4849* comment by: *TAP Portugal*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering

RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *4952* comment by: *TAP Portugal*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *4953* comment by: *TAP Portugal*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS

and ATC are leading.

Proposal:

Remove articles C and D

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5047* comment by: *Deutsche Lufthansa AG*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *5048* comment by: *Deutsche Lufthansa AG*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *5049* comment by: *Deutsche Lufthansa AG*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS and ATC are leading.

Proposal:

Remove articles C and D

comment 5368 comment by: *Virgin Atlantic Airways*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment 5370 comment by: *Virgin Atlantic Airways*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training points c and d are standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Proposal:

Amend ref c & d

comment 5528 comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5617* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.

Comment:

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *5618* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

g. At intervals of approximately one hour, cross-checks between the primary altimeters should be made. A minimum of two will need to agree within ±60 m (±200 ft). Failure to meet this condition will require that the altimetry system be reported as defective and notified to ATC;

i. The usual scan of flight deck instruments should suffice for altimeter crosschecking on most flights.

ii. Before entering RVSM airspace, the initial altimeter cross check of primary and standby altimeters should be recorded.

Comment:

This procedure is not needed for aircraft with automatic monitoring systems

Proposal:

Add the following; "*This cross-check is not mandatory when the aircraft is equipped with an automatic monitoring system for the flight instruments*."

comment *5619* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

6.1.

c. use and limitations in terms of accuracy of standby altimeters in contingencies. Where applicable, the pilot should review the application of static source error correction/position error correction through the use of correction cards; such correction data should be available on the flight deck.

d. problems of visual perception of other aircraft at 300 m (1 000 ft) planned separation during darkness, when encountering local phenomena such as northern lights, for opposite and same direction traffic, and during turns;

Comment:

Training point C and D is useless. It is standard ATPL training material.

Ref C: Most modern aircraft do not have correction cards for standby altimeters

Ref D: All RVSM flights are carried out under IFR, often in IFR conditions. TCAS and ATC are leading.

Proposal:

Remove articles C and D

comment *5952* comment by: *ERA*

European Regions Airline Association Comment

Reference: '3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance to avoid entering this airspace.'

Often, together with a new clearance request, one can still enter or remain in RVSM airspace.

Therefore please change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *6642* comment by: *KLM Cityhopper*

Comment:

Often, together with a new clearance request, one can still enter or remain in

RVSM airspace.

Proposal:

Change text into the following, as it still will allow ATC to refuse entry;

3.2 Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance.

comment *6862* comment by: *Icelandair*

Relevant Text:

Paragraph 2 and paragraph 3 and paragraph 4

When determined by the competent Authority responsible for type certification or supplemental type certification and agreed by the Agency,:…

Comment:

This requirement/wording is different from EU-OPS. Moreover, the Authority responsible for type certification or supplemental type certification would be EASA whereas EU-OPS refers to the competent Authority (NAA)

Proposal:

Stick to EU-OPS wording

comment *7121* comment by: *IACA International Air Carrier Association*

4.1.b

It is considered unnecessary to wait until Transition Altitude before selecting 1013.2 (hpa)/29.92 if the flight is already cleared to a Flight Level. In addition the necessity of changing the Standby Altimeter at the same time is an unnecessary distraction at a time of high workload. The Standby altimeter should be left on Departure QNH and can be referred to should ATC ask for a passing Altitude and can be changed to 1013.25 (hpa)/29.92 prior to reaching the initial cleared Flight Level when the workload is less.

Proposal:

It is acceptable to change the the altimeters to 1013.2(hpa)/29.92 if the flight is already cleared to a Flight Level. The Standby Altimeter should be left on Departure/local QNH for reference should ATC require an intermediate Altitude readout, and should be changed to 1013.2 (hpa)/29.92 having passed the Transition Altitude and achieved the en route MSA and prior to reaching the initial Flight Level.

comment *7627* comment by: *AOPA UK*

If the pilot is notified by ATC of altitude deviation, there has to be a discrepancy between the and j transponder encoder and the Air Data Computer. ATC can not, without a height monitoring radar make corrections. AOPA UK suggests a complete revision

comment *7628* comment by: *AOPA UK*

What about "single pilot system" training?

B. II. Draft Decision - Part-OPS - Subpart D - Section IV p. 385-386

comment *6096* comment by: *DGAC*

As a general comment : The huge number of GM or AMC comparing to the 4 requirements in section IV of the subpart D, demonstrates obviously that the organization chosen by the agency is not the most appropriate one. It makes far more difficult to understand what the different operational concepts are and what it entails for the operator to get an approval.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - GM1 OPS.SPA.001.LVO Low visibility operations (LVO) p. 385

comment *577* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.SPA.001.LVO: change sequence of b. and c.

1. Low Visibility Operations include, as applicable:

a. Manual take-off (with or without electronic guidance systems or Head-Up Guidance Landing System (HUDLS)/Hybrid Head-up display (HUD)/HUDLS);

b. ~~**Auto-coupled approach to below Decision Height (DH), with manual flare, hover, landing and roll-out;**~~**Approach flown with the use of a HUDLS/Hybrid HUD/HUDLS and/or Enhanced Vision system (EVS);**

c. **Auto-coupled approach to below Decision Height (DH), with manual flare, hover, landing and roll-out;**~~**Approach flown with the use of a HUDLS/Hybrid HUD/HUDLS and/or Enhanced Vision system (EVS);**~~

d. Auto-coupled approach followed by auto-flare, hover, auto landing and manual roll-out; and

e. Auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll-out, when the applicable Runway Visual Range (RVR) is less than 400 m. Note 1: A hybrid system may be used with any of these modes of operations. Note 2: Other forms of guidance systems or displays may be certificated and approved.

Justification:

Change sequence results in logical order.

comment *611* comment by: *ECA - European Cockpit Association*

Comment on GM1 OPS.SPA.001.LVO(2)(h)and(i): <![endif]-->Remove

definitions (h) Lower than Standard Category I Operations and (i) Other than Standard Category II Operations:

~~**h. Lower than Standard Category I Operation. A Category I Instrument Approach and Landing Operation using Category I DH, with an RVR lower than would normally be associated with the applicable DH;**~~

~~**i. Other than Standard Category II Operation. A Category II Instrument Approach and Landing Operation to a runway where some or all of the elements of the ICAO Annex 14 Precision Approach Category II lighting system are not available.**~~

Justification:These definitions should be in Implementing Rules (OPS.GEN.010) and not in GM.

comment *3306* comment by: *AEA*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to

be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3693* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

comment *4091* comment by: *UK CAA*

Page No: 385

Paragraph No:

GM1 OPS.SPA.001.LVO GENERAL TERMINOLOGY para 2

Comment:

LVP and LVTO should be included in terminology as in EU-OPS 1.435.

Justification:

Completeness of document and reference to their use in the text.

Proposed Text (if applicable): Include LVP and LVTO as per EU-OPS 1.435.

comment *4358* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4692* comment by: *KLM*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

comment *4725* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4842* comment by: *British Airways Flight Operations*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is different from EU-OPS 1.440. References to aeroplanes and helicopters should not be published in the same document; the entire NPA must be reviewed.

Proposal:

Use the wording from EU Ops 1.440

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4954* comment by: *TAP Portugal*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

comment *4963* □ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5052* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

comment *5374* comment by: *Virgin Atlantic Airways*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Realign with EU-OPS

comment *5529* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5620* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Low Visibility operations include, as applicable:

1 e auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll out, when the applicable RVR is less than 400 m.

Comment:

This terminology is not in line with EU-OPS 1.440

Proposal:

Stick to EU-OPS

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - GM2 OPS.SPA.001.LVO Low visibility operations (LVO) p. 386

comment *2531* comment by: *Royal Aeronautical Society*

In paragraph 5, the ICAO Doc number for PANS – OPS Aircraft Operations should be 8168 and not 8186.

In paragraph 9, the correct description for ICAO Doc number 9328 is 'Manual of RVR Observing and Reporting Practices'.

comment *3312* □ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3695* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4359* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4727* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5530* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO) p. 386-393

comment *578* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.SPA.001.LVO(b)(1)4.2.: add text 'low visibility'

4.2 Flight Simulator Training and/or Flight training:

a. A minimum of 6 (8 for HUDLS with or without EVS) **low visibility** approaches and/or landings in a Flight Simulator approved for the purpose. The 8 HUDLS approaches may be reduced to 6 when conducting Hybrid HUDLS operations. See 4.4a. below;

Justification:

It is not mentioned under what conditions the approaches and landings in the simulator should be made. It makes sense to conduct these approaches and landings under simulated low visibility conditions.

comment *612* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.SPA.001.LVO(b)(1)(4): change as follows:

4. Conversion Training provisions to conduct Low Visibility Take-off, Lower than Standard Category I, Other than Standard Category II, Approach utilising EVS and Category II and III Operations. **An operator shall ensure that** ~~**Each**~~ **each** flight crew member ~~**should complete**~~ **completes** the following Low Visibility Procedures training if converting to a new type/class or variant of aircraft in which Low Visibility Take-off, Lower than Standard Category I, Other than Standard Category II Approaches utilising EVS with an RVR of 800 m or less and Category II and III Operations will be conducted. The necessary flight crew member experience to undertake an abbreviated course is prescribed in 1.2, 1.3 and 1.4 above.

Justification:

Main responsibility should be with the operator and not with the crew member.

comment *667* comment by: *ECA - European Cockpit Association*

Comment on paragraphs 4.2.a and 7.1: change as follows:

4.2 Flight Simulator Training and/or Flight training:

a. A minimum of ~~**6 (8 for HUDLS with or without EVS)**~~ **8** approaches and/or landings in a Flight Simulator approved for the purpose. ~~**The 8 HUDLS approaches may be reduced to 6 when conducting Hybrid HUDLS operations.**~~ See 4.4a. below;

[…]

7. Recurrent Training and Checking – Low Visibility Operations

7.1 An operator should ensure that, in conjunction with the normal recurrent training and operator proficiency checks, a pilot's knowledge and ability to perform the tasks associated with the particular category of operation, including Low Visibility Take-Off (LVTO), for which he/she is authorised is checked. The number of approaches to be undertaken in the Flight Simulator within the validity period of the operator proficiency check is to be a minimum of 2 (4 when HUDLS and/or EVS is utilized to touchdown) one of which should be a landing at the lowest approved RVR; in addition 1 (2 for HUDLS and/or operations utilising EVS) of these approaches may be substituted by an approach and landing in the aircraft using approved Category II or III procedures. One missed approach should be flown during the conduct of the operator proficiency check. If the operator is authorised to conduct take-off with RVR less than 150/200 m, at least one LVTO to the lowest applicable minima should be flown during the conduct of the operator proficiency check. (See GM OPS.SPA.001.LVO (b)(1).)

The number of approaches to be conducted during such recurrent training is to be a minimum of ~~**two**~~ **three**, one of which is to be a missed approach and at least one low visibility take-off to the lowest applicable minima. The period of validity for this check should be 6 months including the remainder of the month of issue.

Justification:

ECA cannot agree on the reduction in training requirements from Appendix 1 to JAR-OPS 1.450 [d][2][I] and [g][1].

ECA requests to have the previous requirements from JAR-OPS 1.450 to be restored.

comment *1544* comment by: *AIRBUS*

Paragraph 5.2: The AMC is driven from the EU-OPS 1 Appendix 1 to OPS 1.450. The paragraph (e) 3 of the Appendix has been deleted. This paragraph reads: "The Authority may authorize a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience." The Agency should explain why this paragraph has been deleted or add this paragraph as a paragraph 5.3 of the AMC.

comment *1545* comment by: *AIRBUS*

Paragraph 7.1: The last part of the paragraph 7.1 reads: "The number of approaches to be conducted during such recurrent training is to be a minimum of two, one of which is to be a missed approach and at least one low visibility take-off to the lowest applicable minima. The period of validity for this check should be 6 months including the remainder of the month of issue." The underlined part of the paragraph is redundant with what is mentioned before in the paragraph 7.1 and should be deleted.

comment *1653* comment by: *Luftfahrt-Bundesamt*

It should be stated that for LVTO-Training (RVR < 400 m) a flight simulator must be used. In our opinion it is not possible to train LVTO on a real aircraft, because the visual scenario can´t be simulated in better weather conditions. Training in real weather conditions with RVR < 400 m would not be safe.

comment *2763* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial

Para 3.1, sub para i. ii. should be indented further

comment *3266* comment by: *Eurocontrol CND*

AMC OPS.SPA.001.LVO (b) (1) low visibility operations

It is not clear what kind of training is required for a crew to become qualified for Lower than Standard CAT I with autoland capability

Proposed Action: add any specific training requirement for Lower than standard CAT I with autoland

comment *3267* comment by: *Eurocontrol CND*

AMC OPS.SPA.001.LVO(b)(1)

Low visibility operations (LVO) should contain XLS/GLS, notably in sections: 2.a (P. 388), 3.7.b (P.389)

comment *3308* comment by: *AEA*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional

provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *3312* ☐ comment by: *AEA*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3696* comment by: *AUSTRIAN Airlines*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *3870* comment by: *AUSTRIAN Airlines*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *4092* comment by: *UK CAA*

Page No: 388-389

Paragraph No:

AMC OPS.SPA.001.LVO (b)(1) FLIGHT CREW TRAINING para 3.5

Comment:

To improve and clarify the text, the last sentence should be prefixed by 'thereafter'.

Justification: Clarity.

Proposed Text (if applicable): 'Thereafter the training ……aircraft'

comment *4360* comment by: *KLM*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4697* comment by: *KLM*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *4728* comment by: *TAP Portugal*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *4843* comment by: *British Airways Flight Operations*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional

provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4955* comment by: *TAP Portugal*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *4963* ☐ comment by: *Deutsche Lufthansa AG*

Relevant Text:

All chapters, applicable to various elements, for example (this means, there are more):

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Comment:

Such material is in opposition to the concept of "performance-based rulemaking". It is all detailed procedure description, but not a rule to comply with. The flexibility promised by EASA through the "performance-based rulemaking" is odd: It is true that the Implementing Rule **seems** to be leaner now than before, but all the details and in many cases even new texts have been added to the AMC (which are factual rules) and GM (which are factual audit basis).

As presented, the concept of "performance-based rulemaking" fails to convince.

Proposal:

Keep the **Implementing Rules as close as possible to EU-OPS (as having been tasked),** and refrain from detailed and/or extended procedure descriptions in AMC and GM.

comment *5053* comment by: *Deutsche Lufthansa AG*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *5130* comment by: *Pietro Barbagallo ENAC*

Comment: Flight Crew Training - par 4.3 (b) The check prescribed in 4.3 .a above, may be replaced by successfull completition of the flight simulator and /or flight training prescribed in 4.2 above. The chance to substitute the check with training also if it is successfully, is not acceptable

Justification: Any training must be followed by a check to verify the skill level acquired. LVO are operations requiring a crew suitably reactions that need to be veryfied before commencing the real operation

comment *5531* comment by: *Swiss International Airlines / Bruno Pfister*

Applicable to various sections:

AMC1 OPS.GEN.100 Ice and other contaminants

AMC2 OPS.GEN.100 Ice and other contaminants

GM1 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.100 Ice and other contaminants

GM3 OPS.GEN.100 Ice and other contaminants

GM2 OPS.GEN.150.A Instrument Flight Rules (IFR) operating minima

AMC OPS.SPA.001.RVSM(b)(2)(ix) Operations in RVSM airspace

GM OPS.SPA.001.RVSM(b)(2) Operations in RVSM airspace

GM1 OPS.SPA.001.LVO Low visibility operations (LVO)

GM2 OPS.SPA.001.LVO Low visibility operations (LVO)

AMC OPS.SPA.001.LVO(b)(1) Low visibility operations (LVO)

Relevant Text:

All chapters

Comment:

Nothing to do with an AMC; It's only procedures description. It doesn't need to be so detailed

Proposal:

Put in the rule, only what the operator has to do. It's reference document

comment *5621* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional

provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *5953* comment by: *ERA*

European Regions Airline Association Comment

Text from Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Therefore add the following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.

comment *6097* comment by: *DGAC*

Before specifying what could be acceptable for the training to be LVO authorized, it would be interesting to define first what are 'LTS cat I', 'OTS cat

II', 'cat II' and 'cat III' (cf AMC 1 OPS.SPA.020.LVO)

comment *6479* comment by: *Konrad Polreich*

AMC OPS.SPA.001.LVO (b)(1)

Nr. 7.1

This paragraph is inconsistent and written in a confusing sequence (training-checking-training-checking).

Sentence 2 states, that there have to be undertaken a minimum of 2 (4 for EVS/HUDLS) approaches in the SIM within the validity period of the OPC. Part 2 of sentence 2 (after the semicolon) states, that 1 (2) of these approaches may be undertaken in an aircraft.

Sentence 5 states that a minimum of 2 approaches have to be conducted during the recurrent training, and no alleviation is mentioned as in sentence 2, which also covers the recurrent training (what else in a simulator??).

Sentence 6 states "...this check" and therefore relating to the previous sentence, which is mentioning training requirements, not checking requirements.

Suggestion:

The last 2 sentences, which have been added to the text from EU-OPS changes the description of the requirements stated above and should be deleted, since they are not necessary.

Alternatively, state clearly the requirements for recency, training and checking.

comment *6481* comment by: *Konrad Polreich*

AMC OPS.SPA.001.LVO (b)(1)

Nr. 7.1

Sentence 6 limits the validity of a check, which is supposed to be the OPC, to 6 month, including the month of issue. This is inconsistend with the OPC requirement stated in OR.OPS.145.FC (b)(3) and its associated AMC1 OR.OPS.145.FC No 2.1.1.3 and 2.4

Suggestion:

Delete the last sentence of this paragraph, since the period of validity is stated in OR.OPS.145.FC and should not be duplicated and definitely not different.

comment *6482* comment by: *Konrad Polreich*

AMC OPS.SPA.001.LVO (b)(1)

Nr. 7.1

This paragraph is built on requirements for commercial operators, which have to do OPC's. This is not required for non-commercial operators. An additional simulator training event is very demanding for smaller operators and not really necessary, taking in account the small number of training approaches required.

This simulator training could be compensated by an adequate recency requirement.

Suggestion:

Change wording of Operator Proficiency Check into Proficiency Check, thus also including the LPC.

Alternatively:

Add at the end of No. 7.1:

Non-commercial operators operating CAT II approaches and LVTO's:

The above mentioned requirements have to be fullfiled during the validity period of the LPC and when conducting the LPC. For non commercial operators, not conducting flight simulator training every 6 months, there is an additional recency requirement for 2 approaches and landings in the aircraft using approved CAT II procedures during the last 90 days.

comment *6508* comment by: *IATA*

3.11 The training programme should include, where appropriate, approach where failures of the HUDLS and/or EVS equipment at low level require either:

a. Reversion to head down displays to control missed approach;

Proposal:

A reversion from head up to head down should

only be trained with a change of PF.

5.Type and Command Experience

The flexibility in EU-OPS should be retained.

Proposal: Add the EU-OPS requirement again

"The Authority may authorise a reduction in

the above command experience requirements

for flight crew members who have Category II or Category III commar experience."

p391

4.4 Line Flying under Supervision. An operator should ensure that each flight cre member undergoes the following line flying under supervision (LIFUS):

a. …..

b. …..

c. …..

5. Type and command experience.

5.1……

5.2…….

Appendix to EU-OPS 1.450 E (3) should be

kept in the regulation.

Proposal:

Add: 5.3 The authority may authorise a reduction concerning the above command experience for flight crew members who have category II or III command experience.

comment 6644 comment by: *KLM Cityhopper*

Comment:

Text from Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment 6863 comment by: *Icelandair*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with

a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.*

comment *7168* comment by: *Virgin Atlantic Airways*

Relevant Text:

5. Type and command experience.

5.1 Before commencing Category II operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and b. 100 m should be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:

i. a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or

ii. a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator.

iii. For HUDLS operations the sector requirements in 5.1 and 5.2 a. should always be applicable, the hours on type/class does not fulfil the requirement.

5.2 Before commencing Category III operations, the following additional provisions are applicable to the pilot-in-command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:

a. 50 hours or 20 sectors on the type, including line flying under supervision; and

b. 100 m should be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.

Comment:

Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Proposal:

Add following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. *The Authority may authorise a reduction in the above command experience requirements for flight crew members who have*

Category II or Category III command experience.

comment *7315* comment by: *ANE (Air Nostrum) OPS QM*

Text from Appendix to EU-OPS 1.450 E (3) is missing and should be added/kept in the regulation

Therefore add the following EU-OPS text;

{ref EU-OPS 1.450 E (3)}. The Authority may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC OPS.SPA.001.LVO(b)(2) Low visibility operations (LVO) p. 393-396

comment *1712* comment by: *Dassault Aviation*

Technical comment.

Page 396 GM OPS.SPA.001.LVO(b)(2) §3.1.b and §4.2: these sub-paragraphs requires a head down view of the EVS image so that the right hand pilot is kept in the loop. We still believe that having two pilots monitoring the aircraft trajectory using information - EVS image - coming from the same sensor - EVS infrared camera - is not "safety-oriented". Our proposal is to remove in this GM §3.1.b and §4.2.

comment *3268* comment by: *Eurocontrol CND*

AMC OPS.SPA.001.LVO (b) (2)

ICAO has agreed to GLS as GBAS landing system (PANS ABC, and PANS-OPS)

Proposed action: Change GNSS landing system by GBAS Landing System

comment *6484* comment by: *Konrad Polreich*

AMC OPS.SPA.001.LVO (b)(2) Table 1

For helicopters equipped with EVS the table should be complemented in the left column with the value 500 corresponding to 300 m in the right column, to reflect the lower standard minima with helicopters.

Add a new line above '550' / 350' and fill in '500' / '300' (helicopters only)

comment *7356* comment by: *FAA*

1. GM OPS.SPA.001.LVO (b)(2), para 3.1.b

Comment:

While the need for monitoring from a second pilot is a valuable addition to safety, the specific requirements levied in this paragraph are too restrictive. A monitoring pilot could be effective through the use of other tools than just "a head-down view of the EVS image, or other means of displaying the EVS-derived information …." For example, the monitoring pilot's tool could be a second heads up display or a heads down display of vertical and horizontal position derived from sources other than the EVS.

Recommendation:

Change paragraph 3.1.b to read

For a two-pilot operation, the monitoring pilot should have a means of readily identifying the vertical and horizontal accuracy of the aircraft position in relation to the runway.

comment *7358* comment by: *FAA*

1. GM OPS.SPA.001.LVO (b)(2), para 4

Comment:

In the US, there are operators that are approved to perform operations as low as CAT II with a single pilot. The requirement to have two pilots below 550 m would stand in conflict with this and not allow operators to take advantage of the safety benefits afforded by the use of EVS. An additional inconsistency with the delineation of a 550m restriction is that it would cut into the realm of the lower-than-standard CAT I operations.

Recommendation:

Recommend removing paragraph 4 in its entirety.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC OPS.SPA.001.LVO(b)(2)(iii) Low visibility operations (LVO p. 396-397

comment *1711* comment by: *Dassault Aviation*

Technical comment.

Page 396 AMC OPS.SPA.001.LVO(b)(2)(iii): with respect to OPS.SPA.030.LVO(a), the only LVO operations where at least 2 pilots are required are LTS Cat1 and EVS operations. Therefore we propose that the term "flight crew member**s**" contained in §1 of the AMC OPS.SPA.001.LVO(b)(2(iii) be corrected into "flight crew member**(s)**" to take into account LVO operations where 2 pilots are formally required by the IR (i.e. LTS Cat1 and EVS) and LVO operations where there is no formal IR requirement (i.e. OTS Cat2, Cat2, Cat3, …). §2h and §2i do not need correction.

comment *1767* comment by: *claire.amos*

Point 1

eJ has procs and instructions for Cat I, II and III ops. We do not perform the other approaches listed here, however we would support their inclusion.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - GM2 OPS.SPA.001.LVO(b)(2)(iii) Low visibility operations (LVO) p. 398-403

comment *5* comment by: *KLM*

Attachment #22

REF AMC OPS.SPA.001.LVO(b)(3) LVO

3.4 Eligible Aerodromes and Runways

The airline is not responsible of the correct functioning of the ILS equipment.

The airline is responsible to proof the correct functioning of the on board equipment by means of 3.1 continuous monitoring.
If the local authority has approved the ILS for LVO cat ll / lll functionality the airline operator must report any deviation which occurred during operation.

However the item described in 3.4 is an incidental check for any aircraft type /runway combination and has no guarantee for any further developments or functioning of the ILS.

Any malfunction or replacement of any item of the installation can have an influence on "eligible aerodromes and runways".

The required assessment has therefore no meaning for the individual airline operator as approval to use the specific equipment is already under continuous investigation.

All ILS installation must be proven by the local authority by means of flight-check. These check will be performed by other airplanes than normally operate on the airports.

The technology is of such a high standard that there will be no need to perform assessments by a specific airline or aircraft type as the local authority performs their regular flight-checks.

No ILS equipment or on board equipment is sold on the market that is not compliant with each other or the ICAO specifications and so there is no sensible check as required here, that is usefull.

This is an irrealistic burden to airlines that is not adding to structural safety.

Any mistake made in maintenance of the ILS or on board equipment will not be prevented because of this requirement.

The whole requirement has to be deleted

as it is not adding any safety but an administrative burden to operators without any benefit.

The requirement seems incident driven and that can never be a basis for such

demanding regulations.

Alternate airports are because of this excluded from planning and use with CATII/III equipment restricting operators while there is no need. It means more fuel to be carried and burned which means more emission as well.

For this regulation a proof of need has to be given if it will be retained as is, but definetely that will not be possible and those requirements with so much impact should not be demanded.

See also attached file with analysis of ILS reliability from the SREADES database, that shows that this requirement is highly exaggerating the risks.

comment *1765* comment by: *claire.amos*

3.4 e

Agreed, but how will this be done in practice?

comment *1766* comment by: *claire.amos*

3.3

Flight Ops - OK but verification required from Engineering

3.4 a

easyJet does not accept that this is necessary if the aircraft type/runway combination has already been verified by another operator.

comment *2956* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Para 2.b insert Additionally, some operators recommend .....

Comment

Para 2.e The onus is currently on operators to prove and record autoland capabilities for aircraft and runway combinations or to use data from other operators.

Proposal:

Make it a requirement for operators to inform the aerodrome and that the aerodrome is required to publish "approved" combinations.

comment *2957* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment:

Para 2.3 vi. It is unreasonable to expect the crew to note "Trim at the time of automatic flight control disengagement" when conducting Auto Lands.

Proposal:

Para 2.3 iv **If possible** trim at the time of automatic flight control disengagement.

comment *2963* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Comment 3.4 a.

This paragraph has been inherited from JAR-OPS where the impracticalities of the requirement were alleviated by the Operators NAA accepting the Approval of the host NAA responsible for the aerodomes LVO approval as being adequate. This was a practical resolution to this requirement.

With the onset of EU-OPS the NAA's have been removed from this equation and are not permitted to alleviate operators in this way. This is a unneccessary inhibiting requirement. It is impractical both operationally and financially to visit all ETOPS and non ETOPS ERAs solely for the purpose of proving CAT III operations. It would be appropriate for Operators to inform the aerodrome of successful CAT II approaches [with reference to aircraft type/variant and make this available ["publish"] approved combinations.

Proposal:

Remove para 3.4 a. and replace with:

For CAT III approved aerodromes [as authorised by the host NAA] it is acceptable for Operators who have NAA LVO approval in their home state for the aircraft type[s]/variants operated by that Operator to utilise the aerodrome[s] in question within that host state. This pre-supposes that the Operator in question has applied for LVO approval in the host country in accordance with the Operators AOC LVO approval.

comment *3269* comment by: *Eurocontrol CND*

AMC OPS.SPA.001.LVO (b) (2) (iii) Low visibility Operations

j. The requirement for the ILS Sensitive area to be protected

In case of Lower than CAT I operations is this requirement applicable down to 200ft, or to the threshold? In other terms do we have to protect for the signal on the visual segment? This is quite important to know as a CAT I airport does not have CAT II holding positions for example.

At several other places this requirement has been extended to LVP have to be in force. LVPs cover more than ILS signal protection.

Finally ILS is not the only system that can support LVO. Same requirement should apply to the other eligible systems.

There is no section that identifies the requirements when low visibility are in force.

There is no clarification regarding ATM procedures for low visibility take off and the ones for approach and landing.

Proposed action:

Clarify the exact operation requirement vis a vis the protection needed on the ground.

Take into consideration other landing system protection criteria (e.g. MLS)

Add a section for when LVP are in force

Add a section clarifying LVP applicability: for take off or for approach and landing.

comment *6099* comment by: *DGAC*

1. Editorial comment:

This GM2 comes before the AMC/GM's which introduce what cat III operations and cat II operation are, it does not help understanding. It would maybe be more appropriate to introduce first what cat II and cat III are

2. What about operators who do not want to be authorized for SPA LVO, but who operate aircraft certified cat I with autoland (cf airbus has been certified gls cat 1 autoland). Do those operators have to apply this AMC? Do they need a SPA?

3. Chapter 2.a.ii: Lots of Cat 2 are now performed in autoland.

This AMC should take into consideration the following criteria to authorize autoland training:

ILS 2nd digit should be at least D or E (see 3.1.3.4.2 vol I annex 10 ICAO)

Glide performance should meet cat II performance

Operator should check compliance between its Aircraft, autoland system and the runway profile and also profile of the terrain before the runway threshold.

Glide slope should not be higher than 3°.

comment *6514* comment by: *IATA*

3.1 Continuous Monitoring

a. After obtaining the initial authorisation, the operations should be continuous monitored by the operator to detect any undesirable trends before they becon hazardous.

This is a new requirement and totally impractical for a day to day operation.

Proposal: Delete

3.4 Eligible Aerodromes and Runways

a. Each aircraft type/runway combinations should be verified by the successf completion of at least one approach and landing in Category II or bett conditions, prior to commencing Category III operations.

b. For runways with irregular pre-threshold terrain or other foreseeable or know deficiencies, each aircraft type/runway combination should be verified l

operations in standard Category I or better conditions, prior to commenci
Lower than Standard

Category I, Category II, or Other than

Standard Category II.

What could be gained in safety by performing

a CAT III approach in VMC?

Which airport starts a CAT III operation on request in VMC?

Proposal:

Delete No 3.4

comment *6712* comment by: *AIR FRANCE*

§3.4 Eligible Aerodromes and runways

We don't know any figures or incidents showing the need for this "in Category II or better conditions," demonstration. Prior to the implementation of EU OPS, DGAC France didn't require this demonstration and we never had a problem when starting new Cat III opertaions. When an aeroplane, an aerodrome and a crew are CAT III certified they should be allowed to proceed. We suggest to delete this requirement.

If the requirement is maintained we would consider normal that EASA provides a database of the already existing demonstrations (per type of aeroplane/QFU) in order for the operators to take advantage of § 3.4.(e)

comment *7113* comment by: *IACA International Air Carrier Association*

2.b

insert Additionally, some operators recommend...

comment *7115* comment by: *IACA International Air Carrier Association*

2.e

The onus is currently on operators to prove and record autoland capabilities for aircraft and runway combinations or to use data from other operators.

Proposal:

Make it a requirement for operators to inform the aerodrome and that the aerodrome is required to publish "approved" combinations.

comment *7116* comment by: *IACA International Air Carrier Association*

2.3 vi

It is unreasonable to expect the crew to note "Trim at the time of automatic

flight control disengagement" when conducting Auto Lands.

Proposal:

If possible trim at the time of automatic flight control disengagement.

comment *7118* comment by: *IACA International Air Carrier Association*

3.4 a.

This paragraph has been inherited from JAR-OPS where the impracticalities of the requirement were alleviated by the Operators NAA accepting the Approval of the host NAA responsible for the aerodomes LVO approval as being adequate. This was a practical resolution to this requirement.

With the onset of EU-OPS the NAA's have been removed from this equation and are not permitted to alleviate operators in this way. This is a unnecessary inhibiting requirement. It is impractical both operationally and financially to visit all ETOPS and non ETOPS ERAs solely for the purpose of proving CAT III operations. It would be appropriate for Operators to inform the aerodrome of successful CAT II approaches [with reference to aircraft type/variant and make this available ["publish"] approved combinations.

Proposal:

Remove para 3.4 a. and replace with:

"For CAT III approved aerodromes [as authorised by the host NAA] it is acceptable for Operators who have NAA LVO approval in their home state for the aircraft type[s]/variants operated by that Operator to utilise the aerodrome[s] in question within that host state. This pre-supposes that the Operator in question has applied for LVO approval in the host country in accordance with the Operators AOC LVO approval."

comment *7122* comment by: *IACA International Air Carrier Association*

1.b.

The difference between EASA and FAA for Pilots is not of any value.

More or less common sense: Use of autoland without "LVP in progress"

comment *7361* comment by: *FAA*

1. GM2 OPS.SPA.001.LVO (b)(2)(iii) - (Para 1. a. Page 398)

Comment:

The acronym LLZ is not used in the US or ICAO. LOC is the correct acronym for localizer.

Recommendation:

Recommend changing LLZ to LOC.

comment *7363* comment by: *FAA*

GM2 OPS.SPA.001.LVO (b)(2)(iii)

(Para 1. a. Page 398)

Comment:

The statement that the critical areas are protected in the U.S. when the weather is less than 800-2 is not entirely accurate.

ATC issues control instructions to avoid interfering operations within ILS critical areas at controlled airports during the hours the Airport Traffic Control Tower (ATCT) is in operation as follows: (a) Weather Conditions. Less than ceiling 800 feet and/or visibility 2 miles.

(1) Localizer Critical Area. Except for aircraft that land, exit a runway, depart or miss approach, vehicles and aircraft are not authorized in or over the critical area when an arriving aircraft is between the ILS final approach fix and the airport. Additionally, when the ceiling is less than 200 feet and/or the visibility is RVR 2,000 or less, vehicle and aircraft operations in or over the area are not authorized when an arriving aircraft is inside the ILS MM.

(2) Glide Slope Critical Area. Vehicles and aircraft are not authorized in the area when an arriving aircraft is between the ILS final approach fix and the airport unless the aircraft has reported the airport in sight and is circling or side stepping to land on a runway other than the ILS runway.

Operators may incorrectly assume that full protection is provided when the weather is 800-2.

Recommendation:

Recommend changing the last sentence to read:

At US airports the Localisor (LOC) and GP critical area protection will begin when weather at the airport is reported less than 800 feet ceiling and/or visibility is less than 2 miles and will be fully protected when the ceiling is less than 200 feet and/or the visibility is RVR 2,000 or less, when an arriving aircraft is inside the ILS MM.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC1 OPS.SPA.001.LVO(b)(3) Low visibility operations (LVO) p. 400

comment *613* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.SPA.001.LVO(b)(3)(3.4)(b): change as follows:

3.4 Eligible Aerodromes and Runways

a. Each aircraft type/runway combination should be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations.

b. For runways with irregular pre-threshold terrain or other foreseeable or known deficiencies, each aircraft type/runway combination should be verified by operations in standard Category I or better conditions, prior to commencing Lower than Standard Category I, ~~**Category II, or Other than Standard Category II.**~~ <![endif]--><u>**Other than Standard Category II,Category II**</u>

or III Operations.

Justification:

Category III should be added.

comment *1009* comment by: *CAA-NL*

Comment CAA-NL regarding:

AMC1 OPS.SPA.001.LVO(b)(3), requirement 3.4

Comment CAA-NL:

The AMC does not clearly state if compliance with requirement 3.4 'Eligible Aerodromes and runways' is required continuously throughout the operation or only at the time of the inital application of the CAT II and Cat III special approval.

Proposal CAA-NL:

The CAA-NL requests EASA to change AMC 1 OPS SPA.001.LVO (b) 3 In accordance with appendix 1 to OPS 1.440 (a) of EU-OPS. The AMC should clearly state that compliance with requirement 3.4 is required continuously throughout the operation and not only at the time of the initial application of the Cat II and Cat III special approval.

comment *1654* comment by: *Luftfahrt-Bundesamt*

Page 403, 3.4 should completely be deleted because it doesn´t make any sense today.

Flight Calibration which is required by specialized companies is sufficient according to our opinion.

comment *1713* comment by: *Dassault Aviation*

Technical comment.

Page 400 AMC1 OPS.SPA.001.LVO(b)(3) - Operational demonstration and data collection/analysis: for approaches with DH ≥ 50 feet, the operational demonstration at the operator level should be at least 30 approaches and landings. For DH < 50 feet, the number of approaches and landings is increased to 100. We propose an alternative for these number of approaches and landings, provided it is demonstrated in the OSC. We therefore propose a reorganisation of § 1.1.a as follows:

1.1 The purpose of the operational demonstration is to determine or validate the use and effectiveness of the applicable aircraft flight guidance systems, including HUDLS if appropriate, training, flight crew procedures, maintenance programme, and manuals applicable to the Category II/III programme being approved.

*a.**i** At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft,*

*at least 100 approaches and landings should be accomplished**, or***

a.ii The number of approaches or landings where Decision Height (DH) is 50 ft or higher, or where the DH is less than 50 ft, is approved through Part 21.

comment *3270* comment by: *Eurocontrol CND*

AMC1 OPS.SPA.001.LVO(b)(3) Low visibility operations (LVO)

item 2.3.b.viii, 2.4.a.i and 2.5.b (P.401/2): ILS should be replaced by XLS

comment *3271* comment by: *Eurocontrol CND*

3.4 Eligible aerodromes and runways

In this section there is no mention of LVP requirement for lower than standard CAT I , or type of ILS/MLS required.

Proposed action: gather all information regarding airport infrastructure requirements in one section.

comment *3307* comment by: *AEA*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *3309* comment by: *AEA*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and

landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *3817* comment by: *AUSTRIAN Airlines*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *3818* comment by: *AUSTRIAN Airlines*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *4700* comment by: *KLM*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *4702* comment by: *KLM*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *4956* comment by: *TAP Portugal*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *4957* comment by: *TAP Portugal*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *5054* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *5057* comment by: *Deutsche Lufthansa AG*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *5375* comment by: *Virgin Atlantic Airways*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *5622* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Operational demonstration and data collection/analysis

Comment:

At the Air Safety Committee, the European Commission, at the request of several member States, has asked EASA to review this requirement and its practical implications.

Proposal:

Review this requirement in line with the instructions from the Air Safety Committee

comment *5623* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

a. At least 30 approaches and landings should be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.

Comment:

EU-OPS allowed for authorities' discretion about the amount of approaches and landings.

Proposal:

Add: "***unless otherwise approved by the competent authority***"

comment *5954* comment by: *ERA*

European Regions Airline Association Comment

3.4 Eligible Aerodromes and Runways

a. Each aircraft type/runway combination should be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations.

This was a new requirement introduced in the latest version of EU-OPS under 1.440 (h)(1). It was a requirement that had received no prior approval from the original OSC/Stakeholders. ERA members have raised their concerns already to EASA about this requirement which is ineffectual (system is already CS.AWO compliant, airports are normalized, one approach is not statistically significant) and totally unworkable for all QFUs (example CDG outer runways are never used for landings) and alternate airports. Therefore, ERA members would request the removal of 3.4 a. in full:

~~a. Each aircraft type/runway combination should be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations~~

The remaining part of 3.4 is acceptable.

comment *6308* comment by: *Lufthansa CityLine GmbH*

3.4 Eligible Aerodromes and Runways

(a), (b)

This was a new requirement introduced in the latest version of EU-OPS under 1.440 (h)(1). It was a requirement that had received no prior approval from the original OSC/Stakeholders. ERA members have raised their concerns

already to EASA about this requirement which is ineffectual (system is already CS.AWO compliant, airports are normalized, one approach is not statistically significant) and totally unworkable for all QFUs (example CDG outer runways are never used for landings) and alternate airports. Therefore, Lufthansa CityLine would request the removal of 3.4 (a) and (b) in full. The remaining part of 3.4 is acceptable.

~~a) Each aircraft type/runway combination should be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations.~~

~~b) For runways with irregular pre-threshold terrain or other foreseeable or known deficiencies, each aircraft type/runway combination should be verified by operations in standard Category I or better conditions, prior to commencing Lower than Standard Category I, Category II, or Other than Standard Category II.~~

comment *6528* comment by: *IATA*

1. Operational Demonstration for aeroplanes

1.1 ……

a. At least 30 approaches and landings should be accomplished in operatio using the Category II/III systems installed in each aircraft type if the request Decision Height (DH) is 50 ft or higher. If the DH is less than 50 ft, at least 1(approaches and landings

should be accomplished.

Comment:

EU-OPS provides more flexibility.

Proposal:

Add "unless otherwise approved by the competent authority"

comment *7314* comment by: *ANE (Air Nostrum) OPS QM*

3.4

Eligible Aerodromes and Runways

a. Each aircraft type/runway combination should be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations.

This was a new requirement introduced in the latest version of EU-OPS under 1.440 (h)(1). It was a requirement that had received no prior approval from the original OSC/Stakeholders. ERA members have raised their concerns already to EASA about this requirement which is ineffectual (system is already CS.AWO compliant, airports are normalized, one approach is not statistically significant) and totally unworkable for all QFUs (example CDG outer runways are never used for landings) and alternate airports.

Therefore, we would request the removal of 3.4 a. in full

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC2 OPS.SPA.001.LVO(b)(3) Low visibility operations (LVO) p. 404-405

comment *3311* comment by: *AEA*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *3819* comment by: *AUSTRIAN Airlines*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *4704* comment by: *KLM*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *4958* comment by: *TAP Portugal*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *5058* comment by: *Deutsche Lufthansa AG*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *5378* comment by: *Virgin Atlantic Airways*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *5624* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

comment *6864* comment by: *Icelandair*

Relevant Text:

1.4 not more than 30% of the demonstration flights should be made on the same runway.

Comment:

This is not practical at busy airports

Proposal:

Delete this requirement

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC1 OPS.SPA.020.LVO LVO operating minima p. 405-406

comment *614* comment by: *ECA - European Cockpit Association*

Comment on AMC1 OPS.SPA.020.LVO: delete item 4

~~**4. In establishing the aerodrome operating minima which will apply to any particular operation, an operator should take full account of: a. the type, performance and handling characteristics of the aircraft; b. the composition of the flight crew, their competence and experience; c. the dimensions and characteristics of the FATO's/runways which may be selected for use; d. the adequacy and performance of the available visual and non-visual ground aids (see AMC 4 OPS.SPA.020.LVO); e. the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, as appropriate, during the take-off, the approach, the flare, the hover, the landing, roll-out and the missed approach; f. the obstacles in the approach, missed approach and the climb-out areas required for the execution of contingency procedures and necessary clearance; g. the obstacle clearance altitude/height for the instrument approach procedures; h. the means to determine and report meteorological conditions; and i. the flight technique to be used during the final approach.**~~

Justification:

This is already in OPS.GEN.150(p34)

comment *2733* comment by: *EHOC*

General

There is a lack of consistency between the approach taken for 'OPS.GEN.150' and that for 'AMC1 OPS.SPA.020.LVO'.

The calculating methods for 'Aerodrome minima' have been split between Subpart GEN and Subpart SPA (with the exception of LVTO) but the objective requirements, that are contained in IR OPS.GEN.150, are only a method of compliance in AMC1 OPS.SPA.020.LVO.

There are potential issues that arise from this:

1. Apart from the title, there is no objective in OPS.SPA.020.LVO for which this is a method of compliance (in fact the objective is itself contained in the AMC). (The AMC could be promoted to an IR with the title 'Aerodrome Operating Minima - General')
2. The text of the AMC (apart from the substitution of the word 'shall' with

'should') contains the rule objective. This can be seen from the wording (my underlining) "An operator should establish, for each aerodrome planned to be used, aerodrome operating minima that are not lower than the values given in...". Apart from the 'should', this sentence contains an imperative.

3. The second paragraph of the AMC also contains an imperative "Such minima should not be lower than the minima that may be established for such aerodromes by the State in which the aerodrome is located, except where specifically approved by that State". (This is a Standard in ICAO Annex 6 Part 2, Chapter 2.2.2.2, and Part 1, Chapter 4.2.8.1 and might therefore be a rule and not a method of compliance - what other method of compliance could there be?)
4. The text that has been used in GEN and the LVO AMC are not quite the same (the AMC is a more accurate representation of the original text).

Apart from convenience, it is not clear why the text for the methods of establishment of the aerodrome minima has been split in this way. In EU OPS, all of the methods of calculation were in one Appendix - with the objective for that minima set in the single rule. The requirements in Subpart SPA.LVO could have just contained: the elements required for the approval of such operations; the intent of the orginal five rules; and their associated appendices (if required, as AMCs). There is an additional complication that the minima for LVTO are not provided in the Subpart SPA.LVO but, as indicated in Appendix 4 to AMC1 OPS.SPA.020.LVO, are contained in AMC3 to OPS.GEN.150 paragraph 3.

It is suggested that the methods of calculation of Aerodrome Minima be returned to a single Appendix attached to OPS.GEN.150. It is also suggested that the IRs in Subpart SPA.LVO are revisited to decide whether the functional grouping of the rules is as logical as it was in the original.

comment *3272* comment by: *Eurocontrol CND*

OPS.SPA.020.LVO 2):

There is no distinction here regarding low visibility procedures for take off and those for landing. It can be that an airport has only take low visibility procedures that would not necessarily protect for the landing operations.

Proposed action: clarify LVP applicability

comment *7509* comment by: *FINNAIR*

Lower than Standard CAT I (LTS CAT I) and Other than Standard CAT II (OTS CAT II) are missing from Table 1.

Proposal

Add LTS CAT I and OTS CAT II into the Table 1 by adding a new column for LTS CAT I and combining OTS CAT II with CAT II (some additions are needed).

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC1 OPS.SPA.020.LVO LVO operating minima - Appendix 1 to AMC1 OPS.SPA.020.LVO p. 406-407

comment *615* comment by: *ECA - European Cockpit Association*

Comment on Appendix 1 to AMC1 OPS.SPA.020.LVO: This appendix should be an IR, not an AMC.

Justification:

All requirements of DH/RVR should be published as Implementing Rules.

comment *967* comment by: *KLM*

It should be mentioned that equivalent ALS as specified by the FAA is allowed to be used.

comment *3273* comment by: *Eurocontrol CND*

Appendix 1 to AMC1 OPS.SPA.020.LVO operating minima

LTS and OTS are not ICAO procedures

Lower Than Standard CAT I:

For DH 200ft LTS allows a RVR 400m whereas DH 199ft OTS allows 450m. This looks inconsistent. Rationale needs to be checked.

There is no requirement for ILS type to be published in AIP. How does an operator find out that the ILS provided at a specific airport fully meets the requirement for lower than Standard CAT I, in particular the fact that the system has been flight checked to the threshold?

Proposed actions:

Correct inconsistency if recognised or document the rationale for the difference.

Identify AIP requirements and potential phraseology changes requirements

Other Than Standard CAT II

OTS definition needs to be changed if CAT I system can only be used for DH at 200ft. For the moment the definition is clearly an operation below 200ft: we would propose to remove this possibility as OTS definition says DH should be lower than 200ft which can not be achieved by ILS I/T/1.

Additionally the same issue applies as above regarding ILS type publication.

Proposed action: remove a) of the eligible system list

comment *7365* comment by: *FAA*

Appendix 1 to AMC1 OPS.SPA.020.LVO LVO operating minima

Comment:

The performance requirement for the ILS to support CAT I operations appears to be excessive.

Class I/T/1 requires Category III localizer performance to threshold. This will result in an increased burden on the aerodrome and facilities organizations. Operations below 450 m require that the ILS be recertified to a Facility Performance Category II standard. This seemingly defeats the concept of providing more useful CAT I operations.

Requiring dual ILS facilities unless the single ILS facilities are rated at level 2 integrity and continuity, is restrictive.

The number of opportunities afforded pilots to successfully land from an approach under low visibility conditions will be unnecessarily limited by constraining the facility requirements for the lower than standard CAT I operations.

Recommendation:

Change paragraph 2 to read:

…..and the ILS should be certified to class I/A/1.

comment *7375* comment by: *FAA*

Appendix 1 to AMC1 OPS.SPA.020.LVO LVO operating minima

Table 1 - Lower than Standard Category I Minimum RVR/CMV vs. Approach Light System (Page 407)

Comment:

The table allows for lower than standard operations with DH's above 200 ft. We need to reassess whether reductions should be allowed under these circumstances.

There are two basic reasons that a DH is raised above 200 ft: either there is an obstacle problem that needs to be mitigated; or, the ILS glide slope is out-of-tolerance and requires a restriction to its use below a certain altitude. Both situations indicate a less than optimum 3D approach and landing operation.

We know of no studies that would support authorizing lower than standard operations with no lights (NALS) or basic lights (BALS).

Recommendation:

The EASA/FAA All Weather Operations Harmonization Working Group should reexamine the operation. In the meantime, we recommend that the columns for BALS and NALS be removed.

comment *7390* comment by: *FAA*

Appendix 1 to AMC1 OPS.SPA.020.LVO LVO operating minima

Table 1 - Lower than Standard Category I Minimum RVR/CMV vs. Approach Light System (Notes on Page 407)

Comment:

The notes state that the visual aids comprise approach lighting, yet the table above the note allows for NALS. If operations are authorized without approach lighting systems, the note needs to be revised. The note and the table can be confusing as to what is the minimum requirement.

Recommendation:

Revise the note or the table.

comment *7393* comment by: *FAA*

Appendix 1 to AMC1 OPS.SPA.020.LVO LVO operating minima

(**Page 407, para 5 a.)**

Comment:

Lower than standard CAT I operations require autoland or HUDLS to 150 ft. This makes the use of a localizer over the runway mandatory if the operator elects to autoland. The localizer SARPS for Facility Performance Category III might not be met in the touch down zone of the runway. You are only requiring that the ILS has to be certified to class I/T/1 which does not support autoland operations. Many antenna types that support CAT I operations are susceptible to disruptions and it can be difficult to protect an autoland (CAT III) sensitive area.

Recommendation:

Either do not require autoland for CAT I operations; or require that the ILS be certified and protected to at least class I/D/1. Also, if the autoland option is retained, the max height of the ILS reference datum or the achieved ILS reference datum should be limited to 18 meters.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC1 OPS.SPA.020.LVO LVO operating minima - Appendix 2 to AMC1 OPS.SPA.020.LVO p. 407-409

comment *616* comment by: *ECA - European Cockpit Association*

Comment on Appendix 2 to AMC1 OPS.SPA.020.LVO: This appendix should be an IR, not an AMC.

Justification:

All requirements of DH/RVR should be published as Implementing Rules.

comment *1007* comment by: *CAA-NL*

Comment CAA-NL regarding:

1.c the colon after the lead in sentence should be deleted as well as (i) to continue with the requiements in (ii).

Substantiation: DH's lower than 200ft can not be achieved by ILS I/T/1.

comment *4093* comment by: *UK CAA*

Page No: 408

Paragraph No:

Appendix 2 to AMC1 OPS.SPA.020.LVO (1)(c)

Comment:

(c)(i) Class I/T/1 for the operations down to 450 m RVR and to a DH of 200ft or more;

This is not relevant for CAT II operations and therefore the line 'Single ILS facilities are only acceptable if level 2 performance is provided' is also not needed.

Justification:

Cat II operations refer to a DH of 200 ft or less. Therefore stating an ILS requirement for CAT II operations with a DH of 200 ft or more does not make sense.

Class II/D/2 implies a requirement for level 2 performance.

Proposed Text (if applicable):

c. The ILS/MLS that supports other than a Standard Category II operation should be an unrestricted facility with a straight in course (≤ 3º offset) and the ILS should be certificated to~~:~~ ***Class II/D/2.***

~~i. Class I/T/1 for operations down to 450 m RVR and to a DH of 200 ft or more; or~~

~~Class II/D/2 for operations in RVRs of less than 450m or to a DH of less than 200ft.~~

comment *6100* comment by: *DGAC*

c.i. Class I/T/1 has more to do with Lower than standard cat I

Proposal : Suppress line c.i..

For the RVR, check consistency of Table 2 of this appendix 2 and Table 1 – Lower than standard cat I minimum of Appendix 1 to AMC1 OPS.SPA.020.LVO

comment *7398* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

(para 1.b.ii. - Page 408)

Comment:

The RVR values listed in the paragraph are 350/400 m and refers to table 2. The table 2 values are 300/350.

Recommendation:

Revise the values to reflect 300/350 in the paragraph and the table.

comment *7403* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

(para 1.c. - Page 408)

Comment:

The AMC is indicating that a straight in course ≤ 3^{o} offset is acceptable. This would be unacceptable for low RVR operations and autoland. The localizer course could be outside of the limits of the runway.

Recommendation:

Recommend rewording as follows:

The ILS/MLS that supports other than a Standard Category II operation should be an unrestricted facility with a straight in course aligned with runway centerline…..etc,

comment *7407* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

(para 1.c.i., ii. - Page 408)

Comment:

A Class 1/T/1 ILS and a DH of 200 with an RVR of 450 m is describing a lower than standard CAT I operation. Why would you now want to describe it as an other than standard CAT II operation?

Recommendation:

Recommend deleting i., and incorporating ii., into the main paragraph.

Revised text would then be:

The ILS/MLS that supports other than a Standard Category II operation should be an unrestricted facility with a straight in course aligned with runway centerline and the ILS should be certificated to class II/D/2 or better.

comment *7412* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

Table 1 – RVR for Cat II Operations vs DH - Page 408

Comment:

The first column of the bottom row lists "141 and above." It is inconsistent with the text.

Recommendation:

Recommend changing it to "141 to 199" to be consistent with paragraph 1. b. i., above.

comment *7424* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

Note below Table 2 - Other than Standard Category II Minimum RVR vs. Approach Light System – Page 409

Comment:

The note states that approach lights are required to conduct operations.

Recommendation:

Consider rewriting note to make this conditional since the table authorizes NALS operations.

comment *7425* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

Note below Table 2 - Other than Standard Category II Minimum RVR vs. Approach Light System – Page 409

Comment:

The note states "For operations in RVR of 400 m or less, centre line lights *should* be available." The regulation indicates that it is optional.

Recommendation:

Recommend rewording as follows:

"For operations in RVR of 400 m or less, centre line lights shall be available."

comment *7428* comment by: *FAA*

Appendix 2 to AMC1 OPS.SPA.020.LVO LVO operating minima

CAT II AND OTHER THAN STANDARD CAT II OPERATIONS

Para. 5 - Page 409

Comment:

This AMC states that operators "should" ensure that appropriate low visibility procedures are established, etc. This appears to be inconsistent with Draft

Opinion OPS.SPA.020.LVO which uses mandatory language.

Page 92 of the Draft Opinion OPS.SPA.020.LVO LVO operating minima states in pertinent part that:

(b) An operator shall not use an aerodrome for operations in accordance with this section, unless: (1) the aerodrome has been approved for such operations by the State in which it is located; (2) low visibility procedures (LVP) have been established at that aerodrome where LVO are to be conducted.

(c) The pilot-in-command shall ensure that: (1) appropriate LVPs are in force according to information received from Air Traffic Services, before commencing a Low Visibility Take-off, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach, and (2) the status of the visual and non-visual facilities are sufficient prior to commencing a Low Visibility Take-Off, an Approach utilising EVS, a Lower than Standard Category I, an Other than Standard Category II, or a Category II or III approach.

Recommendation:

Consider changing this language to something more mandatory such as shall or must.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC1 OPS.SPA.020.LVO LVO operating minima - Appendix 3 to AMC1 OPS.SPA.020.LVO p. 409-410

comment *617* comment by: *ECA - European Cockpit Association*

Comment on Appendix 3 to AMC1 OPS.SPA.020.LVO: This appendix should be an IR, not an AMC.

Justification:

All requirements of DH/RVR should be published as Implementing Rules.

comment *816* comment by: *CAA-NL*

In table 1 to

Appendix 3 to AMC1 OPS.SPA.020.LVO LVO operating minima

PRECISION APPROACH - CAT III OPERATIONS

the first line of CATIIIA is set to 200m. According to ICAO, through, amdt 33 to Annex 6 part I, amdt 28 to Annex 6 part II and amdt 14 to Annex 6 part III changing this value to 175m should be considered.

comment *890* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Refering to App. 3 to AMC 1 OPS.SPA.020.LVO, Para 1 (a) (i): Precise the wording: a decision height lower

than 100 ft, or no decision height; and "

comment *891* comment by: *Condor Flugdienst GmbH - FRA HO/R*

Please open a new subparagraph 4.3.stating the following:

"For CAT IIIB operations with no decision height there is no requirement for visual contact with

the runway prior to touchdown." Refer to App. 3 to AMC 1 OPS.SPA.020.LVO Para 5.1.

comment *1100* comment by: *Condor Flugdienst GmbH - FRA HO/R*

According Condor the used term "Rollout system" needs to be specified!

comment *4094* comment by: *UK CAA*

Page No: 409

Paragraph No:

Appendix 3 to AMC1 OPS.SPA.020. LVO (1)

Comment:

Definitions of CAT IIIA and CAT IIIB Operations differ from recent ICAO definition. Modify RVR figures as appropriate.

Delete reference to ILS and MLS.

Justification:

ICAO has recently changed the CAT III definitions to harmonise with those used by the FAA.

ICAO also does not specify the approach aid to be used, currently only ILS and MLS are available for CAT II/III but GLS (GBAS) is under development.

Proposed Text (if applicable):

1. General

   Category III operations are subdivided as follows:

   a. Category III A operations. A precision instrument approach and landing ~~using ILS or MLS~~ with:

      i. A decision height lower than 100 ft; and

      ii. A runway visual range not less than ~~200~~ **175** m.

   b. Category III B operations. A precision instrument approach and landing ~~using ILS or MLS~~ with:

      i. A decision height lower than 100 ft, or no decision height; and

      ii. A runway visual range lower than ~~200~~ **175** m but not less than ~~75~~ **50** m.

Where the decision height (DH) and runway visual range (RVR) do not fall within the same Category, the RVR will determine in which Category the

operation is to be considered.

comment *5686* comment by: *Deutsche Lufthansa AG*

Comment:

GM2 Appendix 3 to AMC1 OPS.SPA.020.LVO LVO operating minima reads:

"5.1 For Category III operations with No Decision Height the pilot is not required to see the runway prior to touchdown. The permitted RVR is dependent on the level of aircraft equipment."

This important concept is missing in this Appendix 3 to AMC1

Proposal:

Insert a new para 4.3:

4.3 For CatIIIB operations with no decision height there is no requirement for visual contact with the runway prior to touchdown.

comment *6101* comment by: *DGAC*

The CS AWO 321 and CS AWO 304 are more accurate than this table regarding installed equipment requirements.

Is there a need to specify the conditions on the roll Out control/guidance system since it is not the only equipment requirement difference between the different cat 3 operations?

Proposal : we suggested deleting the column Roll-Out..

comment *7124* comment by: *IACA International Air Carrier Association*

1.a.1.

Replace "i. A decision height lower than 100 ft; and " by

"i. A decision height lower than 100ft, or no decision height; and"

comment *7125* comment by: *IACA International Air Carrier Association*

4.2.

Para. 4.2. should read: "For Cat IIIB operations with a decision height conducted either..."

Suggest new Paragraph 4.3.:

"For Cat IIIB operations with no decision height there is no requirement for visual contact with the runway prior to touchdown". Justification: common sense, see also :

p.413 ***GM2 Appendix 3 to AMC1 OPS.SPA.020 LVO para.5.1***

5. Category III fail operational operations - with No Decision Height

5.1 For Category III operations with No Decision Height the pilot is not required to see the runway prior to touchdown. The permitted RVR is dependent on the level of aircraft equipment.

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - GM2 Appendix 3 to AMC1 OPS.SPA.020.LVO LVO operating minima p. 411-413

comment *4095* comment by: *UK CAA*

Page No: 412

Paragraph No:

GM2 App 3 to AMC1 OPS.SPA.020.LVO

Comment:

At paragraph e. 4th line it should read 'than' and not 'that'.

Justification: Typo

Proposed Text (if applicable):

Delete "that" and replace with "than"

comment *4096* comment by: *UK CAA*

Page No: 412

Paragraph No:

GM2 Appendix 3 to AMC1 OPS.SPA.020.LVO LVO operating minima

Comment:

Para 3.2 and 3.3 Use of 'he/she' when referring to 'pilot' is unnecessary and disjoints the flow of the text.

Justification:

To improve readability.

Proposed Text (if applicable):

replace 'he/she' with 'the pilot'

B. II. Draft Decision - Part-OPS - Subpart D - Section IV - AMC2 OPS.SPA.020.LVO LVO operating minima p. 413-415

comment *313* comment by: *Rega / Swiss Air-Ambulance*

AMC2 OPS.SPA.020.LVO LVO operating minima TABLE 1 - Failed or downgraded equipment - effect on landing minima

Scope:

The after the column title "FAILED OR DOWNGRADED EQUIPMENT" mentioned note --> (note 1) is not present.

Text to be added:

Add note as applicable or delete the text (note 1) after the column title "FAILED OR DOWNGRADED EQUIPMENT"

Proof:

Not applicable.

Background:

Swiss Air Ambulance is a subsidiary of Rega, Switzerland's national air-rescue organisation, which was founded in 1952. Swiss Air Ambulance can draw on decades of experience and the expertise of professional teams to provide competent, comprehensive assistance in the event of medical emergencies all over the world operating besides 13 dedicated HEMS helicopters 3 dedicated Bombardier CL-604 "Challenger" ambulance jets with a range of 3'500 NM. Its services range from providing medical advice to repatriating patients to/from Switzerland or any other point of the world. Swiss air-ambulance is a private, non-profit organisation, which operates in accordance with the guiding priniples of the Red Cross. It comes to the aid of people in distress, without respect of their nationality, religious convections or social status. Swiss air-ambulance operates under the Air Operator Certificate CH-AOC-No.1015 issued by the Federal Office of Civil Aviation Switzerland (FOCA) and is compliant with EU-OPS. Please visit www.rega.ch

comment *1235* comment by: *AUSTRIAN Airlines*

How shall we use the table falied or downgraded equipment for LTS Cat I and OTS Cat II?

The problem:

1) LTS Cat I and OTS Cat II are not shown in table falied or downgraded equipment

2) In GM1 OPS.SPA.001.LVO - Terminology the definition shows:

h. 'Lower than Standard Category I Operation'. A Category I Instrument Approach and Landing Operation using Category I DH, with an RVR lower than would normally be associated with the applicable DH.

i. 'Other than Standard Category II Operation'. A Category II Instrument Approach and Landing Operation to a runway where some or all of the elements of the ICAO Annex 14 Precision Approach Category II lighting system are not available.

that implies, that for the LTS Cat 1 the "standard" Cat I rules (tables) apply (if not otherwise indicated) and for OTS Cat 2 the "standard" Cat II rules (tables) apply (if not otherwise indicated).

Now back to table falied or downgraded equipment: with this interpretation i use Cat I column for LTS Cat I and Cat II column for OTS Cat II.

3) The problem now is that the LTS Cat I requires autoland and the visual references like Cat II and OTS Cat II does NOT require a Cat II approach light

system but can also be used with NALS, IALS, etc ..

Some examples where this does not match in table falied or downgraded equipment:

When i use the Cat I column for LTS Cat I:

- Column "Touchdown zone RVR assessment system": should be the same as Cat 2

When i use the Cat II column for OTS Cat II:

- Column "Approach lights": Should be same as for Cat I (Minima for NALS apply)
- Column "Approach lights except the last 210 m": Should be same as for Cat I (Minima for NALS apply)
- Column "Whole runway light system": Should be same as for Cat I (Minima for NALS apply)
- Column "Centreline lights": Day RVR 300 is not applicable as lowest RVR cat OTS Cat II is 350!
- Column "Touchdown zone lights": Day RVR 300 is not applicable as lowest RVR cat OTS Cat II is 350!

comment *1763* comment by: *claire.amos*

Edge lights, threshold lights and runway end lights:- a total or in individual elements?

comment *1764* comment by: *claire.amos*

Is **1.1** necessary as the conditions are in Table 1?

comment *3274* comment by: *Eurocontrol CND*

AMC2 OPS.SPA.020.LVO LVO operating minima

in item 2.d replace ILS by XLS

comment *3310* comment by: *AEA*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision

approaches

comment *3820* comment by: *AUSTRIAN Airlines*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *4706* comment by: *KLM*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *4847* comment by: *British Airways Flight Operations*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

General Comment:

NPA 2009-2 in its entirety is unfit for the purpose for which it is intended and must be withdrawn and reconsidered.

comment *4959* comment by: *TAP Portugal*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *5059* comment by: *Deutsche Lufthansa AG*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *5379* comment by: *Virgin Atlantic Airways*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *5625* comment by: *Swiss International Airlines / Bruno Pfister*

Relevant Text:

Table 1

Comment:

Table 1 has no info on CAT 1 and Non Precision approaches

EU-OPS does have info on CAT 1 and Non Precision approaches

Proposal:

Use table as published in EU-OPS and add info about CAT 1 and Non Precision approaches

comment *7352* comment by: *FAA*

1. Table 1 of AMC12 OPS.GEN.150; *and*

paTable 1 of AMC2 OPS.SPA.020.LVO

Comment:

The tables which describe the affect of failed or downgraded equipment on landing minima only apply to operational requirements. A similar strategy should be applied to navaid facility, aerodromes, and air traffic control requirements. The determination that a facility or instrument approach procedure is not suitable for use negates the intent and the effects of these tables for operators. Similar standards are needed to authorize continued operations in the event of system downgrades or failures. In some circumstances, it may be appropriate for approved operators to continue in the event of component failures if those operators use suitable equipment, training, and procedures to mitigate the failure of specific components.

Recommendation:

Apply similar navaid facility, aerodrome, and air traffic control requirements in the event of component failure.

B. II. Draft Decision - Part-OPS - Subpart D - Section V - AMC OPS.SPA.001.DG(b)(1) Approval to transport dangerous goods p. 416

comment *850* comment by: *Reto Ruesch*

Training intervals of not longer than 2 years

Due to high number of training and checks for a crew involved in all operations we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1140* comment by: *Heli Gotthard*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS

Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1209* comment by: *Stefan Huber*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1265* comment by: *Air Zermatt*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks (!!): HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1316* comment by: *Air-Glaciers (pf)*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1810* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops Spa 001 DG Training intervals of not longer than 2 years

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT

(annual check), dangerous check (2 years).

comment *1957* comment by: *Berner Oberländer Helikopter AG BOHAG*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2043* comment by: *Heliswiss AG, Belp*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2174* comment by: *Dirk Hatebur*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2180* comment by: *Heliswiss*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2187* comment by: *Heliswiss NV*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2442* comment by: *Jan Brühlmann*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2485* comment by: *Catherine Nussbaumer*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2573* comment by: *Walter Mayer, Heliswiss*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2863* comment by: *Philipp Peterhans*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14

checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2945* comment by: *Pascal DREER*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *3595* comment by: *Aero-Club of Switzerland*

The interval proposed by the Agency is much too short. We propose:

6. Training should be conducted at intervals of not longer than 5 years.

Justification: The interval proposed by the Agency represents an unnecessary burden on everyone engaged in the transportation of Dangerous Goods. It would be much cheaper to prepare the contents of the training syllabi accordingly, respecting what Phil Condit of Boeing Aeroplane some years ago said: "Quality has to be built-in, not to be tested-in."

comment *4010* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA 001 DG:

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years. Flight crew undergo 14 checks: HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *4572* comment by: *Christophe Baumann*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM

annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *4733* comment by: *Virgin Atlantic Airways*

Relevant Text:

3. Training intended to give general information and guidance may be by any means including handouts, leaflets, circulars, slide presentations, videos, etc and may take place on-the-job or off-the-job……This training should include a written or oral examination covering……

Comment:

The text does not reflect the ability to deliver this training through 'computer based training' (CBT), which part of the modern portfolio of teaching methods. The text also does not reflect the ability to take the examination via computer-based training.

Proposed Text:

Change text to:

3. Training intended to give general information and guidance may be by any means including handouts, leaflets, circulars, slide presentations, videos, computer based training etc and may take place on-the-job or off-the-job……This training should include a written or, oral or computer based examination covering……

comment *5820* comment by: *Ph.Walker*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6173* comment by: *Hans MESSERLI*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years. Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6319* comment by: *SHA (AS)*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6640* comment by: *Heliswiss International*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *7039* comment by: *Swiss Helicopter Group*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *7123* comment by: *Eliticino SA*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

B. II. Draft Decision - Part-OPS - Subpart D - Section V - AMC OPS.SPA.001.DG(b)(2)(ii) Approval to transport dangerous goods p. 416-417

comment *1433* comment by: *International Air Transport Association*

AMC OPS.SPA.001.DG(b)(2)(ii) 1. b.

The ICAO Technical Instructions permits the operator to accept the information contained on the dangerous goods transport document in electronic form in lieu of a paper document.

Proposed revision:

Amend b. to read as follows:

"b. except when otherwise specified in the Technical Instructions, they are accompanied by two copies of a dangerous goods transport document, or the information applicable to the consignment is provided in electronic form; and"

comment *6985* comment by: *Christian Hölzle*

Owing to high number of training and checks for a crew involved in all operations, we require training intervals of 5 years.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

B. II. Draft Decision - Part-OPS - Subpart D - Section V - AMC OPS.SPA.001.DG(b)(2)(v) Approval to transport dangerous goods p. 417-418

comment *2965* comment by: *The TUI Airlines group represented by Thomson Airways,TUIfly,TUIfly Nordic,CorsairFly,Arkefly,Jet4U,JetairFly*

Editorial:

Para 1a. Typo error: Any contamination ~~found as a result of~~ resulting from the ....

B. II. Draft Decision - Part-OPS - Subpart D - Section V - AMC OPS.SPA.001.DG(b)(2)(vii) Approval to transport dangerous goods p. 418

comment *1202* comment by: *CAA-NL*

AMC OPS.SPA.001.DG(b)(2)vii

Comment: No mention is made of the need to inspect unit load devices as required by the Technical Instructions.

Justification: AMC OPS.SPA.001.DG(b)(2)vii contains 4 of the 5 aspects under EU-OPS 1.1200 and it is not clear why point 2. relating to unit load devices should have been omitted.

Proposed Text:

Add a new point 2. to AMC OPS.SPA.001.DG(b)(2)vii as follows:

"2. A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;"

and consequentially amend subsequent bullet points.

comment *1563* comment by: *Luftfahrt-Bundesamt*

The so called „Unit Load Device (ULD)" should be mentioned as well:

„1. Packages, overpacks, **Unit Load Device (ULD)** and freight containers are inspected for evidence of leakage or damage immediately prior to loading on an aircraft, as specified in the Technical Instructions;"

comment *2004* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

No mention is made of the need to inspect unit load devices as required by the Technical Instructions.

Comment:

AMC OPS.SPA.001.DG(b)(2)vii contains 4 of the 5 aspects under EU-OPS 1.1200 and it is not clear why point 2. relating to unit load devices should have been omitted.

Proposal:

Add a new point 2. to AMC OPS.SPA.001.DG(b)(2)vii as follows:

"2. A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;"

and consequentially amend subsequent bullet points.

comment *2785* comment by: *Pietro Barbagallo ENAC*

Comment: No mention is made of the need to inspect unit load devices as required by the Technical Instructions.

Justification: AMC OPS.SPA.001.DG(b)(2)vii contains 4 of the 5 aspects under EU-OPS 1.1200 and it is not clear why point 2. relating to unit load devices should have been omitted.

Proposal: Add a new point 2. to AMC OPS.SPA.001.DG (b) (2) vii as follows: "2. A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of

leakage from, or damage to, the dangerous goods contained therein;" and consequentially amend subsequent bullet points.

comment *4097* comment by: *UK CAA*

Page No: 418

Paragraph No: AMC OPS.SPA.001.DG(b)(2)vii

Comment: No mention is made of the need to inspect unit load devices as required by the Technical Instructions.

Justification: AMC OPS.SPA.001.DG(b)(2)vii contains 4 of the 5 aspects under EU-OPS 1.1200 and it is not clear why point 2. relating to unit load devices should have been omitted.

Proposed Text (if applicable):

Add a new point 2. to AMC OPS.SPA.001.DG(b)(2)vii as follows:

"2. A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;"

and consequentially amend subsequent bullet points.

comment *6664* comment by: *Finnish CAA*

Paragraph No: AMC OPS.SPA.001.DG(b)(2)vii

Comment: No mention is made of the need to inspect unit load devices as required by 7;3.1 of the Technical Instructions.

Justification: AMC OPS.SPA.001.DG(b)(2)vii contains 4 of the 5 aspects under EU-OPS 1.1200 and it is not clear why point 2. relating to unit load devices should have been omitted.

Proposed Text (if applicable):

Add a new point 2. to AMC OPS.SPA.001.DG(b)(2)vii as follows:

"2. A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;"

and consequentially amend subsequent bullet points.

B. II. Draft Decision - Part-OPS - Subpart D - Section V - AMC OPS.SPA.040.DG(b) Dangerous goods information and documentation p. 418

comment *1199* comment by: *CAA-NL*

OPS.SPA.040.DG(b) 2. / AMC OPS.SPA.040.DG(b) 2.

Comment 1: This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents.

Justification: The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposed Text :

1. Delete OPS.SPA.040.DG (b) and consequentially renumber subsequent paragraphs;

2. Add the following to OPS.GEN.030:

"(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

Comment 2

AMC OPS.SPA.040.DG(b) 2.

Comment 2: It is inappropriate to refer to handling agents.

Justification: The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent (e.g. in the previous sub paragraph)

Proposed Text:

"An operator ~~and, where applicable, his handling agent~~ should ensure that notices……"

comment *1546* comment by: *AIRBUS*

Paragraph 2: The paragraph 2 reads: "An operator and, where applicable, his handling agent should ensure that notices are provided at acceptance points […]." With this AMC, the requirements of the paragraph OPS.SPA.040.DG(b) become applicable to parties that are not operators. This is not in line with the scope of the regulation given in the paragraph OPS.SPA.005.GEN that reads: "This part establishes the requirements to be met by an operator to qualify for the issue or continuation of specific operational approvals."

comment *1565* comment by: *Luftfahrt-Bundesamt*

Since this is a more general passage it should be required in the General section, e.g. as paragraphs (e) and (f) under OPS.GEN.030 rather than in the AMC.

comment *2002* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents.

Comment:

The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposal:

1 Delete OPS.SPA.040.DG (b) and consequentially renumber subsequent paragraphs;

2 Add the following to OPS.GEN.030:

"(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

comment *2003* comment by: *Federal Office of Civil Aviation (FOCA), Switzerland*

Concern Detail:

It is inappropriate to refer to handling agents.

Comment:

The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent (e.g. in the previous sub paragraph).

Proposal:

"An operator ~~and, where applicable, his handling agent~~ should ensure that notices……".

comment *2776* comment by: *Pietro Barbagallo ENAC*

Comment: This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents.

Justifiation:The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposal:1. Delete OPS.SPA.040.DG (b) and consequentially renumber subsequent paragraphs; 2. Delete AMC.OPS.SPA.040.DG (b) and move its content in OPS.GEN.030 adding the following: "(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft. (f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

comment *4098* comment by: *UK CAA*

Page No: 418

Paragraph No:

OPS.SPA.040.DG(b) 2. / AMC OPS.SPA.040.DG(b) 2.

Comment:

This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents.

Justification: The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposed Text (if applicable):

1. Delete OPS.SPA.040.DG (b) and consequentially renumber subsequent paragraphs;

2. Add the following to OPS.GEN.030:

"(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(f) The operator ~~and, where applicable, his handling agent~~ shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

comment *4099* comment by: *UK CAA*

Page No: 418

Paragraph No:

AMC OPS.SPA.040.DG(b) 2. (see also UK CAA comment 4098)

Comment:

It is inappropriate to refer to handling agents.

Justification:

The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent (e.g. in the previous sub paragraph)

Proposed Text (if applicable):

"An operator ~~and, where applicable, his handling agent~~ should ensure that notices……"

comment *6650* comment by: *Finnish CAA*

Comment: This text should appear in OPS.GEN. In addition, it is inappropriate to refer to handling agents. (See also our comment to OPS.SPA.040.DG(b).)

Justification: The carriage of dangerous goods in passenger baggage is not related to the holding of a dangerous goods approval, which is for the carriage of dangerous goods in cargo. The implementing rules do not apply to handling agents, only operators and they are required to "ensure" notices are provided (which may be delegated to a handling agent). If this comment is not accepted, reference to handling agent would have to be added everywhere in the text where a particular activity may be delegated to a handling agent.

Proposed Text (if applicable):

1. Delete AMC OPS.SPA.040.DG(b);

2. Add the following to OPS.GEN.030:

"(e) The operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(f) The operator shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods."

B. II. Draft Decision - Part-OPS - Subpart D - Section VI p. 419

comment *2574* comment by: *Walter Mayer, Heliswiss*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after

a risk analysis and approval by the national authority.

comment *4100* comment by: *UK CAA*

Page No: 419

Paragraph No: Title

Comment:

The associated OPS.SPA.SFL applicability has been suggested for change (see UK CAA comment) and therefore the AMC title requires alignment.

Justification:

Editorial and alignment.

Proposed Text (if applicable):

Section VI –Helicopter *Commercial* operations without an assured safe forced landing capability

comment *6643* comment by: *Heliswiss International*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

comment *6645* comment by: *Heliswiss International*

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6647* comment by: *Heliswiss International*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *6988* comment by: *Christian Hölzle*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

comment *6989* comment by: *Christian Hölzle*

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM OPS.SPA.001.SFL(b) Operations without an assured safe forced landing capability p. 419

comment *515* comment by: *EHOC*

General

The text of GM OPS.SPA.001.SFL(b) belongs to OPS.CAT.360.H; it has nothing to do with operations without SFL. It would better if it were (b) of the IR above:

OPS.CAT.360.H

"(b) The approved performance data contained in the Helicopter Flight Manual is used to determine compliance with the requirements of the appropriate performance class, supplemented as necessary with other data acceptable to the competent authority as may be prescribed in the relevant requirements. When applying the factors prescribed for the appropriate performance class, account should be taken of any operational factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of these factors."

Renumber old (b) to (c).

comment *851* comment by: *Reto Ruesch*

38 419 B Ops SPA SFL Statistics, compare with Swiss record Provide CH record

comment *1141* comment by: *Heli Gotthard*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1210* comment by: *Stefan Huber*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1211* comment by: *Stefan Huber*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *1317* comment by: *Air-Glaciers (pf)*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2185* comment by: *Heliswiss*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2864* comment by: *Philipp Peterhans*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not

come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *4011* comment by: *HDM Luftrettung gGmbH*

OPS SPA SFL:

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *5821* comment by: *Ph.Walker*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6102* comment by: *DGAC*

This. GM dealing with the use of performance data contained in the Helicopter Flight Manual should not be located in OPS.SPA as it is not restricted to operations without an assured safe forced landing capability but is also

applicable to OPS.COM and OPS.CAT.

comment *7127* comment by: *Eliticino SA*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - AMC OPS.SPA.001.SFL(b)(1) and (b)(2) Operations without an assured safe forced landing capability p. 419

comment *1266* comment by: *Air Zermatt*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1741* comment by: *Robert R McGregor*

AMC OPS.SPA.001.SFL(b)(1) and (b)(2) Operations without an assured

safe forced landing capability

POWERPLANT RELIABILITY STATISTICS

Comment: It is stated in this AMC that sudden power loss events (those exceeding a loss of more than 30% of take-off power) should not exceed a rate of 1 event per 100,000 engine hours, in a 5 year moving window. Therefore, it is not sensible to also state that an in flight shut-down (IFSD) rate of 3 per 100,000 engine hours would also be acceptable. Not only do these figures contradict each other, but a sudden power loss event may not result in an IFSD event. Consequently, the text should be amended as shown below, with deleted text struck through and additional text in bold:

1. Except in the case of new engines, power plant reliability should **not** show sudden power loss **event rates** ~~from the set of in-flight shutdown (IFSD) events not~~ exceeding 1 per 100,000 engine hours in a 5 year moving window. ~~A rate in excess of this value, but not exceeding 3 per 100,000 engine hours, may be accepted by the competent authority after an assessment showing an improving trend.~~
2. New engines should be assessed on a case-by-case basis.
3. After the initial assessment, updated statistics should be periodically reassessed; any adverse sustained trend will require an immediate evaluation to be accomplished by the operator in consultation with the competent authority and the manufacturers concerned. The evaluation may result in corrective action or operational restrictions being applied.

comment *1811* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA SFL Statistics, compare with Swiss record

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *1958* comment by: *Berner Oberländer Helikopter AG BOHAG*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on

AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2045* comment by: *Heliswiss AG, Belp*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2181* comment by: *Dirk Hatebur*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *2190* comment by: *Heliswiss NV*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

comment *2191* comment by: *Heliswiss NV*

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2456* comment by: *Jan Brühlmann*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

comment *2457* comment by: *Jan Brühlmann*

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2487* comment by: *Catherine Nussbaumer*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurences for SE over a total of 240 representing 12%. 5 occurences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

comment *2575* comment by: *Walter Mayer, Heliswiss*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2946* comment by: *Pascal DREER*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *4574* comment by: *Christophe Baumann*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on

AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *6103* comment by: *DGAC*

This text deals with the eligibility of helicopters to be authorised under SPA SFL. As it is more or less the same philosophy as ETOPS, the provision as regards the sudden power loss rate including the following GM following this AMC (GM OPS.SPA.001.SFL(b)(1) and (b)(2)) should be in an airworthiness text. Otherwise the people from EASA airworthiness will not be aware of their responsibility regarding the eligibility.

comment *6175* comment by: *Hans MESSERLI*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *6321* comment by: *SHA (AS)*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type

in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *6388* comment by: *Trans Héli (pf)*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

comment *7045* comment by: *Swiss Helicopter Group*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the remaining 9, five happends on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurences.

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comment *7349* comment by: *new European Helicopter Association*

Statistics : From 1968 the Swiss AIB reports 18 flame out occurrences (6 on SP and 12 on SE)(10 CAT - 5 AW - 3GA). Out of these 18, 3 were due to HFACS (ice ingestion and fuel contamination). Concerning the SE, on the

remaining 9, five happened on Bell 204,205,206, three on SA315B and one on AS350. Considering 390 occurrences and a total of 4 engine failure on the type in use for AW-HEMS-SAR, that represent only 1% of the total occurrences.

From 1968 the Swiss AIB reports 58 occurrences related to technical or maintenance. 25 cases for SP, 28 cases for SE and 5 cases for ME. If we compare to the number of announced occurrences the figures shows : 25 occurrences for SP over a total of 121 representing 21%. 28 occurrences for SE over a total of 240 representing 12%. 5 occurrences for ME over a total of 29 representing 17%. Single Engine is according to this database the safest type. More, both IHST and EHEST in their respective analysis and research have not come to a result or any recommendations about the performance class type of helicopters. Therefore the choice of the performance class shall be left to the operator, provided he obtain the National Authority AOC required.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM OPS.SPA.001.SFL(b)(1) and (b)(2) Operations without an assured safe forced landing capability p. 419-421

comment *1746* comment by: *Robert R McGregor*

GM OPS.SPA.001.SFL(b)(1) and (b)(2) Operations without an assured safe forced landing capability

DETERMINATION OF SUDDEN POWER LOSS RATE

Comment: 'Applicability factor' and the 'assumptions made on the efficiency of corrective actions' are subjective items and should not be used in the primary statistical analysis. Consequently, the text should be amended as shown below, with deleted text struck through and additional text in bold:

a. Share of roles between the helicopter and engine Type Certificate Holders (TCH).

i. The provision of documents establishing the in-service sudden power loss rate for the helicopter/engine installation; the interface with the operational authority of the State of Design should be the Engine TCH or the Helicopter TCH depending on the way they share the corresponding analysis work.

ii. The Engine TCH should provide the Helicopter TCH with a document including: the list of in-service power loss events~~, the applicability factor for each event (if used), and the assumptions made on the efficiency of any corrective actions implemented (if used)~~;

iii. The Engine or Helicopter TCH should provide the operational authority of the State of Design or, where this authority does not take responsibility, the competent authority, with a document that details the calculation results - taking into account:

A. the events caused by the engine and the events caused by the engine installation;

B. ~~the applicability factor for each event (if used), the assumptions made on the efficiency of any corrective actions implemented on the engine and on the helicopter (if used); and~~

C. the calculation of the power plant power loss rate.

b. Documentation.

The following documentation should be updated every year:

i. The document with detailed methodology and calculation as distributed to the authority of the State of Design;

ii. A summary document with results of computation as made available on request to any competent authority;

iii. A Service Letter establishing the eligibility for such operation and defining the corresponding required configuration as provided to the operators.

c. Definition of the "sudden in-service power loss".

The sudden in-service power loss is an engine power loss:

i. larger than 30 % of the take-off power;

ii. occurring during operation; and

iii. without the occurrence of an early intelligible warning to inform and give sufficient time for the pilot to take any appropriate action.

d. Data base documentation.

Each power loss event should be documented, by the engine and/or helicopter TCH's, as follows:

i. incident report number;

ii. engine type;

iii. engine serial number;

iv. helicopter serial number;

v. date;

vi. event type (demanded IFSD, un-demanded IFSD **or sudden power loss**);

vii. ~~presumed~~ cause;

viii. ~~applicability factor when used;~~ and

ix. reference ~~and assumed efficiency~~ of the corrective actions that will have to be applied (if any).

e. Counting methodology.

Various methodologies for counting engine power loss rate have been accepted by authorities. The following is an example of one of these methodologies:

i. The events resulting from:

A. ~~unknown causes (wreckage not found or totally destroyed, undocumented or unproven statements); or~~

B. ~~where the engine or the elements of the engine installation have not been investigated (for example when the engine has not been returned by the customer); or~~

C. an unsuitable or non representative use (operation or maintenance) of the helicopter or the engine;

are not counted as in-service sudden power loss and the applicability factor is 0%

ii. The events caused by:

A. the engine or the engine installation; or

B. the engine or helicopter maintenance, when the applied maintenance was compliant with the Maintenance Manuals; are counted as engine in-service sudden power loss and the applicability factor is 100 %.

iii. ~~For the events where the engine or an element of the engine installation has been submitted to investigation which did not allow defining a presumed cause, the applicability factor is 50 %.~~

f. Efficiency of corrective actions. The corrective actions made by the engine and helicopter manufacturers on the definition or maintenance of the engine or its installation could be defined as mandatory for specific commercial air transport (CAT) operations. ~~In this case, the associated reliability improvement could be considered as mitigating factor for the event. A factor defining the efficiency of the corrective action could be applied to the applicability factor of the concerned event.~~

g. Method of calculation of the power plant power loss rate. The detailed method of calculation of the power plant power loss rate should be documented by engine or helicopter TCH and accepted by the relevant authority.

Remarks: It is a lesson from history, that measures taken to improve a system do not always have a satisfactory result. The SS Titanic was widely believed to be unsinkable, but in 1912, its system of watertight compartments failed to prevent the ship sinking after a collision with an iceberg. At the inquiry into the disaster, the superior design of the watertight compartments on the SS Mauritania and SS Lusitania was quoted in evidence and the Titanic's sister ship SS Britanic was modified to address this design weakness. Two years later the SS Empress of Ireland, despite being equipped with sections of double hull and watertight compartments, sank after a collision and more than 1,000 fatalities resulted. In 1915, the modified SS Britanic struck a mine and despite the improved design of watertight compartments, sank in less than an hour. Later that year, the SS Lusitania, was hit by a torpedo and despite her 'superior' watertight compartments also sank with colossal loss of life. And in 1956 the 'unsinkable' Andrea Dorea foundered after a collision with the MV Stockholm, despite her modern watertight compartments.

The moral of this story is that one should be conservative when it comes to anticipating how successful a modification to a critical system will be. Only a period of in-service usage with an accompanying reduction in instances of failures can give confidence to an assumption that a problem has been solved.

In the case of helicopter operations, without an assured safe forced landing capability, which are predicated upon very low engine failure rates, the benefits that may follow from changes in design and maintenance practices should not be anticipated. Instead, the statistics of sudden power loss should be used unmodified in order to determine the average failure rate, and the associated trend should be established by means of a linear regression of the primary data.

comment *2186* comment by: *Heliswiss*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after

a risk analysis and approval by the national authority.

comment *2488* comment by: *Catherine Nussbaumer*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *4012* comment by: *HDM Luftrettung gGmbH*

OPS SPA SFL:

Not possible for all public interest site

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *6104* comment by: *DGAC*

(1)(a)(iii):

Proposal:

Amend the text of (1)(a)(iii) as follows :

"The Engine or Helicopter TCH should provide **EASA** ~~the operational authority of the State of Design or, where this authority does not take responsibility, the competent authority,~~ with a document that details the calculation results - taking into account:…"

Justification:

There is no more reason for having "where this authority does not take responsibility". EASA has to take the responsibility for that because EASA is responsible for the airworthiness and to ensure that the eligibility of helicopters will be the same throughout Europe.:

Proposal :

The Engine or Helicopter TCH should provide EASA with a document that details the calculation

comment *6389* comment by: *Trans Héli (pf)*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *6443* comment by: *HDM Luftrettung gGmbH*

(b) (1):

This a requirement for the manufacturer and should be deleted here

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - AMC OPS.SPA.001.SFL(b)(3)(ii) Operations without an assured safe forced landing capability p. 421

comment *852* comment by: *Reto Ruesch*

Not possible for all public interest site

This again is not applicable to mountain operations as the sites are always different and due to the weather change, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and an approval of the National authority.

comment *1142* comment by: *Heli Gotthard*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *1267* comment by: *Air Zermatt*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *1318* comment by: *Air-Glaciers (pf)*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *1812* comment by: *Heli Gotthard AG Erstfeld*

Ops SPA SFL Not possible for all public interest site

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority

comment *1887* comment by: *SHA (AS)*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *1959* comment by: *Berner Oberländer Helikopter AG BOHAG*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2047* comment by: *Heliswiss AG, Belp*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2184* comment by: *Dirk Hatebur*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2194* comment by: *Heliswiss NV*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2460* comment by: *Jan Brühlmann*

This again is not applicable to mountain operations as the sites are always

different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2576* comment by: *Walter Mayer, Heliswiss*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2865* comment by: *Philipp Peterhans*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *2947* comment by: *Pascal DREER*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *3597* comment by: *Aero-Club of Switzerland*

We think what the Agency proposes is an impossible to follow, especially in mountain areas.

Justification: Not everything can be planned and documented in advance. That is why there is a PiC onboard any aircraft who is able to judge and to decide.

Another remark: After having read all Agency proposals referring to helicopter operations we think that offshore operations at sea level were considered to a very much higher degree than operations in mountain areas where very often helicopter operations contribute greatly to assure everything which can be summarized under the term of "logistics".

comment *4424* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

Should state: 2. Part C of the Operations Manual should therefore contain for each public interest site a diagram or annotated photograph showing the main aspects, the dimensions, the non-conformance with performance class 1

requirements, the main risks and the contingency plan should an incident occur **or a reference where such information can be found. It is accaptable that such informations are published in an electronic format**.

comment *4578* comment by: *Christophe Baumann*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *5822* comment by: *Ph.Walker*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *6177* comment by: *Hans MESSERLI*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *6328* comment by: *Heliswiss International*

Mpsc : This is also required for COM (and may also be required for GEN complex aircraft). The provision of this in Part SPA might add a burden to the Authorities that might be unnecessary/unwelcome.Shall be at least 7 pax due to already existing helicopter models with 7 seating capacity like AW119, EC130B4.

comment *6992* comment by: *Christian Hölzle*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *7060* comment by: *Swiss Helicopter Group*

This again is not applicable to mountain operations as the sites are always

different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *7129* comment by: *Eliticino SA*

This again is not applicable to mountain operations as the sites are always different and because of weather changes, the routing will also be adapted to the circumstances. Again alleviation shall be permitted for mountain ops after a risk analysis and approval by the national authority.

comment *7362* comment by: *ADAC Luftrettung GmbH*

Diese Forderungen ist zumindest für HEMS vollkommen utopisch und praktisch nicht umsetzbar: Es liegt in der Natur des HEMS-Flugbetriebs, dass nicht vorher bestimmt werden kann, in welches Krankenhaus der Patient geflogen wird. Dies entscheidet sich je nach Art der Verletzung und Verfügbarkeit der medizinischen Leistungen erst während des konkreten Einsatzes. Um gewährleisten zu können, dass jeder transportierte Patient die entsprechende notwendige medizinische Indikation erhält, muss sichergestellt sein, dass jeder einzelne Hubschrauber unserer Flotte im konkreten Bedarfsfall auch jedes Krankenhaus anfliegen kann. Dazu müssten aber für alle vorhandenen Hubschrauberflugplätze an Krankenhäusern, an denen keine Möglichkeit zur Durchführung einer sicheren Notlandung während der Start- und Landephase besteht landeplatz-spezifische Verfahren entwickelt werden. Dies ist bereits allein aufgrund der Vielzahl der existierenden Krankenhauslandesstellen (allein in Deutschland insgesamt über 1.000) praktisch nicht umsetzbar. Außerdem kann dies generell nicht Aufgabe jedes einzelnen Operators sein, sondern ist vielmehr originäre Aufgabe des jeweiligen Landeplatzbetreibers.

Denkbar und auch umsetzbar ist dagegen die Entwicklung und Beschreibung von einigen grundsätzlichen Standardverfahren für den An-/Abflug ohne Möglichkeit zur Durchführung einer sicheren Notlandung. Dies wäre unserer Erfahrung nach auch aus dem Gesichtspunkt der Sicherheit vollkommen ausreichend:

Von 1970 bis Ende 2008 hat die ADAC Luftrettung GmbH über 500.000 Rettungseinsätze durchgeführt. In der Regel sind pro Rettungseinsatz drei Starts und drei Landungen anzusetzen, die, bedingt durch die orographischen Vorgaben und des Einsatzauftrages, regelmäßig nicht auf einem flugplatzähnlichen Gelände durchgeführt werden können. In der Summe der genannten Rettungseinsätze und der daraus resultierenden knapp **3 Millionen** Starts und Landungen hat innerhalb der ADAC Luftrettung GmbH nicht ein einziger Triebwerkausfall zu einem Flugunfall geführt. Insofern sind die derzeit gemäß JAR-OPS 3 deutsch (in der bis zum 31.12.2009 geltenden Fassung) geregelten Anforderungen zur Erreichung eines angemessenen Sicherheitsniveaus vollkommen ausreichend. Eine weitere Verschärfung ist nicht erforderlich. Mit Einführung der JAR-OPS 3 hat die ADAC Luftrettung GmbH mehr als **100.000.000,00 €** für die Modernisierung der Hubschrauberflotte investiert. Alle eingesetzten Hubschrauber sind gemäß Kategorie A zugelassen und nach JAR 27/29 zertifiziert.

Wir beantragen daher, HEMS-Flüge auch zukünftig generell mit Hubschrauber zertifiziert nach Kategorie A in Übereinstimmung mit

Flugleistungsklasse 2 (ohne Exposure Time und UMS) durchführen zu können und von den Anforderungen des Subpart D, Section VI auszunehmen.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - AMC OPS.SPA.001.SFL(b)(4) and (b)(5) Operations without an assured safe forced landing capability p. 421-423

comment *1206* comment by: *EUROCOPTER*

Comment on § 5.:

The requirement is already covered by OPS.SPA.001.SFL (b)(6). So this requirement should not be listed as one of the set of conditions requested by OPS.SPA.001.SFL (5).

Proposal is to delete § 5.:

~~*5. Establish training for the flight crew which should include the discussion, demonstration, use and practice of th etechniques necessary to minimise the risks;*~~

comment *5709* comment by: *Robinson Helicopter Company*

The requirements for an engine monitoring system given in this AMC are specific to turbine powered helicopters and are not appropriate for piston powered helicopters. The requirements appear to be identical to those of ACJ-2 to Appendix 1 to JAR-OPS 3.517(a). A proposal for revising ACJ-2 to extend its applicability to piston powered helicopters was previously submitted to the JAR-OPS 3 HSST, and the relevant paragraphs are provided below for reference:

2. Conduct the preventive maintenance actions recommended by the helicopter or engine manufacturer as follows:

2.1 Engine oil spectrometric and debris analysis - as appropriate;

2.2 Engine trend monitoring, based on available power assurance checks for turbine engines, or cylinder compression checks for reciprocating engines;

2.3 For turbine engines, engine vibration analysis (plus any other vibration monitoring systems where fitted).

2.4 Oil consumption monitoring.

3. The Usage Monitoring System should fulfil at least the following:

3.1 Recording of the following data:

• Date and time of recording, or a reliable means of establishing these parameters;

• Amount of flight hours recorded during the day plus total flight time;

For turbine engines:

• N1 (gas producer RPM) cycle count;

- N2 (power turbine RPM) cycle count (if the engine features a free turbine);
- Turbine temperature exceedance: value, duration;
- Power-shaft torque exceedance: value, duration (if a torque

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - AMC OPS.SPA.005.SFL(b) and (c) Applicability p. 423

comment *516* comment by: *EHOC*

Paragraph 1.b.

These conditions apply only to the take-off phase; the wording should be:

"b. for operations from a helideck..."

Paragraph 2.b.

These conditions apply only to the landing phase; the wording should be:

"b. for operations to a helideck..."

comment *1361* comment by: *EUROCOPTER*

Proposal: In order to restore the original JAR-OPS 3 text (JAR-OPS 3.520 (a)(3)(ii) for take-off; JAR-OPS 3.535(a)(3)(ii) for landing), Eurocopter propose the following wording modifications:

§ 1 b.: write: *"for operations* ~~***to /***~~ ***from*** *a helideck,* ***either when located*** *in a hostile environment* ~~***and***~~ ***or with a helicopter that has a MPSC of more than 19***, ~~***a non-hostile environment,***~~ *the take-off mass …"*

§ 2 b.: write: *"for operations* ***to*** ~~***/ from***~~ *a helideck,* ***either when located*** *in a hostile environment* ***or with a helicopter that has a MPSC of more than 19*** *,* ~~***a non-hostile environment,***~~ *the landing mass …"*

Rationale:

In JAR-OPS 3.520 (a)(3)(ii) and JAR-OPS 3.535(a)(3)(ii), the additional requirements (so called 'Enhanced PC2') are applicable either to helicopters located in a hostile environment whatever the MPSC is (condition B) or to helicopters with MPSC of more than 19 (condition A).

comment *4101* comment by: *UK CAA*

Page: 423

Paragraph No:

AMC OPS.SPA.005.SFL(b) and (c)

Comment:

Minor editorial change to correct text to align with sense of the context of take-off conditions in 1(b) and landing conditions in 2(b).

Justification:

Editorial.

Proposed Text (if applicable):

1b. for operations ~~to/~~from a helideck in a hostile environment …

2b. for operations to~~/from~~ a helideck in a hostile environment …

comment *6106* comment by: *DGAC*

(1)(b) and (2)(b) : We have reservations regarding the use of "Enhanced Performance Class 2" as we are not sure that the data will be made available to the operator by the manufacturer.

comment *6318* comment by: *Heliswiss International*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *6330* comment by: *Heliswiss International*

Applicability : This alleviation has been incorporated into Part OPS.SPA. Most of the clauses have been bound up into the requirement but the original guidance on when it might be applicable is missing. It might be clearer if there was guidance attached to OPS.SPA.005.SFL paragraph (d)(3).JAR guidance was as follows: IEM to Appendix 1 to JAR-OPS 3.005 Helicopter operations over a hostile environment located outside a congested area 1 The subject Appendix has been produced to allow a number of existing operations to continue.

comment *6331* comment by: *Heliswiss International*

It is expected that the alleviation will be used only in the following circumstances: 1.1 Mountain Operations; where present generation multi-engined aircraft cannot meet the requirement of Performance Class 1 or 2 at altitude. 1.2 Operations in Remote Areas; where existing operations are being conducted safely; and where alternative surface transportation will not provide the same level of safety as single-engined helicopters; 2 The State issuing the AOC and the State in which operations will be conducted should give prior approval .3 If both approvals have been given by a single State, it should not withhold, without justification, approval for aircraft of another State. See TGL 43 HEMS.Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM1 OPS.SPA.005.SFL(b) Applicability p. 424-426

comment *1116* comment by: *EUROCOPTER*

Comment on § 7. Variation of wind speed:

It is not correct to write that 10 kts wind increases by 5 ft the deck edge clearance. This result is depending on the helicopter type. There are even cases where the wind will reduce the deck-edge margin.

Wording modification proposal:

7. Variation of wind speed

*...**For certain helicopter types,** simulation has shown that a 10 knot wind can give an extra 5 ft deck edge clearance compared to a zero wind condition.*

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM2 OPS.SPA.005.SFL(b) Applicability p. 426-433

comment *4654* comment by: *Bristow Helicopters*

In JAR OPS 3 the operator was required to "take account of deck edge miss" when complying with PC2e. In this section the word "assure" is used in the context of deck edge miss, which is a fundamental change to the requirement, i.e. a hardening of the requirement. In the case of a moving deck it is not possible to "assure" a deck edge miss of 15 feet as the deck is also moving and its position (both absolute and relative to the helicopter) cannot be known by the crew and therefore the value of deck edge miss cannot be assured.

Due to deck motion, sea motion and the uncertainty over helicopter trajectory, absolute values of a 15 feet deck edge miss or 35 feet sea miss distance cannot be applied in practice

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM OPS.SPA.005.SFL(c) Applicability p. 429

comment *6088* comment by: *Irish Aviation Authority*

Comment:

(1) -

Within the text offered as guidance material reference is made to "AS/NZS 4360:1999", if it is intended to use the guidance outlined in this document than the relevant text should be extracted and included along with the material already contained in this GM.

Justification:

Provision of appropriate guidance material.

Proposed text:

Amend text to include relevant text from the quoted reference document.

comment *6530* comment by: *ADAC Luftrettung GmbH*

GM OPS.SPA.005.SFL(c)

Auch nach vielfacher Bearbeitung erschließt sich mir die Begründung eines absoluten Limits der Exposure bei 200 ft **<u>überhaupt nicht!!</u>**

OPS.SPA.005.SFL muss angewendet werden, wenn z.B. an einer HEMS Operating Site die Voraussetzungen für PC 1 nicht erfüllt werden (können). Unter diesen Umständen kann man aber nicht davon ausgehen, dass nach einem Start gemäß CAT A, in 200 ft automatisch PC1 und obstacle clearance erreicht ist.

Bei HEMS-Flügen muss geländebedingt oft in Senken (HEMS Operating Site) gelandet werden. Da bei CAT A-Verfahren Rückenwind verboten ist, ist die Startrichtung durch den Wind bereits vorgegeben. In solchen Fällen (Senken) bereits in 200 ft OEI die in GM OPS.SPA.005.SFL(c) geforderte obstacle clearance zu haben ist nicht immer gegeben.

Ich bin seit vielen Jahren TRI(H) und TRE(H) und fliege seit knapp 20 Jahren HEMS, aber von einem absolutem Limit der Exposure in 200 ft habe ich noch nie etwas gehört. Und nochmal, es ergibt keinen Sinn. Es würde sehr viel mehr Sinn machen, wenn für solche Fälle ein vertikales Startverfahren unter Ausnutzung des höchstzulässigen kritischen Zeitraums (maximum permitted eposure time) entworfen wird. Für was gibt es die Maximum Permitted Exposure Time, wenn ich sie unter Umständen nicht ausnutzen kann.

Im Übrigen hier die Definition eines CAT A Startes von Eurocopter, welche sich unwesentlich von der Definition PC 1 unterscheidet.

DEFINITIONS

Category A Takeoff is determined so that, if one engine fails at any time after the start of takeoff, the aircraft can

- prior to TDP return to and stop safely on the takeoff area, or
- – after TDP continue the takeoff and climb out and attain single-engine forward flight.

Was in allen FM fehlt ist ein Startverfahren nach Exposure Time. In einem solchem Startverfahren sollte anhand einer Tabelle die vertikale Steighöhe bei den vorhandenen Umgebungsbedingungen (PA, Temp, Wheight, Wind) innerhalb der m. p. Exposure Time zu ermittlen sein. Mit der ermittelten Höhe kann der Pilot schon vor der Landung an der HEMS Operating Site abschätzen, ob er unter Anwendung der m. p. Exposure Time von der ausgewählten HEMS Operating Site wieder starten kann.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM OPS.SPA.005.SFL(d) Applicability p. 433-434

comment *518* comment by: *EHOC*

Paragraph 5.

The original text 'per se' has been translated as 'such as' instead of retaining the original, or using the more correct 'as such'.

That this (trivial attempt at a revision) was observed is somewhat of a minor miracle; why has text that was supposed just to be 'transposed' from JAR-OPS been subject to (apparently random) revision without: (1) quality control; (2) notification of the change; and (3) justification?

It is not sufficient to make a statement in the Explanatory Text that changes have been made to provide clarity or legal certainty.

To find this change required that a large number of highly qualified personnel be removed from essential safety duties to undertake a task (reading and finding every single change of wording and phrasing - both of JAR-OPS and EASA OPS - and comparison of the resulting text) that could have been simplified by the use of an appropriately constructed quality control system. There does not appear to have been adequate justification of this burden on industry.

comment *1110* comment by: *EUROCOPTER*

Proposal is to delete § 6:

~~***6. Specifically, the use of this exception to the requirement for a safe forced landing (during take-off or landing) does not permit semi-continuous operations over a hostile environment such as a forest or hostile sea area. It can therefore be seen as a limited alleviation from AMC4 OPS.CAT.H.355 1.a. which states that: "operations are only conducted to/from those aerodromes/operating sites and over such routes, areas and diversions contained in a non-hostile environment…".***~~

Reason: consistency with our proposal to introduce the DGAC alleviation "50 % 5 minutes" en-route in OPS.SPA005.SFL (d)(4) (see our comment n° 1106).

comment *5069* comment by: *SNEH Organisation representing all french commercial helicopters operators*

6. Specifically, the use of this exception to the requirement for a safe forced landing (during take-off or landing) does not permit semi-continuous operations over a hostile environment such as a forest or hostile sea area. Il can therefore be seen as a limited alleviation from AMC4 OPS.CAT.H.355 1.a. which states that : "operations are only conducted to/from those aerodromes/operating sites and over such routes, areas and diversions contained in a non-hostile environment..."

Reason : consistency with the proposal to introduce the DGAC alleviation en-route.

comment *5962* comment by: *Irish Aviation Authority*

Comment:

Subparagraphs 3 and 4(a) & (b) requires amending as detailed below

Justification:

ACJ OPS 3.540 b) 3 and 4 includes the additional proviso "before reaching Vy" when considering the take-off condition.

Proposed text:

3. Take-off flight path is not used in performance class 3 and, consequently, the term 'take-off and landing phases' is used to bound the limit of exposure. For the purpose of performance class 3, the take-off and landing phases are considered to be bounded by: a. for the take-off no later than **Vy or** 200 ft above the take-off surface; and

4. Ground level exposure – and exposure for elevated FATO's or helidecks in a non-hostile environment – is permitted for operations under an approval in accordance with section OPS.SPA.SFL. Exposure in this case is limited to the 'take-off and landing phases'.

What is the practical effect of this bounding of exposure? Consider a couple of examples: a. A clearing: an operator may consider a take-off/landing in a clearing when there is sufficient power, with all engines operating, to clear all obstacles in the take-off path by an adequate margin (this, in ICAO, is meant to indicate 35 ft). Thus, the clearing may be bounded by bushes, fences, wires and, in the extreme, by power lines, high trees etc. Once the obstacle has been cleared – by using a steep or a vertical climb (which itself may infringe the HV diagram) - the helicopter reaches **Vy or** 200 ft, and from that point a safe forced landing must be possible. The effect is that whilst operation to a clearing is possible, operation to a clearing in the middle of a forest is not (except when operated in accordance with OPS.SPA.005.SFL (d)(3)).

b. An aerodrome surrounded by rocks: the same applies when operating to a landing site that is surrounded by rocky ground. Once **Vy or** 200 ft has been reached, a safe forced landing must be possible.

comment *6107* comment by: *DGAC*

There used to be an IEM in JAR OPS 3 explaining the reason for the exposure time for operations in the mountain and in remote areas? There is no more explanation. To help standardisation, we suggest to add a GM which could be the same as the IEM of JAR OPS 3 on the subject.

comment *6490* comment by: *DGAC*

Proposal:

Delete 6.

Justification:

Consistency with the DGAC proposal to introduce the alleviation en-route.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - AMC OPS.SPA.005.SFL(e) Applicability p. 434

comment *1079* comment by: *REGA*

8%-requirement

The requirement will be an issue at higher altitudes and/or higher temperatures. This leads to an obligation to reduce mission weight, e.g. fuel quantity.

Example (EC145)

To achieve the 8% climb gradient in respect of the fuel requirement, the endurance will be limited to 55 minutes under day condition and 42 minutes at night.

Proposal

If it is not possible to comply at all time with the requirement of the 8% climb gradient due to performance or operational reasons, take-off may be carried out with multi-engine helicopters (Category A certified), in performance class 2 providing that these deviations are described in the operations manual and have been approved by the competent authority.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM1 OPS.SPA.005.SFL(e) Applicability p. 434-435

comment *5961* comment by: *Irish Aviation Authority*

Comment:

It is not apparent where this data comes from. JAR-OPS 3 and CS 29 CAT A does not address it.

B. II. Draft Decision - Part-OPS - Subpart D - Section VI - GM2 OPS.SPA.005.SFL(d) Applicability p. 435-437

comment *800* comment by: *French SAMU using helicopters for medical transport*

In 2 Delete "CAT A" and add ”performance class 1”

Consistency

Comment In 4 the second paragraph is a general requirement made by ICAO, HEMS operations should be more demanding

B. II. Draft Decision - Part-OPS - Subpart D - Section VII p. 439

comment *6648* comment by: *Heliswiss International*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *6993* comment by: *Christian Hölzle*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

B. II. Draft Decision - Part-OPS - Subpart D - Section VII - AMC OPS.SPA.001.NVIS(b)(1) Night Vision Imaging System (NVIS) operations p. 439

comment *853* comment by: *Reto Ruesch*

1.2 Checking

Possible Combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the National Authority.

comment *1143* comment by: *Heli Gotthard*

1.2 Checking

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *1212* comment by: *Stefan Huber*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *1268* comment by: *Air Zermatt*

1.2. Checking : Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *1319* comment by: *Air-Glaciers (pf)*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *1813* comment by: *Heli Gotthard AG Erstfeld*

GM Ops SPA NVIS 1.2 Checking

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority

comment *1888* comment by: *SHA (AS)*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *1960* comment by: *Berner Oberländer Helikopter AG BOHAG*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2048* comment by: *Heliswiss AG, Belp*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2188* comment by: *Heliswiss*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2197* comment by: *Heliswiss NV*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2223* comment by: *Dirk Hatebur*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2491* comment by: *Catherine Nussbaumer*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2577* comment by: *Walter Mayer, Heliswiss*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2866* comment by: *Philipp Peterhans*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2948* comment by: *Pascal DREER*

1.2 Checking:

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *4014* comment by: *HDM Luftrettung gGmbH*

GM OPS SPA NVIS:

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority

comment *4581* comment by: *Christophe Baumann*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *5823* comment by: *Ph.Walker*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *6183* comment by: *Hans MESSERLI*

1.2 Checking

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *6390* comment by: *Trans Héli (pf)*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *7062* comment by: *Swiss Helicopter Group*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *7130* comment by: *Eliticino SA*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

B. II. Draft Decision - Part-OPS - Subpart D - Section VII - GM OPS.SPA.001.NVIS(b)(1) Night Vision Imaging System (NVIS) operations p. 440-451

comment *854* comment by: *Reto Ruesch*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

comment *855* comment by: *Reto Ruesch*

Ground training

The theory shall be treated with all subjects , no time minimum required.

comment *856* comment by: *Reto Ruesch*

Flight training 5 hours

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. Www.ofac.admin.ch, NVIS training.

comment *1144* comment by: *Heli Gotthard*

4.5.3. 100 missions to perform as FI is too much. This is not fullfilable. We require that if the FI is qualified as NVIS it shall be accepted.

comment *1145* comment by: *Heli Gotthard*

The theory shall be treated with all subjects , no time minimum required.

comment *1213* comment by: *Stefan Huber*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *1214* comment by: *Stefan Huber*

The theory shall be treated with all subjects , no time minimum required.

comment *1215* comment by: *Stefan Huber*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *1269* comment by: *Air Zermatt*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *1270* comment by: *Air Zermatt*

Ground training:

The theory shall be treated with all subjects , no time minimum required.

comment *1271* comment by: *Air Zermatt*

Flight training: Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *1320* comment by: *Air-Glaciers (pf)*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *1321* comment by: *Air-Glaciers (pf)*

The theory shall be treated with all subjects , no time minimum required.

comment *1322* comment by: *Air-Glaciers (pf)*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *1814* comment by: *Heli Gotthard AG Erstfeld*

GM Ops SPA NVIS Instr. Qualification 4.5.3. 100 missions to perform as FI is too much

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *1815* comment by: *Heli Gotthard AG Erstfeld*

GM Ops SPA NVIS Ground training

The theory shall be treated with all subjects , no time minimum required.

comment *1816* comment by: *Heli Gotthard AG Erstfeld*

GM Ops SPA NVIS Flight training 5 hours.

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training

comment *1889* comment by: *SHA (AS)*

The theory shall be treated with all subjects , no time minimum required.

comment *1961* comment by: *Berner Oberländer Helikopter AG BOHAG*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *1962* comment by: *Berner Oberländer Helikopter AG BOHAG*

The theory shall be treated with all subjects , no time minimum required.

comment *1963* comment by: *Berner Oberländer Helikopter AG BOHAG*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2049* comment by: *Heliswiss AG, Belp*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2050* comment by: *Heliswiss AG, Belp*

Ground training

The theory shall be treated with all subjects , no time minimum required.

comment *2053* comment by: *Heliswiss AG, Belp*

Flight training 5 hours

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2189* comment by: *Heliswiss*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2192* comment by: *Heliswiss*

Ground training

The theory shall be treated with all subjects , no time minimum required.

comment *2193* comment by: *Heliswiss*

Flight training 5 hours.

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2199* comment by: *Heliswiss NV*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2201* comment by: *Heliswiss NV*

The theory shall be treated with all subjects , no time minimum required.

comment *2206* comment by: *Heliswiss NV*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2224* comment by: *Dirk Hatebur*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2225* comment by: *Dirk Hatebur*

The theory shall be treated with all subjects , no time minimum required.

comment *2226* comment by: *Dirk Hatebur*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file.

www.bazl.admin.ch, NVIS training.

comment *2461* comment by: *Jan Brühlmann*

Possible combination with PPC or HHO checks shall be applicable. Choice shall be left to operator as long as it is approved by the national authority.

comment *2462* comment by: *Jan Brühlmann*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2464* comment by: *Jan Brühlmann*

The theory shall be treated with all subjects , no time minimum required.

comment *2465* comment by: *Jan Brühlmann*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2493* comment by: *Catherine Nussbaumer*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2494* comment by: *Catherine Nussbaumer*

The theory shall be treated with all subjects , no time minimum required.

comment *2496* comment by: *Catherine Nussbaumer*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2578* comment by: *Walter Mayer, Heliswiss*

4.5.3: This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2579* comment by: *Walter Mayer, Heliswiss*

The theory shall be treated with all subjects , no time minimum required.

comment *2580* comment by: *Walter Mayer, Heliswiss*

Flight Training 5 hrs:

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2867* comment by: *Philipp Peterhans*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *2868* comment by: *Philipp Peterhans*

The theory shall be treated with all subjects , no time minimum required.

comment *2869* comment by: *Philipp Peterhans*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *2949* comment by: *Pascal DREER*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much:

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

Ground training:

The theory shall be treated with all subjects , no time minimum required.

Flight training 5 hours:

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file.

www.bazl.admin.ch, NVIS training.

comment *3019* comment by: *REGA*

The following paragraph is to delete without replacement

4.6.2, d. For helicopter operations, IR landing or searchlight (page 442)

Reasons for an application

In civil NVIS OPS there is no need for covered missions like military or police OPS. Using a conventional landing or searchlight in praxis is no problem at all. Far from it – it increases the situational awareness. The perception with a conventional landing or searchlight (combined with NVG) is closer to the prevalent atmospheric conditions when changing later on from aided to unaided NVIS flight during approach.

As long as we are not conducted below the VFR weather minima for the type of night operations being conducted (see OPS.SPA.020.NVIS operating minima), IR landing or searchlight should not be required.

Rega (Swiss Air-Ambulance Ltd.) is operating with this culture since 1988 in civil use of NVIS and we never had any problems.

Remarks

Without tactical aspects civil NVIS OPS is much easier than military or police OPS. So keep the system simple. Most of the military NVIS accidents happened close to ground "on NVG". This is the reason why Rega is not using NVG cloth to ground.

There are some requirements and experiences of military or police OPS, as shown to the subject "IR landing or searchlight", they are not applicable to civil NVIS OPS. Civil OPS should learn about military or police OPS but also has do develop "the civil use on NVIS".

Shown in "4.8 Training References" there are no civil experiences influences the subject NVIS – not just yet.

comment *4019* comment by: *HDM Luftrettung gGmbH*

GM OPS SPA NVIS:

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted

comment *4279* comment by: *HDM Luftrettung gGmbH*

GM OPS SPA NVIS - 442:

The theory shall be treated with all subjects , no time minimum required.

comment *4283* comment by: *HDM Luftrettung gGmbH*

GM OPS SPA NVIS -449:

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *4291* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA NVIS - 452:

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *4425* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *4582* comment by: *Christophe Baumann*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *4584* comment by: *Christophe Baumann*

The theory shall be treated with all subjects , no time minimum required.

comment *4588* comment by: *Christophe Baumann*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *5824* comment by: *Ph.Walker*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted

comment *5825* comment by: *Ph.Walker*

The theory shall be treated with all subjects , no time minimum required.

comment *5826* comment by: *Ph.Walker*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *6181* comment by: *DGAC*

It should be stated somewhere that the training should be done during dark night. If a pilot is trained during a very short period, he could be trained during light nights only which is not acceptable as it is not representative. He should be submitted to dark nights (it is the case during 40 to 50% of the year)

comment *6186* comment by: *Hans MESSERLI*

Instr. Qualification 4.5.3. 100 missions to perform as FI is too much.

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *6188* comment by: *Hans MESSERLI*

Ground training

The theory shall be treated with all subjects , no time minimum required.

comment *6191* comment by: *DGAC*

Paragraph 4.8:it should be noted that there are other people than US army having huge experience regarding to NVIS (ex: civil security (more than 7000 flight hours) and ALAT in France, REGA in Switzerland)

comment *6196* comment by: *Hans MESSERLI*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *6322* comment by: *SHA (AS)*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *6324* comment by: *SHA (AS)*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *6391* comment by: *Trans Héli (pf)*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *6392* comment by: *Trans Héli (pf)*

The theory shall be treated with all subjects , no time minimum required.

comment *6393* comment by: *Trans Héli (pf)*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *6649* comment by: *Heliswiss International*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted

comment *6651* comment by: *Heliswiss International*

The theory shall be treated with all subjects , no time minimum required.

comment *6652* comment by: *Heliswiss International*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We

propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training

comment *6654* comment by: *Heliswiss International*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO

comment *7001* comment by: *Christian Hölzle*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *7002* comment by: *Christian Hölzle*

The theory shall be treated with all subjects , no time minimum required.

comment *7004* comment by: *Christian Hölzle*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *7064* comment by: *Swiss Helicopter Group*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *7066* comment by: *Swiss Helicopter Group*

The theory shall be treated with all subjects , no time minimum required.

comment *7067* comment by: *Swiss Helicopter Group*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *7133* comment by: *Eliticino SA*

This is not fullfilable.We require that if the FI is qualified as NVIS it shall be accepted.

comment *7134* comment by: *Eliticino SA*

The theory shall be treated with all subjects , no time minimum required.

comment *7135* comment by: *Eliticino SA*

Switzerland as a 4 hours training system which can be assessed as good following the experience accumulated with NVIS by Swiss operators. We propose to adapt the requirement to 4 hours and the Swiss NVIS FOCA file. www.bazl.admin.ch, NVIS training.

comment *7366* comment by: *ADAC Luftrettung GmbH*

Please add: than the provision is more flexible

4.5.3 has logged at least one hundret NVIS flights **or 30 hrs. Flight time under NVIS** as pilot-in-command

B. II. Draft Decision - Part-OPS - Subpart D - Section VII - AMC OPS.SPA.010.NVIS(a) Equipment requirements for NVIS operations p. 451-452

comment *1080* comment by: *REGA*

Attachment #23

In the EC 145 the Radio Altimeter - digital type - is integrated in the primary flight display screen. This Radio Altimeter provides the pilot with visual altitude information, not only numbers, and an audio/visual warning.

see attachement, page 25.

There is no obvious reason to demand for NVIS operation an analogue type

Proposal 1.1

The radio altimeter should:

a. be of ~~an analogue~~ type display providing graphical visual altitude information..

comment *1081* comment by: *REGA*

1.1

d. No obvious reason why require more than for IFR- and NVFR-flights

comment *2196* comment by: *Heliswiss*

1.3 Recency 3 night NVIS in 90 day

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2497* comment by: *Catherine Nussbaumer*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *4287* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA NVIS - 452

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority

comment *4426* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *5863* comment by: *Norsk Luftambulanse*

1.1.a: Why an analogue type display?

B. II. Draft Decision - Part-OPS - Subpart D - Section VII - AMC p. 452

OPS.SPA.030.NVIS Crew requirements for NVIS operations

comment *857* comment by: *Reto Ruesch*

20 hours PIC before commencing trainin

It is a nonsense as NVIS is a safety device. Not permitting the usage of such device is not acceptable. The minimum requirement to use NVIS is to have the night training completed. The usage of the NVIS is after left to the Authority and responsability of the Flight ops manager of the Company in accordance with the National Authority.

comment *858* comment by: *Reto Ruesch*

1.3 Recency 3 night NVIS in 90 day

Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *1146* comment by: *Heli Gotthard*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *1147* comment by: *Heli Gotthard*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *1216* comment by: *Stefan Huber*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *1217* comment by: *Stefan Huber*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other

check or training like HHO.

comment *1272* comment by: *Air Zermatt*

20 hours PIC : It is nonsense **as NVIS is a safety device**. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *1273* comment by: *Air Zermatt*

1.3 Recency 3 night NVIS in 90 days

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *1323* comment by: *Air-Glaciers (pf)*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *1324* comment by: *Air-Glaciers (pf)*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *1325* comment by: *Air-Glaciers (pf)*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1817* comment by: *Heli Gotthard AG Erstfeld*

AMC ops SPA NVIS 20 hours PIC before commencing trainin

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in

accordance with the national authority

AMC Ops SPA NVIS 1.3 Recency 3 night NVIS in 90 day

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *1964* comment by: *Berner Oberländer Helikopter AG BOHAG*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *1965* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2054* comment by: *Heliswiss AG, Belp*

20 hours PIC before commencing trainin

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority

1.3 Recency 3 night NVIS in 90 day

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO

comment *2195* comment by: *Heliswiss*

20 hours PIC before commencing trainin

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority

comment *2210* comment by: *Heliswiss NV*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *2212* comment by: *Heliswiss NV*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2227* comment by: *Dirk Hatebur*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *2228* comment by: *Dirk Hatebur*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2469* comment by: *Jan Brühlmann*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *2470* comment by: *Jan Brühlmann*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2581* comment by: *Walter Mayer, Heliswiss*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the

authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *2582* comment by: *Walter Mayer, Heliswiss*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2870* comment by: *Philipp Peterhans*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *2871* comment by: *Philipp Peterhans*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *2950* comment by: *Pascal DREER*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *4591* comment by: *Christophe Baumann*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *4592* comment by: *Christophe Baumann*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *5827* comment by: *Ph.Walker*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *5828* comment by: *Ph.Walker*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *6199* comment by: *Hans MESSERLI*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *6203* comment by: *Hans MESSERLI*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *6208* comment by: *DGAC*

We suggest to add a training in case of inadvertent entry in IMC.

comment *6326* comment by: *SHA (AS)*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *6327* comment by: *SHA (AS)*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *6395* comment by: *Trans Héli (pf)*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *6397* comment by: *Trans Héli (pf)*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *6653* comment by: *Heliswiss International*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *7012* comment by: *Christian Hölzle*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *7017* comment by: *Christian Hölzle*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *7078* comment by: *Swiss Helicopter Group*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *7080* comment by: *Swiss Helicopter Group*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *7137* comment by: *Eliticino SA*

20 hours PIC : It is nonsense as NVIS is a safety device. Not permitting the usage of such a device is unacceptable. The minimum requirement to use NVIS is to have completed night training. The use of NVIS is then left to the authority and responsibility of the flight ops manager of the company in accordance with the national authority.

comment *7138* comment by: *Eliticino SA*

1.3 : Not applicable. Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

comment *7373* comment by: *ADAC Luftrettung GmbH*

1.3 : Not applicable.

Therefore the minimum acceptable requirement would be 1 NVIS mission with 3 landings in 90 days and can be combined with other check or training like HHO.

B. II. Draft Decision - Part-OPS - Subpart D - Section VIII p. 453

comment *7018* comment by: *Christian Hölzle*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *7385* comment by: *ADAC Luftrettung GmbH*

1.2 HHO check at night

The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

B. II. Draft Decision - Part-OPS - Subpart D - Section VIII - AMC OPS.SPA.001.HHO(b)(3) Helicopter hoist operations (HHO) p. 453-454

comment *770* comment by: *ECA - European Cockpit Association*

Comment: former JAR-OPS 3 Pilot and HHO Crewmember training should be inserted in section VIII:

Appendix 1 to JAR-OPS 3.005(h)

Helicopter Hoist Operations (HHO)

(2) The Crew. Notwithstanding the requirements prescribed in Subpart N, the following apply to HHO operations:

(d) Operating requirements

[...]

comment *859* comment by: *Reto Ruesch*

1.2 HHO check at night

The risk compare to the efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria.

comment *860* comment by: *Reto Ruesch*

2.2 Onshore min. requirement / compare with HHO CH

The minimum shall be defined by the National authority / depending of the kind of work, environement and usage.see www.ofac.admin.ch HHO training

comment *861* comment by: *Reto Ruesch*

2.3 Recency

The risk compare to the efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria.

comment *862* comment by: *Reto Ruesch*

HHO procedures 1.HelicopterI

n Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *863* comment by: *Reto Ruesch*

2.2.2 b iii

The minimum shall be defined by the National authority / depending of the kind of work, environement and usage.see www.ofac.admin.ch HHO training

comment *1218* comment by: *Stefan Huber*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1219* comment by: *Stefan Huber*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *1220* comment by: *Stefan Huber*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1221* comment by: *Stefan Huber*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1274* comment by: *Air Zermatt*

1.2 HHO check at night

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1326* comment by: *Air-Glaciers (pf)*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *1818* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HHO 1.2 HHO check at night

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1966* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2055* comment by: *Heliswiss AG, Belp*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2198* comment by: *Heliswiss*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2213* comment by: *Heliswiss NV*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2230* comment by: *Dirk Hatebur*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2472* comment by: *Jan Brühlmann*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2498* comment by: *Catherine Nussbaumer*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2583* comment by: *Walter Mayer, Heliswiss*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2872* comment by: *Philipp Peterhans*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2951* comment by: *Pascal DREER*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only

after a risk analysis and approval of the National Authority.

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *4304* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA HHO - 453:

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *4593* comment by: *Christophe Baumann*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *5829* comment by: *Ph.Walker*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6108* comment by: *DGAC*

Proposal : Renumber this AMC "AMC.OPS.SPA.001.HHO (b)(2)" instead of "AMC.OPS.SPA.001.HHO (b)(3)".

Justification : (b)(2) of OPS.SPA.001.HHO deals with specific crew training and checking, while (b)(3) deals with operating procedures

comment *6206* comment by: *Hans MESSERLI*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6337* comment by: *Heliswiss International*

CAT=HHO class 1 : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters because of the high risk to the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this

purpose to CAT B only after a risk analysis and approval of the National Authority.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled. Performance Class 2 and 3 shall have no restrictions provided the operator obtain the AOC validated by the National Authority.

comment *6338* comment by: *Heliswiss International*

From 1968 the Swiss AIB reports 22 occurrence for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than 325'000 missions accomplished represents 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6339* comment by: *Heliswiss International*

HHO : The original intent of the text was to require the operator to have an HHO Supplement to the Operations Manual; the text might be: the Operations Manual includes an HHO supplement specifying the SOP's.

comment *6398* comment by: *Trans Héli (pf)*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6401* comment by: *Trans Héli (pf)*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *6658* comment by: *Heliswiss International*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *7082* comment by: *Swiss Helicopter Group*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *7140* comment by: *Eliticino SA*

1.2 : The risk in comparison to efficiency is too high and shall be left to operators approved by national authority / day hoist cycles should be taken into

B. II. Draft Decision - Part-OPS - Subpart D - Section VIII - AMC OPS.SPA.001.HHO(b)(4) Helicopter hoist operations (HHO) p. 454-455

comment *522* comment by: *EHOC*

Paragraph 1.

Because of the conditional text contained in OPS.SPA.025.HHO, it will be necessary to make the following addition:

"The operations manual should contain the criteria for establishing the appropriate performance standard."

Paragraph 3.

This would work much better if the objective requirement for a supplement is already specified (see the comment to OPS.SPA.001.HHO(b)(3).

comment *1072* comment by: *REGA*

Attachments #24 #25 #26 #27 #28

Switzerland has a long tradition and large experience in this field of operations. Most of the commercial activities in Switzerland today are focused on aerial work, especially transport of cargo.

After a lot of accidents the last 3 decades the Swiss authority toghether with the helicopter industry decided to develop a training syllabus for external sling operations. This syllabus bases on the accident analysis and the large experience from the industry.

Since the authority requires those more demanding instruction and experience before beginning hook (or hoist) operations, Switzerland experiences significantly less helicopter accidents!

Please see the attached training program and syllabus.

comment *1073* comment by: *REGA*

Attachments #29 #30 #31

2.3 Recency

REGA has a large experience within the field of operations.

The HEMS crew (pilots and technical crew members) are checked out once a year for skill (standard and emergency procedures). Medical passengers (medic) will be checked every month on ground training; independently if they had performed real hoist operations or not. Pilots will not be able to perform hoist operations before they have a large transport experience. Please see the attachment.

Regarding proportionality - safety versus economic and environmental aspects - a recency required according 2.3. is not adequate.

For instance: In summer times night begins after 10 p.m.. According the national law aerodromes are closed down for training activies between 10 p.m. and 6 a.m.. Even when flying outside of aerodromes at nights, noise will be accompanied by neighborhood protest.

REGA requires the attached syllabus for their own pilots. Based on this company policy, pilots should be able to operate at a high level of safety, even with less restrective recency requirements: One check and training per year.

comment *1148* comment by: *Heli Gotthard*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority.

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1222* comment by: *Stefan Huber*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *1275* comment by: *Air Zermatt*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *1276* comment by: *Air Zermatt*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1277* comment by: *Air Zermatt*

HHO procedures 1.Helicopter

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1278* comment by: *Air Zermatt*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *1327* comment by: *Air-Glaciers (pf)*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1328* comment by: *Air-Glaciers (pf)*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1329* comment by: *Air-Glaciers (pf)*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *1819* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HHO 2.2 Onshore min. requirement / compare with HHO CH

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

AMC Ops SPA HHO 2.3 Recency

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

AMC Ops SPA HHO HHO procedures 1.Helicopter

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

AMC Ops SPA HHO 2.2.2 b iii

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *1892* comment by: *SHA (AS)*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1893* comment by: *SHA (AS)*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1894* comment by: *SHA (AS)*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *1967* comment by: *Berner Oberländer Helikopter AG BOHAG*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *1968* comment by: *Berner Oberländer Helikopter AG BOHAG*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *1969* comment by: *Berner Oberländer Helikopter AG BOHAG*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *1970* comment by: *Berner Oberländer Helikopter AG BOHAG*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2056* comment by: *Heliswiss AG, Belp*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

HHO procedures 1.Helicopter

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2200* comment by: *Heliswiss*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2202* comment by: *Heliswiss*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2203* comment by: *Heliswiss*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2204* comment by: *Heliswiss*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2214* comment by: *Heliswiss NV*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2215* comment by: *Heliswiss NV*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2216* comment by: *Heliswiss NV*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2217* comment by: *Heliswiss NV*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO

training

comment *2232* comment by: *Dirk Hatebur*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2233* comment by: *Dirk Hatebur*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2234* comment by: *Dirk Hatebur*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2236* comment by: *Dirk Hatebur*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2473* comment by: *Jan Brühlmann*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2474* comment by: *Jan Brühlmann*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2476* comment by: *Jan Brühlmann*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2478* comment by: *Jan Brühlmann*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2499* comment by: *Catherine Nussbaumer*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2584* comment by: *Walter Mayer, Heliswiss*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2585* comment by: *Walter Mayer, Heliswiss*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2586* comment by: *Walter Mayer, Heliswiss*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken

into consideration for the ria. (?)

comment *2587* comment by: *Walter Mayer, Heliswiss*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2588* comment by: *Walter Mayer, Heliswiss*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *2873* comment by: *Philipp Peterhans*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *2874* comment by: *Philipp Peterhans*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *2875* comment by: *Philipp Peterhans*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *2876* comment by: *Philipp Peterhans*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *4309* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA HHO - 454:

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *4595* comment by: *Christophe Baumann*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *4597* comment by: *Christophe Baumann*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *4598* comment by: *Christophe Baumann*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *4599* comment by: *Christophe Baumann*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *5830* comment by: *Ph.Walker*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *6082* comment by: *Irish Aviation Authority*

Comment:

Operating Procedures 1. - Within the text the phrase "at **the** appropriate power setting" is used. This too prescriptive without "the appropriate power setting" being further defined.

Justification:

Provision of appropriate guidance material.

Proposed text: Amend text to include a definition of "the appropriate power setting" or change the text to read "an appropriate power setting".

comment *6086* comment by: *Irish Aviation Authority*

Comment:

Crew Composition 2.4.2 - The text refers to the requirement for two pilots to be employed when operations are carried out below the VFR minima. This should be reviewed as by definition operations carried out below the VFR minima would have to be carried out under IMC and as such IFR minima should be applied.

Justification:

Provision of appropriate guidance material that complies with flight rules minima.

comment *6109* comment by: *DGAC*

Proposal : Renumber this AMC "AMC.OPS.SPA.001.HHO (b)(3)" instead of "AMC.OPS.SPA.001.HHO (b)(4)".

Justification : (b)(3) of OPS.SPA.001.HHO deals with operating procedures

and there is no (b)(4)

comment *6209* comment by: *Hans MESSERLI*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *6212* comment by: *Hans MESSERLI*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6215* comment by: *Hans MESSERLI*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *6219* comment by: *Hans MESSERLI*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *6399* comment by: *Trans Héli (pf)*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *6400* comment by: *Trans Héli (pf)*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6402* comment by: *Trans Héli (pf)*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *6659* comment by: *Heliswiss International*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *6661* comment by: *Heliswiss International*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *6662* comment by: *Heliswiss International*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *6663* comment by: *Heliswiss International*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *7021* comment by: *Christian Hölzle*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO

training

comment *7083* comment by: *Swiss Helicopter Group*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *7085* comment by: *Swiss Helicopter Group*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *7087* comment by: *Swiss Helicopter Group*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *7089* comment by: *Swiss Helicopter Group*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *7141* comment by: *Eliticino SA*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.see www.bazl.admin.ch HHO training

comment *7142* comment by: *Eliticino SA*

2.3 : The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

comment *7152* comment by: *Eliticino SA*

HHO procedures : In Switzerland we are authorised to fly HHO-HCS operations for public interest site with class 3 Helicopters due to the high risk for the population if there is any delay. These sites are avalanche mining stations, rock fall alerting devices etc… An alleviation shall exist for this purpose only after a risk analysis and approval of the National Authority.

comment *7153* comment by: *Eliticino SA*

2.2.2b : The minimum shall be defined by the national authority / depending on the kind of work, environement and usage.See www.bazl.admin.ch HHO training

comment *7426* comment by: *ADAC Luftrettung GmbH*

2.2 : The minimum shall be defined by the National authority / depending on the kind of work, environement and usage.

2.2.2 Grundsätzlich ist es problematisch die notwendige Erfahrung an bestimmte Werte (Flugstunden, Cycles etc.) festzumachen. Wir sind zur Erkenntnis gekommen, dass es in erster Linie von den fliegerischen Fähigkeiten des einzelnen Piloten abhängt, wie schnell oder langsam ein Erfahrungsschatz aufgebaut wird, der zu einer sicheren Flugdurchführung - auch in kritischen Einsätzen - führt.

Deshalb sollte es dem Betreiber (Fachbereichsleiter Flugbetrieb) überlassen werden, festzustellen, ob ein Pilot für die vorgesehene Tätigkeit geeignet ist (Eigenverantwortung)!!!

Daneben beantragen wir höchstvorsorglich folgende Änderungen:

The minimum experience level for a pilot-in-command conducting HHO flights should not less than:

a. Offshore

i: 1000 hours pilot-in-command of helicopters or 700 hours as pilot-in-command of helicopters and 300 hours as co-pilot in HHO of which 50 hours is as pilot-in-command under supervision

ii: 40 hoist cycles conducted offshore, of which 20 cycles should be at night if night operations are being conducted.

b) Onshore

i. 1000 hours pilot-in-command of helicopters or 700 pilot-in-command of helicopters and 300 hours as co-pilot in HHO of which 50 hours is as pilot-in-command under supervision

ii. ~~200 hours operating experience in helicopters gained in an operational environment similar to the intended operation;~~ **Diese Formulierung ist unklar, was ist damit gemeint? 200 Stunden in HEMS oder 200 Stunden HHO, oder 200 Stunden im Gebirge/auf See? Deshalb sollte diese Formulierung gestrichen werden.**

and

iii. 40 hoist cycles, of which 20 cycles should be at night if night operations are being conducted.

2.3 Recency

The risk in comparison to efficiency is too high and shall be left to operators approved by National authority / day hoist cycles should be taken into consideration for the ria. (?)

B. II. Draft Decision - Part-OPS - Subpart D - Section VIII - AMC OPS.SPA.010.HHO(a) Equipment requirements for HHO p. 455-456

comment *1112* comment by: *EUROCOPTER*

It is proposed the following new Guidance Material related to AMC OPS.SPA.010.HHO(a):

GM OPS.SPA.010.HHO(a), § 2.(a) CRITERIA FOR A SATISFACTORY SERVICE HISTORY

The judgement whether the in-service history of a hoist-installation can be deemed acceptable by the competent authority should be based on clearly defined criteria.It is proposed that the basis for the judgement should be a in-service history exceeding a minimum time-span and a minimum of hoist installations in-service.

It is proposed to deem the in-service history of a hoist-installation acceptable if no incident classified as hazardous or catastrophic has occurred during the to be defined time-span and amongst all the hoist installations in-service which have to exceed a to be defined number.

Any incident being attributable to mis-use or operation/ maintenance not in accordance with the applicable documentation issued by the TC/ STC holder shall not be part of the in-service history representing the baseline for the authority's decision.

comment *1113* comment by: *EUROCOPTER*

It is proposed to delete § 2.b.v.:

~~***v; Any airworthiness issue reported from incidents or accidents and not addressed by i., ii., and iv. should be addressed.***~~

Reason: Each incident/ accident has to be investigated and protective/ corrective measures have to be taken by the TC/ STC holder in the frame of the continued airworthiness process.

The TC/ STC holder is in charge of implementing changes to the design and/ or documentation in order to eliminate the possibility of repeated occurance of the encountered incident/ accident.

Operators are not able to address airworthiness issues within their area of discretion. Therefore it is proposed to cancel point v

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - GM OPS.SPA.001.HEMS(a) Helicopter emergency medical service operations p. 457-460

(HEMS)

comment *1082* comment by: *REGA*

Attachments #32 #33

(a) (1) Following the EASA's definitions of "congested" and "hostile" area: most of the HEMS operations begin at and end at an aerodrome/operating site located in a congested hostile environment.

Considerations:

Definition: *'Congested area' means in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.* (...)

As commented on page 23, this definition covers quite every area in Europe. An unchanged definition of "congested area" will seriously curtail a number of existing HEMS-operations.

H**: HEMS-Base**: Even with modern twin helicopters (e.g. EC135; EC145; BK117), due to variable operational conditions (e.g. weight; temperature; altitude), operations on HEMS-bases/-aerodromes meeting the requirements of ICAO Annex 14 are not able to guarantee the operation within Performance Class 1 at any time.

HEMS-bases not meeting the requirements of ICAO Annex 14: Like the situation of hospital sites, the problems are historical as well related to geographical aspects (e.g. mountainous terrain providing small places for constructions; obstacles). If EASA or national authorities or used at such a low weight that critical power unit failure performance is assured, it would seriously curtail a number of existing HEMS-operations.

The HEMS Operating Bases, builded before 1 July 2002, should treated like the public interest sites

HEMS-Operating Sites: Meeting the Performance Class 2 requirement at HEMS-operating sites is even with modern twin helicopters (e.g. EC145; EC135) not possible at all time: Due to the "character" of HEMS-missions and their operating sites (e.g. within a forest or a mountainous terrain; wind, temperature) twin helicopters (CAT A certified) are operating within all three performance classes; even for short period in Performance Class 3 without the assurance of a safe forced landing (see examples below).

Operations at hospitals

Throughout Europe HEMS operators used and use landingsites at hospitals that do not meet design criteria nor can be approached in the required PC. This issue was identified and adressed in JAR-OPS 3. A solution was provided by creating Public Interes Sites. Unfortunately many NAAs have neither implemented this regulation, nor have been willing to accept landingsites, existing prior to 1 July 2002, as Public Interes Sites as a consequence. Implementation of PIS regulation under present days conditions will result in a degradation of HEMS patient care because numerous Hospitals would no longer be available for doctor/patient pickup or delivery. Throughout Europe various National regulations exist. The common denominator in these regulations is the fact that unofficial landing sites at hospitals are treated as HEMS operating sites. This especially holds true for landing sites at smaller hospitals which are visited infrequently. In this respect reconsideration of the HEMS philosophy,

and the related requirements, is necessary.

Proposal 1:

(a) (3) *operations to/from a HEMS-aerodrome/-base or a Public Interest Site in a congested hostile environment; or operations to/from a helideck conducted with a helicopter having a MPSC of more than 19, may be operated in performance class 2.*

(a) (4) *HEMS-operations to/from an HEMS Operating Site may be operated in performance class 2 or 3.*

(f) *Helicopters HEMS-missions operated in:*

Performance class 1, 2 or 3 shall be certificated in Category A.

or

Proposal 2:

(a) Except as specified in (f) below, helicopters shall be operated in performance class 1 when:

(...)

~~*(a) (3)*~~

(f) *HEMS-operations: If it is not possible to comply with the requirement of performance class 1 due to performance or operational reasons, HEMS operations may be carried out with multi-engine helicopters (Category A certified), in performance class 2 or 3 providing that these deviations are described in the operations manual and have been approved by the competent authority.*

(g) *Helicopters operated in performance class 1 or 2 not meeting entirely the Category A certification standards should not be operated beyond 2015.*

Examples (CAT A - Limitation VTOL)

BK117 B-2 (Lycoming)

Mission weight (without patient) = 3'000 kg

Max. CAT A weight at 1'000ft/30° = 2'860 kg

Max. CAT A weight at 2'200ft/20° = 2'870kg

Max. CAT A weight at 3'500ft/20° = 2'740 kg

Max. CAT A weight at 8'500/10° = 2'360 kg

BK117 C-1 (Arriel)

Mission weight (without patient) = 3'000 kg

Max. CAT A weight at 1'000ft/30° = 3'100 kg

Max. CAT A weight at 2'200ft/20° = 3'070 kg

Max. CAT A weight at 3'500ft/20° = 2'960 kg

Max. CAT A weight at 8'500/10° = 2'525 kg

BK117 C-2 (EC145)

Mission weight (without patient) = 3'150 kg

Max. CAT A weight at 1'000ft/30° = 3'150 kg

Max. CAT A weight at 2'200ft/20° = 3'130 kg

Max. CAT A weight at 3'500ft/20° = 3'000 kg

Max. CAT A weight at 8'500/10° = 2'550 kg

EC135 P2+

Mission weight (with patient) = 2'858 kg

Max. CAT A weight at 1'000ft/30° = 2'825 kg

Max. CAT A weight at 2'200ft/20° = 2'800 kg

Max. CAT A weight at 3'500ft/20° = 2'630 kg

Max. CAT A weight at 8'500/10° = - kg

comment *3928* comment by: *FOM ANWB MAA*

7. Operations at hospitals.

Throughout Europe HEMS operators used and use landingsites at hospitals that do not meet design criteria nor can be approached in the required PC. This issue was identified and adressed in JAR-OPS 3. A solution was provided by creating Public Interes Sites. Unfortunately many NAAs have neither implemented this regulation, nor have been willing to accept landingsites, existing prior to 1 July 2002, as Public Interes Sites as a consequence.

Implementation of PIS regulation under present days conditions will result in a degradation of HEMS patient care because numerous Hospitals would no longer be available for doctor/patient pickup or delivery.

Throughout Europe various National regulations exist. The common denominator in these regulations is the fact that unofficial landing sites at hospitals are treated as HEMS operating sites. This especially holds true for landing sites at smaller hospitals which are visited infrequently. In this respect reconsideration of the HEMS philosophy, and the related requirements, is necessary

comment *4371* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

7. Operations at hospitals. Throughout Europe HEMS operators used and use landingsites at hospitals that do not meet design criteria nor can be approached in the required PC. This issue was identified and adressed in JAR-OPS 3. A solution was provided by creating Public Interes Sites. Unfortunately many NAAs have neither implemented this regulation, nor have been willing to accept landingsites, existing prior to 1 July 2002, as Public Interes Sites as a consequence. Implementation of PIS regulation under present days conditions will result in a degradation of HEMS patient care because numerous Hospitals would no longer be available for doctor/patient pickup or delivery. Throughout Europe various National regulations exist. The common denominator in these regulations is the fact that unofficial landing sites at hospitals are treated as HEMS operating sites. This especially holds true for landing sites at smaller hospitals which are visited infrequently. In this respect reconsideration of the HEMS philosophy, and the related requirements, is necessary.

comment *4427* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

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comment *5381* comment by: *ALFA-HELICOPTER*

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comment *5700* comment by: *HDM Luftrettung gGmbH*

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comment *5742* comment by: *ADAC Luftrettung GmbH*

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Zusätzliche Stellungnahme in deutsch:

Es liegt in der Natur des HEMS-Flugbetriebs, dass nicht vorher bestimmt werden kann, in welches Krankenhaus der Patient geflogen wird. Dies entscheidet sich je nach Art der Verletzung und Verfügbarkeit der medizinischen Leistungen erst während des konkreten Einsatzes. Um gewährleisten zu können, dass jeder transportierte Patient die entsprechende notwendige medizinische Indikation erhält, muss sichergestellt sein, dass jeder einzelne Hubschrauber unserer Flotte im konkreten Bedarfsfall auch jedes Krankenhaus anfliegen kann. Dazu müsste jeder einzelne Betreiber jedoch, entsprchend den Vorgaben der NPA 2009-02, für alle vorhandenen Hubschrauberflugplätze an Krankenhäusern, an denen keine Möglichkeit zur Durchführung einer sicheren Notlandung während der Start- und Landephase besteht landeplatz-spezifische Verfahren entwickeln! **Dies ist bereits allein aufgrund der Vielzahl der existierenden Krankenhauslandesstellen (allein in Deutschland insgesamt über 1.000) praktisch nicht umsetzbar. Außerdem kann dies generell nicht Aufgabe jedes einzelnen Operators sein, sondern ist vielmehr originäre Aufgabe des jeweiligen Landeplatzbetreibers.**

Denkbar und auch umsetzbar ist dagegen die Entwicklung und Beschreibung von einigen grundsätzlichen Standardverfahren für den An-/Abflug ohne Möglichkeit zur Durchführung einer sicheren Notlandung. Dies wäre unserer Erfahrung nach auch aus dem Gesichtspunkt der Sicherheit vollkommen ausreichend: die (mehrmotorigen) Hubschrauber der ADAC-Luftrettung GmbH haben seit 1970 bis Ende 2008 über 500.000 Rettungseinsätze durchgeführt. In der Regel sind pro Rettungseinsatz drei Starts und drei Landungen anzusetzen, die bedingt durch die orographischen Vorgaben und des Einsatzauftrages regelmäßig nicht auf einem flugplatzähnlichen Gelände durchgeführt werden können. In der Summe der genannten Rettungseinsätze und der daraus resultierenden Starts und Landungen (>3 Millionen) hat kein Triebwerkausfall zu einem Flugunfall geführt. Insofern sind die derzeit gemäß JAR-OPS 3 deutsch (in der bis zum 31.12.2009 geltenden Fassung) geregelten Anforderungen zur Erreichung eines angemessenen Sicherheitsniveaus vollkommen ausreichend. Eine weitere Verschärfung ist überflüssig.

comment *5865* comment by: *Norsk Luftambulanse*

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comment *7221* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

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Throughout Europe HEMS operators used and use landingsites at hospitals that do not meet design criteria nor can be approached in the required PC. This issue was identified and adressed in JAR-OPS 3. A solution was provided by creating Public Interes Sites. Unfortunately many NAAs have neither implemented this regulation, nor have been willing to accept landingsites, existing prior to 1 July 2002, as Public Interes Sites as a consequence.

Implementation of PIS regulation under present days conditions will result in a degradation of HEMS patient care because numerous Hospitals would no longer be available for doctor/patient pickup or delivery.

Throughout Europe various national regulations exist. The common denominator in these regulations is the fact that unofficial landing sites at hospitals are treated as HEMS operating sites. This especially holds true for landing sites at smaller hospitals which are visited infrequently. In this respect reconsideration of the HEMS philosophy, and the related requirements, is necessary

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - AMC OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS) p. 460-463

comment *526* comment by: *EHOC*

Paragraph 1.4.b

Originally this was to be subject to the satisfaction of the Authority; now that this element has been removed from the concept, it would be appropriate to provide more guidance on the limitations including the 'geographical area', 'cultural lighting' and 'terrain'.

Paragraph 1.4.b.i

This might be better changed to 'adequate cultural lighting to permit flight by visual reference to objects outside the aircraft'.

Paragraph 1.5.

It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010.HEMS and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).

"CREW TRAINING AND CHECKING"

comment *626* comment by: *ECA - European Cockpit Association*

Comment on AMC OPS.SPA.001.HEMS: JAR-OPS 3 Pilot and HEMS Crewmember training should be inserted in Section IX.

Reference:

Appendix 1 to JAR-OPS 3.005(d)Helicopter Emergency Medical Service

(c) Operating requirements

(3) The crew. Notwithstanding the requirements prescribed in Subpart N, the following apply to HEMS operations:[...]

(e) Training and checking

(1) Flight crew members

(i) JAR-OPS Part 3 Subpart N training with the following additional items: [...]

comment *864* comment by: *Reto Ruesch*

1.3 Recency

Due to the high number of checks it shall be possible to combined with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *865* comment by: *Reto Ruesch*

1.2 Hems crew requirements

It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *866* comment by: *Reto Ruesch*

1.3 Recency

Due to the high number of checks it shall be possible to combined with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *867* comment by: *Reto Ruesch*

1.5 Hems Technical crew

It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *868* comment by: *Reto Ruesch*

1.5.1 checking

Due to the high number of checks it shall be possible to combined with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1084* comment by: *REGA*

1.2 Experience

b. Using flight hours as the base for decide if the pilot is allowed to conducting HEMS flight is delicate. According the experience a case to case assessment and a specific training program would be more adequate regarding the safety targets. Finally, after the authority approval, the operator has to decide and to take the responsibility.

HEMS operations, if the are well supervised, flown under good conditions (e.g. weather, altitude, open sites) are often less challenging than commercial flights (e.g. hook missions, heliskiing).

Proposal (1.2., a., iii.)

In addition to the provisions regarding the amount of the flight hours a training program may be described in the operations manual. This must be approved by the competent authority and the flight operator manager.

comment *1088* comment by: *REGA*

1.4 Crew composition

A second pilot does not automatically mean in case a safety benefit.

A well trained, experienced and assessed (e.g. medical examination) HEMS technical crew member is often more adequate.

The specific areas shall not be defined by distance. Instead, each HEMS Operating Base shall have a defined specific area for night flights. Those areas, which are defined by the Flight Operations Manager and the competent authority, shall be a part of the Operation Manual.

Reqiurements shall also be based on the helicopter's equipment. REGA helicopters are equipped with EVS; Moving Map; Radio Altimeter; NVIS (pilot and HEMS technical crew member); GIS; Autopilot etc..

Proposal (1.4; Night flight*)*

The minimum crew by night should be two pilots or one pilot and one HEMS technical crew member. The specific geographical operation area shall defined by the operator in the operations manual a taking into account the following: .....

comment *1093* comment by: *REGA*

3.1

To have to (should) take all reasonable measures - as the operator - to ensure that ground emergency service personnel are familiar with a. to e. is very delicate: Quite at every HEMS Operating Site, other mission, the involved service personnel change. Operators are not able to guarantee a familiarization of all ground service personnel and/or organisations.

Proposal (3.1)

The requirement should address those organisation and personnel which are a part of the planned and organized rescue chain by the operator.

comment *1149* comment by: *Heli Gotthard*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years

comment *1150* comment by: *Heli Gotthard*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

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comment *1223* comment by: *Stefan Huber*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1224* comment by: *Stefan Huber*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1225* comment by: *Stefan Huber*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1226* comment by: *Stefan Huber*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *1279* comment by: *Air Zermatt*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1280* comment by: *Air Zermatt*

1.2 : It would be only logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1281* comment by: *Air Zermatt*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1282* comment by: *Air Zermatt*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2

years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *1330* comment by: *Air-Glaciers (pf)*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1332* comment by: *Air-Glaciers (pf)*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1333* comment by: *Air-Glaciers (pf)*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *1820* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HEMS 1.3 Recency

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in

90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1821* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HEMS 1.2 HEMS crew requirements

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

AMC Ops SPA HEMS 1.5 Hems Technical crew

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1822* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HEMS 1.5.1 checking

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses

comment *1895* comment by: *SHA (AS)*

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comment *1897* comment by: *SHA (AS)*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *1971* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *1972* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1973* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *1974* comment by: *Berner Oberländer Helikopter AG BOHAG*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check,

Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2058* comment by: *Heliswiss AG, Belp*

1.3 Recency

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

1.2 HEMS crew requirements

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

1.5 Hems Technical crew

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2059* comment by: *Heliswiss AG, Belp*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2205* comment by: *Heliswiss*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2207* comment by: *Heliswiss*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2208* comment by: *Heliswiss*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2209* comment by: *Heliswiss*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2218* comment by: *Heliswiss NV*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check,

Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2219* comment by: *Heliswiss NV*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2220* comment by: *Heliswiss NV*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2221* comment by: *Heliswiss NV*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2237* comment by: *Dirk Hatebur*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2238* comment by: *Dirk Hatebur*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2239* comment by: *Dirk Hatebur*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2240* comment by: *Dirk Hatebur*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2348* comment by: *Austro Control GmbH*

1.2.

to clarify add in brackets of the 1st sentence:

(... Hoist operations, human external cargo, etc)

The minimum experience level before conducting HEMS operations in Single Pilot operations should be raised.

Proposal for (a)

(i) ***1500 hours pilot-in-command on helicopters*** *~~of aircraft of which 500 hours is as pilot-in-command on helicopters~~.... or*

(ii) ...*and ~~100~~* ***300 hours*** *pilot-in-command ~~of~~* ***on*** *helicopters.*

Justification:

Delete aircraft, because the exerperience should be gained only on pilot-in-command of helicopters!

Furthermore HEMS pilots do not only need flight hours for experience, but also "life-experience" and maturity with human aspects.

In (ii) 300 hours are the minimum of experience. 100 hours are not acceptable as praxis (especially in mountinous areas) shows.

Suggestion:

also add to 1.2. (b)

"500 hours operating experience in helicopters gained in an operational environment ***and 30 hours supervision flights*** *similar to the intended operation;"*

Justificiation:

For safety reasons the local environmental conditions should be considered with a minimum of Supervision flights required.

comment *2479* comment by: *Jan Brühlmann*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2481* comment by: *Jan Brühlmann*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2483* comment by: *Jan Brühlmann*

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comment *2484* comment by: *Jan Brühlmann*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and

introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2500* comment by: *Catherine Nussbaumer*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

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comment *2589* comment by: *Walter Mayer, Heliswiss*

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comment *2590* comment by: *Walter Mayer, Heliswiss*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2591* comment by: *Walter Mayer, Heliswiss*

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comment *2592* comment by: *Walter Mayer, Heliswiss*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2877* comment by: *Philipp Peterhans*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *2878* comment by: *Philipp Peterhans*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *2879* comment by: *Philipp Peterhans*

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comment *2880* comment by: *Philipp Peterhans*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *2952* comment by: *Pascal DREER*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

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six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *3932* comment by: *FOM ANWB MAA*

AMC OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS)

OPERATING PROCEDURES

1.2 Experience.

The minimum experience level for a pilot-in-command conducting HEMS flights should take into account the geographical characteristics of the operation (sea, mountain, big cities with heavy traffic, etc.) and should not be less than:

a. Either:

i. 1 000 hours ~~pilot-in-command of aircraf~~t on helicopters of which 500 hours is as pilot-in-command on helicopters; or

ii. 1 000 hours as co-pilot in HEMS operations of which 500 hours is as pilot-in-command under supervision; and 100 hours pilot-in-command of helicopters.

1.2 (a) (i) & (ii). A combination of i and ii should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC (even in aeroplanes) or co-pilot in HEMS only!.

comment *4320* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA HEMS - 460 1.3, 1.2, 1.5

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *4321* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA HEMS - 461 1.5.1:

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *4375* comment by: *DRF Stiftung Luftrettung gemeinnützige AG*

1.2 (a) (i) & (ii). A combination of i and ii should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC or co-pilot in HEMS only!.

comment *4428* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

1.4: This would be the case for AS 355, therefore no excemption, makes no sense. Define at least the circumstances.

comment *4429* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

2. Medical passenger: There should be an exemption process defined, such as: if the medical passenger has been trained according to an approved training program at least each half year in all of those points listed below, than the medical passenger has not to be briefed prior to each flight or series of flights

comment *4603* comment by: *Christophe Baumann*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *4605* comment by: *Christophe Baumann*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *4606* comment by: *Christophe Baumann*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *4608* comment by: *Christophe Baumann*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *5074* comment by: *SNEH Organisation representing all french commercial helicopters operators*

1.4 Crew composition

In France, HEMS operations don't require a HEMS crew member or a second pilot. For years, many of HEMS flight have been conducted between 2 hospitals by single pilot crews (assisted with an Auto Pilot or SAS helicopter equipment for night operations). Operations on Operating sites are also conducted with single pilot crews without hoist operations (Hoist operations are realized by State aircrafts).

It is not possible to require a crew composition change compared to French's present regulation that is adapted to French HEMS operations requirements.

The HEMS crew member or 2nd pilot in France will have heavy consequences : Loss of range due to the new crew composition (necessity of heavier helicopters) and increase of personal charges will have a heavy financial impact on our customers that is not justified compared with present operations and needs of the States.

We ask tht crew composition in HEMS operations can be studied by the local authority in order to be in compliance with the local operations.

comment *5383* comment by: *ALFA-HELICOPTER*

1.2 (a) (i) & (ii). A combination of i and ii should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC or co-pilot in HEMS only!.

comment *5703* comment by: *HDM Luftrettung gGmbH*

1.2 (a) (i) & (ii). A combination of i and ii should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC or co-pilot in HEMS only!.

comment *5741* comment by: *ADAC Luftrettung GmbH*

1.2

Experience: 500 hrs as PIC in an operational environment similar to the intended operation and a 1000hr total helicopter experience should suffice. or

500 hrs total helicopter experience and 500 hrs as Co-Pilot under Supervision in HEMS and Trainingsprogramm provided by the operator.

comment *5831* comment by: *Ph.Walker*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years)

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING"

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *5832* comment by: *Ph.Walker*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6

months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *5866* comment by: *Norsk Luftambulanse*

1.2 (a) (i) & (ii). A combination of i and ii should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC or co-pilot in HEMS only!.

comment *6110* comment by: *DGAC*

Paragraph 1.3

It should be précised who is entitled to supervise the training with sole reference to instruments.

Proposal:

We suggest that it should be a FI and that the description of the training should be in the ops manual

It is suggested to align the validity of the training with the validity of the OPC (operator proficiency check) as the check and the training could be done on the same flight.

Proposal:

"When the flight with sole reference to instrument is undertaken within the last 3 months of the validity period, new validity period shall be counted from the original expiry date"..

comment *6220* comment by: *Hans MESSERLI*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6221* comment by: *Hans MESSERLI*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO)."CREW TRAINING AND CHECKING"

comment *6222* comment by: *Hans MESSERLI*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO)."CREW TRAINING AND CHECKING"

comment *6224* comment by: *Hans MESSERLI*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *6329* comment by: *SHA (AS)*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO)."CREW TRAINING AND CHECKING"

comment *6403* comment by: *Trans Héli (pf)*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6404* comment by: *Trans Héli (pf)*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *6405* comment by: *Trans Héli (pf)*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *6406* comment by: *Trans Héli (pf)*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *6421* comment by: *HSD Hubschrauber Sonder Dienst*

1.2 Experience.

1.2(a)(i) & (ii) in combination should also be possible, i.e. a minimum experience of 1000 hrs on helicopters, of which 500 hrs as a pilot in command. At present time there is no recognition of helicopter experience gained other than as PIC or copilot in HEMS only.

comment *6433* comment by: *HSD Hubschrauber Sonder Dienst*

1.4 b.iii.: What could you possibly mean by "Adequate ground reference" (Either there are VFR-minima or there are not) and "Reliability of weather reporting facilities"???? When is a facility considered to be reliable???? Who is to state that reliability????

comment *6523* comment by: *Peter Moeller*

1.2 Experience change a. and b. to

a minimum of 1000 hours helicopter time of which at least are 500 hours as PIC on helicopters and at least 500 hours operating experience in helicopters gained in an operational environment similar to the intended operation

Fixed wing time does not improve the safety level of a HEMS pilot

comment *6668* comment by: *Heliswiss International*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *6669* comment by: *Heliswiss International*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *6670* comment by: *Heliswiss International*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *6672* comment by: *Heliswiss International*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *7023* comment by: *Christian Hölzle*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *7026* comment by: *Christian Hölzle*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *7091* comment by: *Swiss Helicopter Group*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *7093* comment by: *Swiss Helicopter Group*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *7099* comment by: *Swiss Helicopter Group*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *7108* comment by: *Swiss Helicopter Group*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

Duplicate comment.

comment *7157* comment by: *Eliticino SA*

1.3 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).

comment *7160* comment by: *Eliticino SA*

1.2 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *7161* comment by: *Eliticino SA*

1.5 : It would be logical to take out the elements contained in 1.5 of AMC OPS.SPA.010 and place them into separate AMC OPS.SPA.001.HEMS(b)(3) (to achieve consistency with HHO).“CREW TRAINING AND CHECKING”

comment *7162* comment by: *Eliticino SA*

1.5.1 : Owing to the high number of checks it should be possible to combine with PPC or other related checks in accordance with the National Authority.Flight crew undergo 14 checks : HELO recency, NVIS (3 missions in 90 days), HHO (3 night hoist cycle in 90 days), HEMS (30 minutes IFR in 6 months), HEMS VMC prof check, HEMS Night prof check, HEMS line check, Recurrent training on each type, CRM annual check, OPS prof. check (check valid 6 months), Emergency and safety check (annual), Ground training (annual), Commercial OPS other than CAT (annual check), dangerous check (2 years).This goes way beyond the original concept of assessment of fitness and introduces periodic assessment. This was not part of the original requirements and unless 'periodic' is qualified, could lead to some TCM being subjected to six-monthly assessments. This clause should be removed because clause (2) and the AMC provides sufficient safety. Delete this clause and renumber subsequent clauses.

comment *7223* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

AMC OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS)

OPERATING PROCEDURES

1.2 Experience.

The minimum experience level for a pilot-in-command conducting HEMS flights should take into account the geographical characteristics of the operation (sea, mountain, big cities with heavy traffic, etc.) and should not be less than:

a. Either:

i. 1 000 hours ~~pilot-in-command of aircraf~~t on helicopters of which 500 hours is as pilot-in-command on helicopters; or

ii. 1 000 hours as co-pilot in HEMS operations of which 500 hours is as pilot-in-command under supervision; and 100 hours pilot-in-command of helicopters.

1.2 (a) (i) & (ii). A combination of (i) and (ii) should also be possible i.e. a minimum experience of 1000hrs (or even 1500hrs) on helicopters of which 500hr as a pilot in command. At present there is no recognition of helicopter experience gained other than as PIC (even in aeroplanes) or co-pilot in HEMS only!.

comment *7317* comment by: *new European Helicopter Association*

1.2 Experience: The requirements mentioned under 1.2 i & ii do not recognise any helicopter experience other than as PIC or co-pilot in HEMS (which is rare),

but do recognise PIC hrs on aeroplanes. The requirement should be changed to enable pilots with a minimum of 1000hrs helicopter experience, of which at least 500hrs as PIC.

comment *7322* comment by: *new European Helicopter Association*

1.4 Crew Composition, (b) Night Flight:" …one pilot and one HEMS technical crew member may be employed in specific geographical areas defined by the operator in the operations manual…" The original text required the satisfaction of the Authority with respect to these kinds of operations. A general rule will be unable to take into account all the factors that could influence the decision on the size of the specified geographical area. This could result in either to strict or to liberal rulemaking. It is recommended that the (local) Authority maintains its role.

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - GM1 OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS) p. 463

comment *6455* comment by: *HSD Hubschrauber Sonder Dienst*

Flight following system:

"providing contact" should be clarified in the sense of either radio contact or contact by electronic information system in regard to position, track,ectr.

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - GM2 OPS.SPA.001.HEMS(b)(4) Helicopter emergency medical service operations (HEMS) p. 463-464

comment *1227* comment by: *Stefan Huber*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2211* comment by: *Heliswiss*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2354* comment by: *Austro Control GmbH*

b.

For safety reasons it has to be clarified that on the flight to the HEMS operating site the technical crew member has to be placed on the front seat and not on the stretcher, which is not a certificated seat and therefore a safety concern!

Solution:

delete b for safety reasons or change requirement b):

"After arriving at the HEMS Operating Site, the installation of the stretcher may preclude the technical crew member from occupying the front seat; ***during the flight to the HEMS operating site the strechter may not be used as front seat".***

e)

Change the text to:

With the exception....assisting from the ~~front seat (co-pilot seat)~~ ***co-pilot-seat***

Justification.

Co-pilot-seats are certified and this proposed text grants clarification.

comment *4323* comment by: *HDM Luftrettung gGmbH*

AMC OPS SPA HEMS - 464:

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6673* comment by: *Heliswiss International*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6871* comment by: *ALFA-HELICOPTER, spol. s r.o.*

This change disqualifies from HEMS VFR-NIGHT operations all helicopters which are not able to carry two crew members in the front seats during patient transport. This would affect certain types of category A, 1st class performance certified helicopters.

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - GM OPS.SPA.020.HEMS(a) HEMS Operating Minima p. 464

comment *2501* comment by: *Catherine Nussbaumer*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6090* comment by: *Irish Aviation Authority*

Comment:

Within the text the term "short period" needs to be defined or guidance offered as to what is deemed to be an acceptable interpretation of the phrase. This is to try and prevent any tendency for a pilot to continue flight in conditions that are unsuitable thereby unnecessarily increasing the risk factor.

Justification:

Provision of appropriate guidance material.

Proposed text:

Amend text to include "Since every situation is different it was not felt appropriate to define the short period in terms of absolute figures, however, for guidance a period of 60 seconds at Vy should be considered as a possible maximum".

comment *6340* comment by: *Heliswiss International*

Operating minima : Visibility may be reduced to 500 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

comment *7027* comment by: *Christian Hölzle*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

B. II. Draft Decision - Part-OPS - Subpart D - Section IX - AMC OPS.SPA.025.HEMS(b)(3) Performance requirements for HEMS operations p. 464

comment *869* comment by: *Reto Ruesch*

Site dimensions

This is not applicable for mountain operations due to the site diversity.

comment *1018* comment by: *Michael Kroell*

2 D during day seems to be to restrictive especially in city areas.

During day it should be the pilots discretion with a minimum distance to obstacles which allows safe operations.

At night, when the operating site is illuminated from the ground, the 4D could be reduced to 2D also at pilots discretion provided the illumination is from a

professional entity(from the operator or fire-brigade, fire-department, civil defence, military-unit etc.).

An equivalent level of safety has to be ensured.

comment *1114* comment by: *EUROCOPTER*

Comment on § 1 (minimum dimensions of the HEMS operating site):

It is not clear if the minimum dimension regards to a solid (flat) area on ground or to an obstacle free area (which can include air or water). If the dimensions describe an area on ground, a landing i.e.on a top of a hill will no longer be possible.

Proposed solutions:

1. (Preferred): to delete this § 1. and leave the decision, to land or not on the specific site, to the pilot. The pilot's decision will be done based on the general impression of the landing site (dimensions, kind of surface, obstacles (height and distance), safety to people on ground, etc), and not only by the size of the site. The size of the site can only be estimated by the pilot.

2. Change wording: "*1. When selecting a HEMS operating site it should have a minimum **obstacle free** dimensions of at least 2D. For night operations, unsurveyed HEMS operating sites shaould have **obstacle free** dimensions of at least 4D in length and 2D in width*;

comment *1115* comment by: *EUROCOPTER*

Comment on § 2: Illumination of the HEMS operation site

Proposed solutions:

1. (Preferred) To delete this § 2. Night operations for all type of aircraft and on all sites require a sufficient illumination. This is not different for HEMS operating sites.
2. Change (2) wording: "*For night operations, the illumination may be either from the ground **in combination with the helicopter lighting**, or from the helicopter."*

comment *1151* comment by: *Heli Gotthard*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *1283* comment by: *Air Zermatt*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *1334* comment by: *Air-Glaciers (pf)*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *1823* comment by: *Heli Gotthard AG Erstfeld*

AMC Ops SPA HEMS Site dimensions

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *1898* comment by: *SHA (AS)*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *1975* comment by: *Berner Oberländer Helikopter AG BOHAG*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2060* comment by: *Heliswiss AG, Belp*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2222* comment by: *Heliswiss NV*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2242* comment by: *Dirk Hatebur*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2486* comment by: *Jan Brühlmann*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2593* comment by: *Walter Mayer, Heliswiss*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2881* comment by: *Philipp Peterhans*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *2953* comment by: *Pascal DREER*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *3939* comment by: *FOM ANWB MAA*

OPS.SPA.025 (b) (2) proposed text states:Helicopters conducting operations to/from an HEMS operating site located in a hostile environment shall be operated in accordance with Performance Class 2This Para which is a change from JAR-OPS 3.005(d) (c) (2) (b) which states Helicopters conducting operations to/from a HEMS operating site located in a hostileenvironment shall as far as possible be operated in accordance with Subpart G (Performance Class 1). The commander shall make every reasonable effort to minimise the period during which there would bedanger to helicopter occupants and persons on the surface in the event of failure of a power unit (See ACJThe rationale behind this change is explained in Attachment D to Appendix 1 and gives 4 options1, 2(a), 2(b) and 2 (c)The preferred option is 2(b) which would leave HEMS Operations as they are today without the requirement to show compliance with JAR-OPS 3.517(a) - Operations without a safe forced landing capability.The justification for this is that European HEMS Operations are now mature and have shown little incidence, if any, of critical power unit failure at the HEMS operating site

comment *4431* comment by: *Helikopter Air Transport GmbH / Christophorus Flugrettungsverein*

This is not applicable for mountain operations due to the site diversity

comment *4610* comment by: *Christophe Baumann*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *5078* comment by: *SNEH Organisation representing all french commercial helicopters operators*

1. When selecting a HEMS operating site it should have a minimum dimension of at lease 2D. For night operations, unsurveyed HEMS operating sites should have dimensions of at least 4D in length and 2D in width.

It is not clear if the minimum dimensions are the ground solid area or the free obstacles zone area (that is preferred).

2. For night operations, the illumination may be either from the ground or from the helicopter

We think the helicopter illumination is always required ; so, it would be better to specify that the illumination may be either from the ground in combination with the helicopter's lighting, or from the helicopter.

comment *5833* comment by: *Ph.Walker*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6112* comment by: *DGAC*

To be consistent with ICAO annex 14, the load bearing area should measure 1.5D and the surface free of obstacle should measure 2D.

comment *6229* comment by: *Hans MESSERLI*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6341* comment by: *Heliswiss International*

Perf class 3 : According to the GM OPS SPA 020 HEMS page 464 the ability to reduce the visibility for short periods has been included. The pilot is allowed tpo asses the risk of flying temporarily into reduced visibility against the need to provide emergency medical service and according to the limitations of the AFM.Mountain operations shall be considerated as SAR.In first priority CAT A or equivalent Helicopter shall be operated for HHO. If the use of a CAT A helicopter is not appropriate for operational reasons, or if a CAT A helicopter is not available within an appropriate time frame, the HHO operation with a CAT B helicopter should be enabled.

comment *6342* comment by: *Heliswiss International*

From 1968 the Swiss AIB reports 22 occurrences for SAR and HEMS over a total of 390 which represents only the 5.6%. 22 occurrences for more than

325'000 missions accomplished represents only 0,0068%. Seven happened on ME and fifthteen on SE and only 2 are related to Technical or maintenance (vibrations and hoist failure both on ME). Considering this, Helicopter Class choice shall be left to the operator, provided he obtain the National Authority AOC required.

comment *6408* comment by: *Trans Héli (pf)*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *6614* comment by: *HSD Hubschrauber Sonder Dienst*

OPS.SPA.025(b)(2) proposed text states: helicopters conducting operations to/from a HEMS-operating site in hostile environment shall be operated in PC 2. This §, which is a change from JAR-OPS 3.005 (d)(c)(2)(b), which states, that helicopters at a HEMS-operating site in a hostile environment shall be operated as far as possible in PC 1. The commander has to make every effort to minimize the period, during which there is danger to the helicopter occupants and persons on the surface in the event of an engine failure (see ACJ, the rational behind this change is explained in Attachment D to Appendix 1 and gives four options: 1, 2a, 2b and 2c. Our prefered option is 2b, which would leave HEMS-operations as they are today without the requirement to comply with JAR-OPS 3.517(a) "Operations without assured safe forced landing capability". The justification for this is, that European HEMS-operations are now mature and show very few incidence and accidents, if any, of critical power unit failures during the takeoff and landing phase.

comment *7112* comment by: *Swiss Helicopter Group*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *7163* comment by: *Eliticino SA*

Site dimensions : This is not applicable to mountain operations owing to site diversity.

comment *7226* comment by: *European HEMS & Air Ambulance Committee (EHAC)*

OPS.SPA.025 (b) (2) proposed text states:Helicopters conducting operations to/from an HEMS operating site located in a hostile environment shall be operated in accordance with Performance Class 2

This paragraph which is a change from JAR-OPS 3.005(d) (c) (2) (b) which states Helicopters conducting operations to/from a HEMS operating site located in a hostileenvironment shall as far as possible be operated in accordance with

Subpart G (Performance Class 1). The commander shall make every reasonable effort to minimise the period during which there would bedanger to helicopter occupants and persons on the surface in the event of failure of a power unit (See ACJThe rationale behind this change is explained in Attachment D to Appendix 1 and gives 4 options1, 2(a), 2(b) and 2 (c)The preferred option is 2(b) which would leave HEMS Operations as they are today without the requirement to show compliance with JAR-OPS 3.517(a) - Operations without a safe forced landing capability.The justification for this is that European HEMS Operations are now mature and have shown little incidence, if any, of critical power unit failure at the HEMS operating site.

Appendix A – Attachments to comments received on NPA 2009-02b

UK CAA FODCOM 03 2009.pdf

Attachment #1 to comment #124

ACJ OPS to Appendix 1 (New) to EU-OPS 1.430(h).pdf

Attachment #2 to comment #815

ACJ OPS 1.430 CONTINUOUS DESCENT FINAL APPROACH (CDFA) See Appendix 1 (New) to JAR-OPS 1.430.pdf

Attachment #3 to comment #815

HEC.pdf

Attachment #4 to comment #4388

NPA 2009-02 Commenti Gelsomino - Attachment no. 1.pdf

Attachment #5 to comment #2761

Attachment #6 to comment #1285

T470.pdf

Attachment #7 to comment #7544

EASA RPF alternate minima.pdf

Attachment #8 to comment #310

BK117 C1.pdf

Attachment #9 to comment #927

BK117 B2.pdf

Attachment #10 to comment #927

NPA OPS 38 JAR-OPS 3 .pdf

Attachment #11 to comment #1152

AGM%20S4%20Ops%20TGL%2043%20HEMS%20Mountain%20Ops%20Feb%2008%20Print.pdf

Attachment #12 to comment #986

Comment NPA 2009-02b-AMC OPS.GEN.125 Portable electronic devices ED130table6.pdf

Attachment #13 to comment #5072

EASA RPF take off minima.pdf

Attachment #14 to comment #312

EASA RPF unserviceable equiment table.pdf

Attachment #15 to comment #311

EASA RPF unserviceable equiment.pdf

Attachment #16 to comment #311

Comment NPA 2009-02b-PA14-OPS-GEN-500 Unified table.pdf

Attachment #17 to comment #4977

JAR-OPS 1 AMT 13 TGL 44AMC OPS 1.297.pdf

Attachment #18 to comment #306

Attachment #19 to comment #6092

HEC.pdf

Attachment #20 to comment #4423

protective equipment.pdf
Attachment #21 to comment #1071

ils reliability-STEADES.pdf
Attachment #22 to comment #5

rad alt.pdf
Attachment #23 to comment #1080

logging.pdf
Attachment #24 to comment #1072

human cargo sling.pdf
Attachment #25 to comment #1072

hoist operations 1.pdf
Attachment #26 to comment #1072

helicopter external load flow chart.pdf
Attachment #27 to comment #1072

long line.pdf
Attachment #28 to comment #1072

hoist operations 2.pdf
Attachment #29 to comment #1073

helicopter external load flow chart.pdf
Attachment #30 to comment #1073

hoist operations 1.pdf
Attachment #31 to comment #1073

BK117 C1.pdf
Attachment #32 to comment #1082

BK117 B2.pdf

Attachment #33 to comment #1082