European Union Aviation Safety Agency

# Notice of Proposed Amendment 2022-11

**in accordance with Article 6 of MB Decision No 1-2022**

# Regular update of the Air Operations rules

## *Lessons learnt from standardisation inspections*

## *Helicopter operation issues*

## *Transposition of several ICAO SARPs*

RMT.0392 (NPA A)


**EXECUTIVE SUMMARY**

The objective of this Notice of Proposed Amendment (RMT.0392 (A)) is to maintain a high level of safety for air operations with aeroplanes and helicopters, to consider the lessons learnt from standardisation inspections, and improve the rules in line with the principles of better regulation.

The NPA proposes to:

— consider safety recommendation SR UNKG-2020-001 on rulemaking for the carriage or installation of carbon monoxide (CO) detectors on aircraft,

— transpose several Standards and Recommended Practices (SARPs) from ICAO Annex 6,

— improve the rules by considering the lessons learnt from standardisation inspections,

— update the rules on fuel planning and management to render them more performance based for aircraft that use engines running with electrical propulsion,

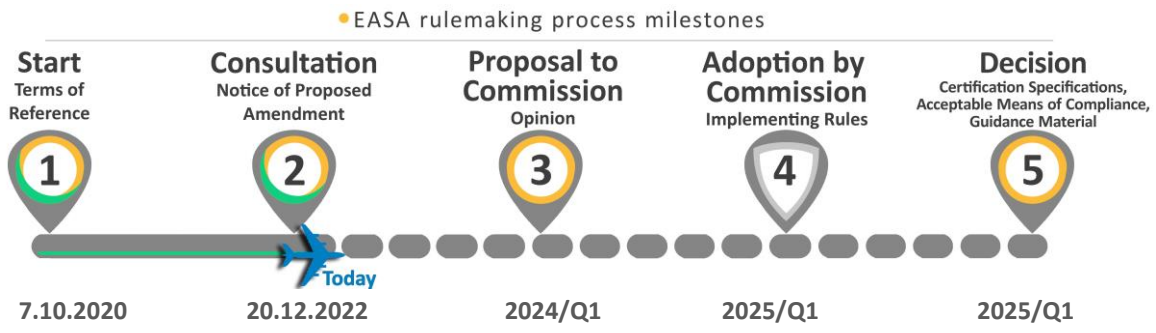
— update the rules on helicopter operations,

— update some rules on cabin crew and cabin safety, and

— improve the rules by updating references, aligning them with the regulations of other domains, and ensuring consistency among the different annexes to Regulation (EU) No 965/2012.

The proposed amendments are expected to maintain and even increase safety and cost-effectiveness, and ensure alignment with ICAO.


| | | | |
|---|---|---|---|
| **Action area:** | Flight operations — aeroplanes and helicopters | | |
| **Related rules:** | Commission Regulation (EU) No 965/2012 and related AMC and GM | | |
| **Affected stakeholders:** | All aircraft operators; competent authorities | | |
| **Driver:** | Efficiency/proportionality; safety | **Rulemaking group:** | No |
| **Impact assessment:** | Yes | | |



# Table of contents

# 1. About this NPA

## 1.1. How this NPA was developed

The European Union Aviation Safety Agency (EASA) developed this NPA in line with Regulation (EU) 2018/1139[1] (the 'Basic Regulation') and the Rulemaking Procedure[2]. This rulemaking activity is included in the European Plan for Aviation Safety (EPAS) for 2022–2026[3] under rulemaking task RMT.0392. The NPA is hereby submitted to all interested parties for consultation[4].

EASA has performed focused consultations on several topics of this regulatory proposal with the affected stakeholders (technical meetings with competent authorities and industry representatives from the EASA Advisory Body Technical Expert Groups on cabin crew and cabin safety and helicopter topics). Their feedback is included in the proposal.

Furthermore, all the amendments that EASA proposes in this NPA related to cabin crew have been thoroughly discussed with the EASA Advisory Body expert subgroup AIR OPS TeB Cabin Safety Expert Group (CSEG)[5].

## 1.2. How to comment on this NPA

Please submit your comments using the automated **Comment-Response Tool (CRT)** available at **http://hub.easa.europa.eu/crt/**[6].

The deadline for the submission of comments is **20 March 2023**.

## 1.3. The next steps

Following the closing of the public commenting period, EASA will review all the comments received.

Based on the comments received, EASA will consider the need to propose amendments to Regulation (EU) No 965/2012 and, if necessary, issue an opinion. A summary of the comments received will be provided in the opinion.

The opinion will be submitted to the European Commission, which will use it as a technical basis in order to take a decision on whether or not to amend Regulation (EU) No 965/2012.

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1 Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139).

2 EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 01-2022 of 2 May on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-no-01-2022-rulemaking-procedure-repealing-mb).

3 European Plan for Aviation Safety 2022 - 2026 | EASA (europa.eu)

4 In accordance with Article 115 of Regulation (EU) 2018/1139, and Article 6 of the Rulemaking Procedure.

5 Members of the AIR OPS TeB CSEG are the cabin safety experts nominated by the EASA Members States' competent authorities.

6 In case of technical problems, please send an email to crt@easa.europa.eu with a short description.

If the European Commission decides that Regulation (EU) No 965/2012 should be amended, EASA will issue a decision in order to amend the acceptable means of compliance (AMC) and guidance material (GM) to comply with the amendments introduced into that Regulation.

The comments received on this NPA and the EASA responses to them will be reflected in a summary that will be included in the Opinion.

# 2. In summary — why and what

## 2.1. Why we need to amend Regulation (EU) No 965/2012 and the related AMC and GM — issue/rationale

RMT.0392 is a standing rulemaking task. Its purpose is to continually address safety issues or topics that have not been addressed yet by dedicated rulemaking tasks and put them forward through the rulemaking process to amend Regulation (EU) No 965/2012 and the related AMC and GM.

The amendments proposed in this NPA stem from various sources ranging from candidate issues proposed by stakeholders to the transposition of several ICAO SARPs, lessons learnt from EASA standardisation inspections, safety issues resulting from EASA's safety risk portfolio, proposals coming from the EASA Advisory Bodies, past rulemaking tasks, etc.

For this reason, the impact assessment developed has considered several aspects of the various proposals, such as their controversy level, their origin, the complexity of the topic, and the overall impact. Because of this customised approach, only one topic has a more extensive impact assessment described in Chapter 4. For the other proposed amendments, a short impact assessment is included either in Section 2.3.2 or directly in the 'rationale' below the proposed amendments in Section 3.

**Related safety issues**

Safety recommendation (SR) UNKG-2020-001, numbered SR 2020-007 in the UK AAIB's aircraft accident report AAR 1/2020[7] on an accident on 21 January 2019 involving a Piper PA-46-310P Malibu aeroplane, has been considered during the development of this RMT. The text of the SR is as follows:

> 'It is recommended that the European Union Aviation Safety Agency require piston engine aircraft which may have a risk of carbon monoxide poisoning to have a CO detector with an active warning to alert pilots to the presence of elevated levels of carbon monoxide.'

An impact assessment has been conducted on the recommended rulemaking to mandate the carriage or installation of CO detectors on aircraft which may have a risk of CO poisoning. The outcome of the impact assessment indicates Option 0 'No rulemaking' as the recommended way to take in this respect, and that the safety issue could be more effectively addressed through other, non-regulatory means. Therefore, EASA's safety-promotion channels will continue to be used to further highlight to the community concerned the dangers of CO poisoning and the safety benefit of carrying or installing CO detectors. EASA will continue to monitor the safety risks related to CO poisoning through the safety risk monitoring programme and take additional action if the data indicates that it is necessary.

More details may be found in Chapter 4 'Impact assessment'.

[7] https://www.gov.uk/aaib-reports/aircraft-accident-report-aar-1-2020-piper-pa-46-310p-malibu-n264db-21-january-2019.

There are no exemptions[8] pertinent to the scope of the topics covered by this NPA.

**Alternative means of compliance (AltMoC) relevant to the content of this RMT**

AltMoC which have an impact on the development of this RMT and which have been considered in this proposal following a prior assessment performed by EASA and considered them worthy alternative means to be used by stakeholders to demonstrate compliance with the applicable implementing rules. These AltMoC are either proposed as new AMC or have been used to amend existing AMC:

| AltMoC Nr | AMC/Point reference | Topic |
|---|---|---|
| 2017-00017<br>2015-00034<br>2020-00006 | **AMC2 CAT.POL.H.305(b)** | Implementation of the set of conditions for piston-engined helicopters versus turbine engines |
| 2014-00009 | **AMC1 CAT.POL.MAB.105(c)** | Electronic signature or equivalent for mass and balance documentation |
| 2014-00045 | **AMC1 ORO.AOC.110** | Wet-lease arrangements |
| 2014-00030R | **Point ORO.CC.140(d)(1)(viii)** | Amendment to AltMoC 2014-00030 Training programme on aero-medical aspects and first aid |
| 2019-00018 | **AMC1 ORO.CC.125(d)(e)(2)(i)**<br>**AMC1 ORO.CC.140(b)(2)** | Use of extinguishing agents instead of halon substitutes during practical firefighting training |
| 2019-00015<br>2019-00030 | **AMC1 ORO.CC.100(b)** | Cabin crew experience measured in the number of sectors or flight hours instead of a 3-month period |
| 2018-0052<br>2017-002<br>2020-00024 | **AMC3 ORO.MLR.100(a)(A)(02)** | Change the 'List of effective pages' in an operations manual with a more appropriate wording to suit electronic operations manuals, for which the list of effective pages is no longer relevant. |

**ICAO and third-country references relevant to the content of this RMT**

The following amendments to the SARPs of ICAO Annex 6 have been considered for the proposals made in this NPA:

**Table 1: ICAO transposition**

| ICAO reference | EASA reference | SL type | Title | Date |
|---|---|---|---|---|
| AN 11/1.3.32-20/18 | 2020/SL 018e | II | Adoption of Amendment 44 to Annex 6 Part I | 07/04/2020 |
| AN 11/6.3.31-20/31 | 2020/SL 031e | II | Adoption of Amendment 37 to Annex 6 Part II | 08/04/2020 |

[8] Exemptions that have an impact on the development of this RMT's content and refer to:
- Article 70(1): Measures taken as an immediate reaction to a safety problem;
- Article 71(1): Limited in scope and duration exemptions from the substantive requirements laid down in the Basic Regulation and its implementing rules in the event of urgent unforeseeable circumstances affecting any natural or legal person subject to the Basic Regulation or urgent operational needs of that person;
- Article 71(3): Derogation from the rule(s) implementing the Basic Regulation where an equivalent level of protection to that attained by the application of the said rules can be achieved by other means;
- Article 76(7): Individual flight time specifications schemes deviating from the applicable certification specifications which ensure compliance with the essential requirements and, as appropriate, the related implementing rules.

| | | | | |
|---|---|---|---|---|
| AN 11/32.3.15-20/32 | 2020/SL 032e | II | Adoption of Amendment 23 to Annex 6 Part III | 07/04/2020 |
| AN 11/32.3.16-22/13 | 2022/013e | II | Adoption of Amendment 24 to Annex 6 Part III relating to offshore alternates for helicopters | 31/03/2022 |

Details on the transposition of the ICAO SARPs may be found in Section 2.3.1.

## 2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1.

The specific objectives of this proposal are to:

— improve, update and clarify the requirements regarding the operators' and competent authorities' systems, processes, practices, operational procedures, documentation, etc., as regards operations and oversight by addressing identified implementation issues and feedback from standardisation inspections and industry/NAA stakeholders;

— increase the level of safety for certain types of operations and activities;

— ensure continued compliance with Regulation (EU) 2018/1139;

— ensure alignment with the ICAO SARPs;

— increase the flexibility of the rules to render them future-proof with regard to new technologies developed by the industry;

— ensure a level playing field; and

— improve the efficacy of the Air Ops rules.

## 2.3. How we want to achieve it — overview of the proposals

### 2.3.1. Transposition of the ICAO SARPs

**Safety of the cargo compartment — new SARPs in ICAO Annex 6 Part I (Chapter 15)**

SARPs 15.1 and 15.2 were introduced with Amendment 44 to Annex 6 Part I and became applicable on 5 November 2020. AMC3 and GM1 to CAT.OP.MPA.160 are proposed to be added to support the implementation of the risk assessment that the operator must perform in accordance with point ORO.GEN.200(a)(3). They address the safety of the items carried in the aircraft's cargo compartment and the risk of fire in there. Many stakeholders around the world have expressed concerns on the insufficiently addressed risks posed by the carriage of certain items in the cargo compartment. For example, lithium batteries can be dangerous for air transport due to their chemical properties, and this hazard sometimes could exceed the containment capabilities of a certified aircraft. The consequences could be an incident or an accident. The new ICAO SARPs introduced in Chapter 15 of Annex 6 Part I and transposed into the proposed new AMC and GM would facilitate the information relevant to the cargo compartment fire protection system to be made available to the operator in appropriate documentation.

The implementation of appropriate risk assessment and mitigation at operator level, including the adequate consideration of the capabilities of the aircraft (e.g. the cargo compartment fire suppression system) is expected to contribute to enhancing safety of transporting all items in the cargo compartment (including lithium batteries) on both passenger and cargo aircraft. In terms of implementation time, it is expected that it will take minimum 2 years for the operators to develop or revise their risk assessment processes for the carriage of such items in the cargo compartment, and related operational procedures and training.

**Safety risk assessment of flying over or near a conflict zone — new SARP in Annex 6 Part I**

AMC2 and GM5 to point ORO.GEN.200(a)(3) are proposed to be introduced to transpose Standard 4.1.2 of Annex 6 Part I, introduced with Amendment 44 and applicable since 5 November 2020.

The MH17 accident investigation revealed that air operators consider that the airspace along the intended flight route is safe unless otherwise stated. While point ORO.GEN.200(a)(3) already requires operators to identify safety hazards linked to their operations, and to evaluate and manage the associated risks, including taking actions to mitigate them, EASA considers that a new AMC to this point could further clarify and substantiate the need to consider the risks involved in operations over or near conflict zones. The new AMC highlights the need for the air operator to assess the risks related to conflict zones and, when necessary, take appropriate risk-mitigation measures to ensure a safe flight operation. It is expected that the new AMC will have a positive impact on safety, as it will contribute to the establishment of a better risk management process.

The new GM incorporates reference to the information provided to the air operator while the aircraft is in flight in a similar way as information is provided en route for in-flight replanning, since this could result in a change of the intended route.

**Offshore alternates used for helicopter offshore operations (HOFO)**

Point (2) is proposed to be added to AMC2 SPA.HOFO.120 to prepare the transposition of new recommendation 2.3.4.3.15 in Annex 6 Part III Section 2, and to reflect the current best practices as regards helicopter offshore operations.

**Other minor amendments stemming from the amendments to ICAO Annex 6 as regards terminology**

The alignment of the terms ‘authorisation’, ‘approval’ and ‘acceptance’ used in Annex 6 has triggered a minor amendment to the Operations Specifications form in Annex II (Part-ARO).

**Article 83 bis of the Chicago Convention, the summary agreement — new SARPs in Annex 6 Parts I, II and III[9]**

Article 83 bis of the Convention on International Civil Aviation (Chicago Convention) provides for the transfer of certain functions and duties normally of the State of registry of an aircraft to the State of operator, that is, the State where the aircraft operator has its principal place of business or, if it has no principal place of business, the place where the operator resides, in the case of lease, charter or interchange of an aircraft or similar arrangement.

New SARPs were introduced in Annex 6 Parts I, II and III to require the carriage on board of a ‘certified true copy’ of the summary of the agreement based on Article 83 bis of the Chicago Convention. The

[9] The new SARPs are: 6.1.5 in Part I, 2.4.18 in Part II, and 4.1.5 in Section II and 4.13 in Section III of Part III.

agreement summary must be transmitted to ICAO when an Article 83 bis agreement is submitted for registration. The new SARPs became applicable on 5 November 2020.

Furthermore, a template for that agreement summary is provided[10], containing all relevant information needed (namely, which functions and duties are transferred by the State of registry to the State of operator). Air operators must carry this form on board the aircraft for use during ramp inspections or other verification activities to mitigate potential issues arising due to non-compliance with the relevant ICAO standards when an Article 83 bis agreement is applicable to the aircraft subject to inspection.

Existing guidance in Doc 10059 'Manual on the Implementation of Article 83 bis of the Convention on International Civil Aviation' refers to the carriage on board of a certified true copy of the agreement summary.

The content and layout of the agreement summary are recommended to be used until ICAO develops an interactive web-based system using a user-friendly electronic platform to allow for the swift registration and publication of Article 83 bis agreements, including the agreement summary.

A short impact assessment included in the related ICAO State letter[11] provides the following details:

> '2.1.9.1 Safety impact: Positive impact. This proposal will facilitate the efficient surveillance of operations under an Article 83 bis agreement, which is otherwise complex to implement.
>
> 2.1.9.2 Financial impact: Additional costs for training of inspectors with regard to the new agreement summary. One-off cost for development of regulations required for States involved in Article 83 bis operations. Operators benefit from ability to carry a summary of agreement and from reduced findings during ramp inspections.
>
> 2.1.9.3 Security impact: No security impact with the implementation of this proposal.
>
> 2.1.9.4 Environmental impact: While this proposal does not by itself provide fuel savings, taken with the guidance of Doc 10059, Manual on the implementation of Article 83 bis of the Convention on International Civil Aviation, it provides for optimum routing of Article 83 bis operations over those States not party to Article 83 bis. In addition, it is expected to reduce the volume of documents to be carried on board.
>
> 2.1.9.5 Efficiency impact: Positive impact. While this proposal does not by itself provide route savings, taken with the guidance of Doc 10059, it provides for optimum routing of Article 83 bis operations over those States not party to Article 83 bis.'[12]

EASA provided the following answer in response to the ICAO State letter Type II (AN 11/1.3.32-20/18) that announced the adoption of this Amendment:

> 'Under the legal framework established by Regulation (EU) 2018/11398 and its implementing and delegated acts, the transfer of the State of Registry (SoR) functions between EU Member States is carried out by the EU regulatory system in a way that fully meets the objectives of Article 83bis of the Chicago Convention. This system is applicable to any aircraft on the register

[10] In new Appendix 10 to Part I, Appendix 2.5 to Part II, and Appendix 6 to Part III.

[11] ICAO State letter AN 11/1.3.32-20/18 of 7 April 2020 on the Adoption of Amendment 44 to Annex 6 Part I.

[12] Quote from ICAO State letter AN 11/1.3.32-20/18 announcing the changes and timelines of implementation of Amendment 44 to Annex 6 Part I.

of any EU Member State that is operated by an operator having its principal place of business in another EU Member State that fulfils the responsibilities of the State of the Operator.

It is considered that the new SARPs will create additional administrative burden for operators to solve a (non-safety) issue for ramp inspectors. Furthermore, ICAO is amending its Rules for Registration to provide for registration of Article 83bis agreements through an interactive web-based system. If such system can be accessed globally, a carriage of the document on board aircraft requirement is even more questionable. **It is not foreseen to amend Regulation (EU) 965/2012 to ensure compliance with this particular standard.**'

The decision not to transpose the new SARPs into Regulation (EU) No 965/2012 will have a minor negative impact on Member States, since they will have to notify a difference related to those SARPs to ICAO. This should have already happened when Member States responded to State letter AN 11/1.3.32-20/18, so in principle no further action will be required.

In terms of impact on air operators, the potential negative consequences of not transposing these standards into the EU regulatory framework are that EU air operators that apply Article 83 bis when flying outside the Territories of the Treaty might be issued with findings during ramp inspections in third countries for not providing the agreement summary form required in accordance with the new SARPs. However, this potential negative impact is still considered low. Taking this into account, EASA proposes not to transpose these new standards into Regulation (EU) No 965/2012. Instead, EASA will continue to support the ICAO initiative to allow the registration of Article 83 bis agreements through an interactive web-based system.

**Electronic flight bag (EFB) standards for NCC and SPO operations**

Amendment 37 to ICAO Annex 6 Part II Section II and Amendment 23 to ICAO Annex 6 Part III Section III, applicable as from 5 November 2020, introduced, in an effort to achieve harmonisation with the requirements applicable to international commercial air transport, a requirement for Contracting States to approve the use of an EFB function used for the safe operation of an aeroplane or a helicopter by an international general aviation (GA) operator.

While at first glance it might seem appropriate to introduce such a requirement for the purpose of harmonisation, EASA considers that such new requirement is not practical and not sufficiently justified considering the safety benefits of EFBs.

First of all, it should be reminded that Annex 6 Part II Section II and Part III Section III apply to all GA operators of aeroplanes and helicopters irrespective of the size and complexity of the aircraft operated. This means that the EFB requirements for such GA operators, if transposed into the EU regulatory framework, would be applicable to both NCO and NCC operators.

The only approvals which NCO and NCC operators are subject to are the following:

— Some SPA approvals granting specific privileges related to airspace usage (i.e. MNPS and RVSM), to the use of specific routes or procedures (i.e. LVO and PBN), and to the transport of dangerous goods. These approvals are applicable to NCO and NCC operators due to the risks involved to persons on the ground or to other aircraft in the vicinity. In addition, apart from the very specific case of dangerous goods, all the other SPA approvals applicable to NCO and NCC operators are linked to aircraft capability.

— The approval of the MEL; however, the establishment of an MEL is not mandatory for NCO operators.

In addition, the following aspects specific to NCO operators have to be considered:

— NCO operators are not required to declare their operations, making the oversight of a potential EFB approval unpractical for the relevant competent authority.

— NCO operators are not required to establish a management system and therefore do not necessarily have the procedures and competence to conduct risk assessments as mentioned in the ICAO SARPs.

— NCO operators are not required to establish an operations manual, where all operator's procedures would be compiled.

— NCO operators are not required to establish a flight crew training programme approved by the competent authority (apart from training related to the specific approvals mentioned above).

For the reasons mentioned above, it is considered that the introduction of a specific approval for the use of EFBs applicable to NCC and NCO operators is unpractical, disproportionate to the type of operations, and inconsistent with the current scope of applicable approvals.

Furthermore, it is considered that for NCO operators the safety benefits stemming from the use of EFBs offset the safety risks involved (refer to NPA 2016-12[13] where a risk assessment was conducted for NCO operations), provided that some minimal mitigation measures are established. Indeed, EFBs may provide major positive impacts in terms of situational awareness and support to decision-making, among others, and it is considered that the requirement to obtain an approval reduces these benefits and might even discourage operators from using EFBs.

**For all these reasons, EASA has not transposed the requirement for NCO and NCC operators to be approved to use an EFB application for the safe operation of an aircraft.** The already applicable mitigation measures for the use of EFBs defined under RMT.0601 have been kept.

### 2.3.2. Amendments to the helicopter requirements

**New definitions introduced in GM1 to Annex I (Definitions)**

Several definitions related to HESLO and HEC have been introduced for clarification. They have been introduced in GM1 to Annex I, as those terms are used only in the AMC to Part-SPO and Part-NCO.

**Complexity of an organisation — new AMC and GM to point ORO.GEN.200(b)**

The implementation of the current AMC1 ORO.GEN.200(b) can lead authorities to define the majority of small and very small helicopter operators as complex. However, the development and implementation of a full-scale management system expected from a complex organisation is unnecessarily burdensome for such operators.

For small organisations, verbal communication in the context of management systems is efficient. The cost of extensively documenting a management system outweighs the benefits. Most of the resources needed to document safety and compliance could be better employed for the benefit of safety.

[13] NPA 2016-12 'Transposition of provisions on electronic flight bags from ICAO Annex 6' (https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2016-12).

The efficiency of a management system relies heavily on the competence of key personnel and on effective verbal communication, and less on documentation.

It is believed that current AMC1 ORO.GEN.200(b) is not appropriate for smaller helicopter operators and, therefore, new AMC and GM have been developed while the current AMC1 remains applicable for aeroplane operators only.

The proposed amendments to AMC1 ORO.GEN.200(b) enable helicopter operators to better tailor their management systems to their operations, without amending the other AMC and GM to point ORO.GEN.200.

It was discussed whether all other AMC and GM to point ORO.GEN.200 should become restricted in scope to aeroplanes only. This might have helped define new AMC and GM applicable to helicopter operators. Such an approach was taken when reviewing the AMC and GM to point CAMO.A.200 of Annex Vc (Part-CAMO) to Regulation (EU) No 1321/2014, resulting in much leaner AMC. This option was considered and was rejected. Keeping the existing AMC and GM to point ORO.GEN.200 and using them with a more performance-based approach was considered more efficient for helicopter operations.

The proposal establishes the required proportionality as well as the appropriate level of harmonisation with the recently amended regulations applicable to management systems of maintenance and continuing airworthiness organisations (Part-145 and Part-M of Regulation (EU) No 1321/2014).

Pending the comments received to this NPA, similar amendments to AMC1 ORA.GEN.200(b) 'Management systems' will be considered to maintain a sufficient degree of alignment between Annex III (Part-ORO) to Regulation (EU) No 965/2012 (the Air Operations Regulation) and Annex VII (Part-ORA) to Regulation (EU) No 1178/2011 (the Aircrew Regulation).

New **AMC2 ORO.GEN.200(b)** reinforces the need for operators to assess the nature and complexity of their activities in order to establish an appropriate management system that effectively monitors compliance, and assesses and manages operational risks (see proposed point (a)).

The principle established in AMC2 is that the operator's management system should in principle follow the elements and processes that are appropriate for a complex operator, unless the operator's assessment of its activities clearly indicates that a simpler management system would be sufficient. This clarifies that it is up to the operator to demonstrate to the competent authority that a simpler management system still allows its compliance with the rules, particularly regarding the efficiency of its safety management and compliance-monitoring functions, both during certification and oversight (see proposed point (c)).

Point (b) clarifies that if the operator holds specific approvals under Part-SPA, it should be considered complex as regards its management system:

— Operators that perform HEMS, HHO, and offshore operations should be considered complex as the associated risks are higher than those of other CAT operations.

— SPA-LVO is accessible to NCO and should not be included in the list. SPA-PinS VFR is similar in nature.

— EFBs should be widely adopted without particular difficulties. Although there are associated risks to manage, a SPA.EFB approval should not require a complex management system.

— NVIS has underlying risks which should be managed. A management system is needed but it does not make an operator 'complex'. NVIS has safety benefits but brings no operational credits. It should not become too burdensome, or the safety benefit will never materialise.

It is proposed to delete the criterion of the number of FTEs of the operator (set at 20 FTEs in AMC1). However, with the new criterion proposed, most (if not all) operators with more than 20 FTEs should be considered complex. Therefore, the criterion of number of FTEs was not considered necessary, except possibly in the case of a large operator with an immature management system and an immature competent authority. No criterion based on the number of FTEs was adopted in the recently amended AMC to Regulation (EU) No 1321/2014 on management systems.

A gap analysis between the elements of the management systems of non-complex and complex operators is provided below. It may help define which elements of a management system applicable to a complex operator can be substituted with equivalent elements applicable to a non-complex operator.

Typical elements of the management system of a very small operator (simplified and provided as an example):

(1) Highly competent staff, including a highly competent safety manager, and no excessively complex risks need to be managed. All contractors are subject to an approval and are required to have their own management system.

(2) Adoption of a just culture adapted to the size and nature of the operation.

(3) Close interaction among the staff. No temporary or permanent outbases.

Example of a (simplified) gap analysis between the elements applicable to complex and non-complex operators:

| **AMC/GM applicable to complex operators** | **Gap analysis<br>Elements not included in the AMC/GM applicable to non-complex operators** | **Justification that these elements need not apply to this operator / equivalent risk mitigation measures in the case of this operator** |
|---|---|---|
| AMC1 ORO.GEN.200(a)(1) | More detailed functions of the safety manager | See (1) above |
| AMC1 ORO.GEN.200(a)(1) | Safety review board | See (3) above |
| GM2 ORO.GEN.200(a)(1) | Safety action group | See (3) above |
| AMC1 ORO.GEN.200(a)(2) | Safety policy | See (1), (2) and (3) above |
| AMC1 ORO.GEN.200(a)(3) | More detail regarding internal safety investigation | See (2) and (3) above |
| AMC1 ORO.GEN.200(a)(3) | More detail regarding safety performance measurement | See (2) and (3) above |
| AMC1 ORO.GEN.200(a)(3) | More detail on management of change | No real difference in the context of this operator |
| AMC1 ORO.GEN.200(a)(3) | More detail on continuous improvement | See (1), (2) and (3) above |
| AMC1 ORO.GEN.200(a)(3) | More detail on the emergency response plan | No real difference in the context of this operator |
| GM4 ORO.GEN.200(a)(3) | Interface between organisations | See (1) and (2) above |
| AMC2 ORO.GEN.200(a)(5) | Safety management manual | See (1) and (3) above |
| GM2 ORO.GEN.200(a)(6) | More detailed compliance-monitoring programme | See (1), (2) and (3) above |

New **GM1 ORO.GEN.200(b)** provides a comprehensive list of factors that might influence the complexity of the operator, and consequently of its management system.

Assessment of the impact of the proposals

The proposed AMC and GM will provide helicopter operators with more flexibility when defining their management systems, reducing complexity where it is justified.

The administrative burden placed on small helicopter operators by the unnecessary classification as 'complex' following AMC1 ORO.GEN.200(b) and the related consequences on their management systems was assessed by EASA through evaluation task EVT.0010[14]. The proposals follow the recommendations of EVT.0010 and will allow some operators to reduce the complexity of their management systems, with a positive economic impact as well as a positive impact on efficiency.

It is assessed that a typical small helicopter operator spends 720–880 hours per year on implementing management system requirements, of which approximately 35 % is perceived as administrative burden, e.g. 250–300 hours/year, due to the implementation of means related to the definition of complex helicopter operators in AMC1 ORO.GEN.200(b). It is expected that the proposal will reduce the administrative burden by at least 50 %, saving for example 100–150 hours per year per operator.

There should be no negative safety impact. The proposal might contribute to improving the level of safety as operators could better allocate their resources to safety-relevant priorities.

The overall impact is positive.

**Alternative mass values for passengers — helicopters: new AMC3 CAT.POL.MAB.100(e)**

Effectiveness of statistical increments that increase standard masses for smaller aircraft

AMC2 CAT.POL.MAB.100(e) describes the general methodology that enables an operator to define its own standard masses. It also describes the methodology that was used by the JAA to define the standard masses that are currently published in AMC1 CAT.POL.MAB.100(e).

The statistical increments in Table 1 of AMC2 are justified in the case where each aircraft seat is sold individually to unrelated passengers. In this case, the lower the number of passengers, the higher the risk that all passengers are overweight, and the higher the necessary statistical increment to ensure that the standard masses are conservative.

In the airline business, the statistical increment is an effective way to ensure that standard passenger masses can be used, and no passengers will be rescheduled due to overweight.

In business aviation and helicopter operations, this statistical increment is not adequate.

In such operations, a flight is typically sold to a group of persons. In most cases, the passengers are related to each other because they are part of the same business line or of the same family.

The masses of the different passengers are therefore often related to each other for the following reasons:

— Overweight or underweight is often a shared feature in a given family.

[14] Evaluation report on administrative burden for small helicopter operators

— Some professions (e.g. professional sports, offshore business in the North Sea or similar) may select or attract persons that are taller and heavier than average.

For helicopters, the passenger masses are not negligible compared to the fuel mass. The smaller the helicopter, the greater the statistical increment in terms of percentage of payload.

For such operations, in most cases the statistical increments in AMC2 CAT.POL.MAB.100(e) are an unnecessary burden that either significantly reduces payload or prevents the use of standard masses. Moreover, in the rare case of a group of heavily overweight passengers boarding the helicopter, the statistical increments may not be sufficient.

For helicopters, statistical increments are burdensome most of the time and not effective to prevent the real helicopter mass from being higher than the computed mass and maximum mass.

Procedure in case the real passenger masses are higher than the standard masses

Standard masses do not always effectively represent the real masses of passengers. In this case, point (f) of AMC1 CAT.POL.MAB.100(e) states:

> '(f) On any flight identified as carrying a significant number of passengers whose masses, including hand baggage, are expected to significantly deviate from the standard passenger mass, the operator should determine the actual mass of such passengers by weighing or by adding an adequate mass increment.'

Safely implementing point (f) is not straightforward because of the following:

— passenger masses in excess of the standard masses are often identified just before the scheduled take-off;

— flight crews are sometimes on their own, and usually it is about single-pilot operations.

For helicopters, the implementation of point (f) of AMC1 CAT.POL.MAB.100(e) is the remaining safety barrier to prevent a take-off in excess of the maximum masses. Its implementation is not always effective because it relies on the pilot to solve problems under time and commercial pressure.

Proposal

The proposal is to permit lower standard masses for small helicopter operators by reducing the ineffective statistical increment. For that purpose, Table 1 of the proposed new AMC3 CAT.POL.MAB.100(e) provides a minimum statistical increment to be used by the operators.

In addition, new AMC3 CAT.POL.MAB.100(e) provides new standard mass values in Table 2. The new standard mass values are calculated as follows:

*Value of Table 2 of AMC2 for 20 and more passengers + Value increment in Table 1 of AMC3*

To use such lower standard masses, the operator should put in place a procedure to identify in advance cases where passenger masses are above the standard masses used. Solutions should be found before passengers board the helicopter. This should ensure a safe flight in case the passengers exceed the standard masses.

The proposal should enable a greater use of lower standard masses instead of real passenger masses that are routinely used by small helicopter operators. The use of standard masses usually comes with margins that do not exist when using real masses if the passengers are of average weight. With lower

standard masses, the margins will be lower, but they will exist more often. Moreover, the procedure in case passengers are above the standard masses is rendered safer.

AMC1 CAT.POL.MAB.100(e): standard masses for children

The 35-kg value proposed in Tables 1 and 2 of AMC1 CAT.POL.MAB.100(e) is expected to be conservative in most cases, although more and more children seem to be overweight. The average child would not weigh 35 kg until reaching the age of 12, at which age adult masses would apply[15].

While developing the proposals for this NPA, EASA considered reducing the existing margins. However, this was ultimately considered unnecessary since the 35-kg value does not create inefficiencies. The carriage of children on a small helicopter is usually unproblematic in terms of mass and balance.

Assessment of the impact of the proposals

Based on the explanations above, the level of safety provided for by the proposed AMC3 CAT.POL.MAB.100(e) should be equivalent to, if not better than, that provided by the existing AMC1 CAT.POL.MAB.100(e) and AMC2 CAT.POL.MAB.100(e).

Operators will decide whether to use the new AMC3 or the existing AMC based on their own impact assessment. The overall impact is expected to be positive for those operators that elect to use the new AMC3. There will be no impact on operators that elect not to use it.

**Clarifications regarding training and checking in Part-SPA**

NVIS and HHO

The amendment proposed to point SPA.NVIS.130(f)(1) establishes the requirement for sufficiently qualified NVIS instructors.

The amendments proposed to points SPA.NVIS.HHO.130(f)(2)(i) and SPA.HHO.130(f)(2)(i) clarify the following aspects:

— training towards NVIS and HHO is embedded in the training required by Subpart ORO.FC;

— aircraft/FSTD training always includes training towards NVIS and HHO;

— the validity period of any recurrent Subpart ORO.FC training is extended to equivalent training in the context of Part-SPA.

New point (f)(2)(iii) added to point SPA.NVIS.HHO.130 and point SPA.HHO.130 clarifies that the Part-SPA specific elements of the checking are conducted with the relevant periodicity. It clarifies the current regulation which implicitly refers to the validity periods defined in Subparts ORO.FC and ORO.TC.

The 3-month revalidation window is introduced at AMC level in AMC1 SPA.NVIS.HHO.130(f) and AMC1 SPA.HHO.130(f). The content is consistent with that of point ORO.FC.145 and the related AMC.

HOFO

Equivalent amendments are proposed to AMC1 SPA.HOFO.170(a) as follows:

[15] The average weight for European (Caucasian) children at the age of 12 is expected to be around 37 kg for girls and around 38.5 kg for boys. These values are lower for Asian children.

— the proposed amendments to point (a) provide clarifications regarding training;

— the proposed amendments to points (b) and (c) clarify the meaning of 'or as applicable';

— new point (d) introduces validity periods for the HOFO-specific part of the checking that were previously implicitly referring to the same validity periods as in Subpart ORO.FC; it ensures that HOFO-specific checking elements are conducted at the prescribed intervals.

No amendments are needed to Subpart SPA.HOFO requirements.

**Survival suits**

Subpart SPA.HOFO

Amendments are proposed to points SPA.HOFO.110(b)(3) and SPA.HOFO.165(b) to make the requirements on survival suits more performance based. EASA also proposes new AMC and GM to these points: AMC1 SPA.HOFO.110(b)(3), GM1 SPA.HOFO.110(b)(3), and AMC1 SPA.HOFO.165(b).

The current requirement on wearing a survival suit at night regardless of water temperature is considered overly prescriptive and has been causing implementation issues for all European operators flying offshore over tropical waters since the time it became applicable. On an average evening in tropical waters, the air temperature can be 30 °C and the water temperature can be 27 °C. Wearing a survival suit with insulation level designed for the North Sea is both unnecessary and unsafe.

The requirement on wearing a survival suit by day introduces a basic level of performance that delivers the intended results as long as only one category of approved survival suit is available. A single water temperature threshold is defined. Below this threshold, the additional insulation provided by the survival suit is required.

Following research on this topic, several categories of survival suits are in the process of being introduced in an EN industry standard. The temporary prEN 4863:2021 published on 1 December 2021[16] or the final EN 4863 will be referred to in the related ETSO.

By the time the proposal in this NPA becomes applicable, approved survival suits will be available with different liners, or with no liner, providing on-demand insulation levels to the operator. Four predefined insulation levels will be available, as follows:

| Insulation level | Description |
|---|---|
| **1** | Current survival suit with no liner |
| **2** | Current survival suit with currently unavailable less-insulated liner |
| **3** | Current survival suits with torso liner |
| **4** | Current survival suit with currently optional full liner |

The requirements need, therefore, to be amended to enable operators to make best use of the survival suits and insulation levels that are available to them.

The current suits are of modular design and can meet insulation level 1 (with no liner), level 3 (with standard torso liner) and potentially level 4 (with optional full liner). Insulation level 2 will require the purchase of a new, less-insulated liner. Operators may need to purchase the optional full liner to meet

[16] DIN EN 4863:2021-12 | ASD-STAN

insulation level 4. However, until a new ETSO is issued, there is only one approved survival suit configuration, which meets only insulation level 3.

Insulation levels 1 and 2 will enable the use of survival suits in temperatures higher than 10 °C. The proposal is to require the use of survival suits by crews up to 12 °C by day and maintain their optional use by day above 12 °C. By night, above 12 °C, the level of insulation can be better tailored to the water temperature, and the use of survival suits becomes optional for pilots above 15 °C and for passengers above 25 °C.

Insulation level 4 is deemed necessary in coldest waters with temperatures below 2 °C.

Each insulation level can be used for a given water temperature range, and there is a 3-degree overlap between the temperature range available for two adjacent insulation levels. The water temperature change from the coastline to an offshore location 1 flight hour away could be 4 °C. The variation from sunrise to sunset at a given location could be an additional 1 to 2 °C. During certain months of the year, the daily average water temperature may vary by another 1 °C per week. The GM clarifies that the operator may ignore such temperature variations. If nevertheless such variations must be taken into account, there would be a risk that the insulation level required on take-off is different from the insulation level required on landing. Ignoring such variations also ensures that in almost all cases the liner on a survival suit given to a passenger or crew need not be changed for the duration of the offshore stay. Crucially, the passenger or crew can use the same suit and the same liner on the inbound flight as on the outbound flight, since leaving the replacement of the liners to untrained passengers or to the crew of the helicopter ahead of the inbound flight would be impractical or even potentially unsafe.

Changing liners within an offshore mission should be restricted to very exceptional cases where logistical support is likely to be available (e.g. availability of a supporting ship or other significant offshore infrastructure), such as when:

— the duration of the offshore stay is longer than 1 month; and/or

— the location of the person changes significantly during the offshore stay.

The use of average monthly temperatures is supported by the rationale developed in NPA 2016-01 'Helicopter ditching and water impact occupant survivability'[17], which led to amendments to CS-27 and CS-29.

The GM also clarifies the following, for information and for the purpose of the operators' risk assessments:

— Flight crews require a lower insulation level than passengers so that it is not excessive and remains compatible with the pilot functions.

— The level of insulation is required to be greater by night because the rescue deployment time and the overall rescue time are expected to be longer at night.

CAT, NCC and SPO operations

EASA also proposes consistent amendments for CAT, NCC and SPO operations.

[17] https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2016-01

The availability of less insulated survival suits enables to increase the temperature threshold below which crews need to wear a survival suit. The temperature threshold in points CAT.IDE.H.295, NCC.IDE.H.226 and SPO.IDE.H.198 is aligned with the threshold introduced in AMC1 SPA.HOFO.110(b)(3) for day operations.

For NCC and SPO operations, points NCC.IDE.H.226 and SPO.IDE.H.198 already require a risk assessment that takes into account a number of criteria. New AMC1 NCC.IDE.H.226 and AMC1 SPO.IDE.H.198 are proposed to ensure that the new insulation levels available on survival suits are also taken into account.

For CAT operations, point CAT.IDE.H.295 is proposed to be amended for alignment with point SPA.HOFO.110(b) to ensure that the level of insulation of the survival suit is sufficient and not excessive. New AMC1 CAT.IDE.H.295 is also proposed.

Assessment of the impact of the proposals

The amendments to the thresholds are as follows:

— Day: a survival suit is required up to 12 °C, instead of 10 °C.

— Night — crews: a survival suit is required up to 15 °C, instead of being always required.

— Night — passengers: a survival suit is required up to 25 °C, instead of being always required.

The amendments to the thresholds at night will make a big difference in the case of tropical waters, where the survival suit is required under the current rules but its use is impractical.

Relaxing the requirement to wear a survival suit in warm waters at night does not reduce safety and brings significant economic benefits.

Providing survival suits to crews and passengers by day at temperatures of 10–12 °C makes sense from a safety perspective, both in terms of cold-water shock and prevention of hypothermia while rescue services are on their way. It is likely that no additional costs will be borne because survival suits will already be available for night flights.

Therefore, the cost incurred by the increased use of survival suits by day is more than offset by the savings resulting from the relaxation of the requirements on wearing survival suits at night, and has additional safety benefits.

Regarding the cost of implementation of the levels of insultation defined in point (c) of AMC1 SPA.HOFO.110(b)(3) and AMC1 SPA.HOFO.165(b), it will be that of the level 2 liner, which adds only 10–15 % to the cost of a survival suit. It should also be noted that not all offshore bases will operate in waters where temperatures are below 2 °C in the winter months. Those that do, are already equipped with liners that provide insulation based on industry best practice.

An ETSO to be published soon will allow the approval of immersion suits with lower insulation levels. It will become necessary to require a level of insulation that is adequate to the water temperature.

Regarding pilots, better survival suits that do not create excessive heat and provide adequate protection in case of water impact or ditching are essential to pilot performance. They are also essential to decision-making, especially if a decision to ditch has to be made.

Regarding all occupants, the proposed measure will potentially save lives because the likelihood that the occupants will have a fully zipped suit will increase, together with the chances of timely rescue after a water impact.

Therefore, the low cost is considered slightly outweighed by the benefits.

**Human external cargo (HEC) operations with external platforms**

In aircraft certification, the concept of 'human external cargo' (HEC) includes the carriage of humans externally to the helicopter regardless of the means.

In Regulation (EU) No 965/2012, HEC is not defined. However, the recent introduction of the definition of 'personnel-carrying device system' (PCDS) in point (95a) of Annex I uses the same concept. In particular, it has been clarified that the carriage of persons externally to the helicopter using an external platform or an 'airframe-mounted PCDS' is also included in HEC operations.

The current AMC1 SPO.SPEC.HEC.100 was written for the use of the cargo sling and potentially for hoist usage. Likewise, point SPO.SPEC.HEC.105 only addresses the use of the cargo sling and the hoist.

EASA proposes to amend points SPO.SPEC.HEC.105 and AMC1 SPO.SPEC.HEC.100 and introduce AMC1 SPO.SPEC.HEC.105 for the use of airframe-mounted PCDS. In addition, amendments to point (d)(5) of AMC1 SPO.SPEC.HEC.100 are proposed to clarify that training should be delivered on the device that is used in operation. New GM1 SPO.SPEC.HEC.105 is proposed to introduce some necessary clarifications.

*Note: The following subtasks are scheduled for NPA (B) of RMT.0392:*

— *improvement of AMC1 SPO.SPEC.HEC.100 for hoist usage, and*

— *harmonisation of pilot training or crediting of experience between point SPO.SPEC.HEC and Subpart SPA.HHO.*

Assessment of the impact of the proposals

It is expected that the proposals will have a positive safety impact by promoting best practices industry-wide and by providing means of compliance for an activity that already takes place.

There could be a downside if, for example, the proposals would lead to powerline maintenance taking place more often with external platforms and less with underslung baskets. The helicopter would then fly much closer to the cables involving additional risks. However, it is considered that the benefits of the proposed amendments will outweigh the drawbacks.

**Other amendments to the helicopter requirements**

Further amendments are proposed to several other helicopter requirements, the rationale of which may be found in Section 3, below each proposed amendment. This is the case for the following:

— point CAT.POL.H.420 and AMC2 CAT.POL.H.305(b) on single-engine performance;

— point SPA.HOFO.165(c) and AMC1 SPA.HOFO.165(c) on emergency breathing systems;

— AMC1 SPA.HOFO.165(h) on emergency exits and openings;

— point SPA.HOFO.165(j) and AMC1 SPA.HOFO.165(j) on chevron paintings or markings;

— point CAT.POL.MAB.105 and AMC1.1 CAT.POL.MAB.105(c) on mass and balance documentation;

— point CAT.IDE.H.145 on radio altimeters;

— point SPA.HOFO.160 and AMC1 SPA.HOFO.160(j) on tail boom cameras.

### 2.3.3. First-aid kits — amendments to the IRs, AMC and GM

EASA proposes amendments to the following points:

— CAT.IDE.A.220 and CAT.IDE.H.220,

— NCC.IDE.A.190 and NCC.IDE.H.190,

— NCO.IDE.A.145 and NCO.IDE.A.145, and

— SPO.IDE.A.165 and SPO.IDE.H.165.

The current rules define a quantitative objective (the number of first-aid kits) but no qualitative objective (their contents). The contents are currently defined at AMC level. EASA proposes amendments to the rules to improve legal certainty by strengthening the link between the objective in the rule and the related AMC.

In addition, the current rules require that the first-aid kid be 'readily accessible'. EASA proposes to replace this phrase with a clearer term.

For helicopters, EASA also proposes to extend the cases were the first-aid kit may be located in the cargo compartment.

EASA also proposes amendments to the following GM:

— GM1 CAT.IDE.H.220,

— GM1 NCC.IDE.H.190,

— GM1 NCO.IDE.H.145,

— GM1 SPO.IDE.H.165.

The proposed amendments aim to ensure consistency with the proposed amendments to the related rules and to improve clarity.

EASA also proposes amendments to AMC1 CAT.IDE.A.220 and AMC1 CAT.IDE.H.220 to clarify that the additional equipment mentioned is part of the first-aid kit but does not need to be located together with the other components of the first-aid kit.

In addition, EASA proposes amendments to AMC1 CAT.IDE.A.220 and AMC1 CAT.IDE.H.220 in relation to airway management devices and bag-valve masks. The proposed amendments have taken into account the outcome and justification of ED Decision 2021/005/R[18] on the new provisions on bag-valve masks and airway management systems for large aeroplanes currently equipped with emergency medical kits (EMKs). The focus was mainly on aircraft where 'EMKs are optional on some flights' and mandatory on others. With the Decision mentioned above, the amendments were expected to 'generate savings for the airlines in terms of costs, space and weight'; however, those amendments have led to additional costs, have used available space in the aircraft, and have added weight for small aircraft operators.

[18] https://www.easa.europa.eu/en/document-library/agency-decisions/ed-decision-2021005r

Contrary to large aeroplanes, on small aircraft with an MOPSC of 19 or fewer:

— the risk of a medical emergency occurring during the flight is very low;

— no cabin crew is required;

— the likelihood that a medically trained passenger might be on board is remote;

— the need for emergency medical equipment is reduced and it is unlikely that an untrained person will be able to use such equipment.

Airway management devices are only needed in medical emergencies. They should be used only by persons who have received advanced resuscitation training, and their use by non-medical persons is likely to be banned in most countries. They should be included only in first-aid kits of aircraft with cabin crews. They shall not be used on smaller aircraft.

Moreover, airway management devices do expire because they need to be sterile. Therefore, their use on smaller aircraft creates unnecessary, recurrent costs.

Bag-valve masks are also only needed in medical emergencies. They take up a substantial volume in the first-aid kit as three different sizes are needed, which makes them disproportionate for small aircraft and for operations not involving the transport of children or infants. Their efficiency in saving lives is reduced if airway management devices are not carried on board too. However, they can be used in the cabin by the neighbouring passenger and should have no expiry date.

In addition, in the case of helicopter operations, in most cases the flight duration is much shorter, and it is possible to land at short notice and leave a passenger on ground where medical help is available. The need for emergency medical equipment is therefore further reduced.

Considering the above, EASA proposes that airway management devices be required only if a cabin crew is required onboard all aircraft. For smaller helicopters operated in CAT, EASA proposes that bag-valve masks be no longer required, but the operator is asked to consider it needs them based on a risk assessment, as is the case already in SPO.

EASA also proposes the correction of an editorial error in AMC2 SPO.IDE.A.165 and AMC2 SPO.IDE.H.165. Bag-valve masks are neither instructions nor available in paper or electronic format. In addition, EASA proposes that a disposable emergency resuscitation aid may be an alternative to the bag-valve mask in the context of helicopter CAT operations with a MOPSC of 6 or fewer and SPO operations with complex motor-powered aircraft, based on a risk assessment. This follows the already applicable provisions for NCO and SPO with non-complex motor-powered aircraft.

### 2.3.4. Universal precaution kits (UPKs) — new rule as a result from the COVID-19 pandemic

The COVID-19 pandemic showed a slow start by aircraft operators in implementing protective measures for crew members servicing symptomatic passengers. Experience demonstrated that operators that had already been using UPKs reacted much faster to the new situation and more efficiently than other operators. Furthermore, the availability of personal protective equipment and disinfecting agents at the beginning of the pandemic further aided the implementation of protective measures.

Following its own assessment and discussions with public health authorities, EASA included the requirement for UPKs in its COVID-19-related Safety Directives 2021-04 and 2021-05 'Operational Measures to Prevent the Spread of Coronavirus "SARS-CoV-2" Infection'[19].

In the long term, to facilitate the use of UPKs as soon as a public health emergency of international concern (PHEIC) is declared by the World Health Organization or by other regional or national public health authorities, EASA proposes the carriage of UPKs as a standard kit to be used by aircraft operators when operating to, from or within an area where a PHEIC has been declared. This is also in line with the current recommendations of ICAO Annex 6 Attachment B (ICAO, 2020). New provisions and related AMC are proposed to be added to Part-CAT (point CAT.IDE.A.226) and to Part-NCC (point NCC.IDE.A.191) for aeroplane operators.

UPKs are expected to improve the health and safety of crew members and passengers at a relatively low financial cost. The volume and weight of such kits are relatively small. If the medical condition of crew members or passengers requires adding other components, then their weight, size and cost will increase.

### 2.3.5. Amendments to the cabin crew requirements

**Amendments to point (e) of point ORO.CC.140 on the validity period of triennial training**

Point (e)(2) of point ORO.CC.140 currently allows counting the validity period of recurrent annual training and checking from the original expiry date if the training and checking are undertaken within the last 3 calendar months of the validity period.

EASA proposes to amend point (e) of point ORO.CC.140 to allow the same practice in the case of triennial recurrent training.

**Amendments to the existing AMC1 ORO.CC.100 (point (b)) on the experience as an operating cabin crew member**

Point ORO.CC.100 specifies the requirements for the number and composition of cabin crew. It is complemented by AMC1 ORO.CC.100, which states in point (b) that for scheduling cabin crew for a flight, the operator should establish procedures that take into account the experience of each cabin crew member. The procedures should specify that the required cabin crew comprises some cabin crew members who have at least 3 months' experience as operating cabin crew member. This was a requirement in JAR-OPS1, it was transposed into EU-OPS, and then into an AMC to the AIR OPS Regulation. The reference to '3 months' experience' has been one of the most challenged aspects of the AMC on cabin crew due to its ambiguity. Several EU MSs have approved alternative means of compliance (AltMoC) through which the operators under their oversight may determine whether a cabin crew member is adequately experienced to exercise their role, based on a specified number of either sectors or flight hours.

EASA sought the advice of the CSEG on how to address this topic. The CSEG could not conclude whether prescribing a number of sectors is preferred over applying flight hours due to the diverse conditions of individual operators. The CSEG, therefore, advised EASA that since each operator represented an individual case, each operator should be provided with the possibility to make the choice of either sectors or flight hours, whichever suits the operator best. The number of sectors or

[19] EASA COVID-19 Resources | EASA (europa.eu)

flight hours should represent a figure equal to the experience a cabin crew member would gain through active and busy rosters (i.e. not an occasional flying activity) within the span of minimum 3 months. The operator should consider realistic possibilities with regard to its type of operation, i.e. from short-haul to ultra-long-haul, and its operational activity during peak as well as during low operational seasons. The decision process should be conducted in coordination with the competent authority and should be supported by a risk assessment. EASA took the CSEG's advice into consideration when developing the proposal for this NPA. With the proposed amendment to point (b) of AMC1 ORO.CC.100, the intent of the 3 month's experience specification is made clearer and the operator is provided with an alternative means to consider the experience of cabin crew to has been gained.

**New point (a)(4) in AMC1 ORO.CC.140 on the content of aero-medical aspects and first-aid training**

Point (d)(1)(viii) of point ORO.CC.140 states that recurrent training shall include annually 'aero-medical aspects and first aid including the related equipment'. Currently, no AMC exists on the content of this recurrent training.

EASA, therefore, proposes new point (a)(4) in AMC1 ORO.CC.140, stating that the training in aero-medical aspects and first aid including related equipment should include a review of all the elements specified in point 5 'Aero-medical aspects and first-aid' of Appendix 1 to Annex V (Part-CC) to Regulation (EU) No 1178/2011. This amendment follows the advice of the CSEG. The CSEG placed emphasis on the difference between the training when studying the subject and acquiring the knowledge for the first time versus a review or update of that knowledge/subject on a recurrent basis to maintain competence. Regarding the aero-medical aspects/first-aid training and the related equipment, due to the individual subjects and their nature, some elements would require a shorter review time than others. The CSEG advised that the specific duration of each element of the training should be determined by the operator, in cooperation with its competent authority.

**Amendments to AMC1 ORO.CC.125(d) and AMC1 ORO.CC.140 on the phaseout of halon as an extinguishing agent**

Halons are fire-extinguishing agents that have been used in aircraft protection systems. The Montreal Protocol (1987)[20] is an international agreement dealing with the phaseout of production and use of ozone-depleting substances, including halogenated hydrocarbons, also known as halons. The Montreal Protocol prohibits the production or import of halon as of 1 January 1994.

Regulation (EC) No 2037/2000[21] contains initial provisions for the halon phaseout, but also exemptions for critical uses of halon, including fire-extinguishing in aviation. It should be noted that the exemptions were established on the basis that, at that time, there were no suitable alternative fire-extinguishing agents or systems available for use on commercial air transport category aeroplanes.

Regulation (EU) No 744/2010[22] established a cut-off date, i.e. halon no longer being acceptable in new applications for type certification, and an end date, i.e. halon no longer being acceptable for use in

[20] The Montreal Protocol on Substances that Deplete the Ozone Layer | Ozone Secretariat (unep.org)

[21] Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (OJ L 244, 29.9.2000, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32000R2037&qid=1667838333921).

[22] Commission Regulation (EU) No 744/2010 of 18 August 2010 amending Regulation (EC) No 1005/2009 of the European Parliament and of the Council on substances that deplete the ozone layer, with regard to the critical uses of halons (OJ L 218, 19.8.2010, p. 2) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010R0744&qid=1667838438741).

aircraft. For handheld fire extinguishers, the cut-off date was 31 December 2014, and the end date was 31 December 2015.

In 2012, EASA revised the applicable certification specifications and issued Amendment 12 to CS-25[23]. References to halon were removed and AMC 25.851(c) was introduced to provide guidance on the certification of fire protection systems installed on large aeroplanes. The AMC clarifies that, historically, Halon 1211 was the most common agent in handheld (portable) fire extinguishers to be used in aircraft compartments and cabins.

Regulation (EU) 2019/133[24] introduced point 26.170 that states the following: 'Operators of large aeroplanes shall ensure that the following extinguishers do not use halon as an extinguishing agent: […] (b) portable fire extinguishers in large aeroplanes for which the first individual certificate of airworthiness is issued on, or after 18 May 2019.'

In recent years, EASA has certified the installation of halon-free handheld fire extinguishers on several large aeroplane models to meet customer requests and to comply with the requirements of the above-mentioned EU regulations. The subject extinguishers use stabilised 2-bromo-3,3,3-trifluoro-propene, also known as 2-BTP, as an extinguishing agent.

Points ORO.CC.125 and ORO.CC.140 require that each cabin crew member receive fire and smoke training including the use of all firefighting equipment representative of that carried on board. The requirements are further complemented by AMC1 ORO.CC.125(d) and AMC1 ORO.CC.140 that refer to the use of halon fire extinguishers in training. In view of the above explanation on the phaseout of halon extinguishing agents, EASA proposes the amendment of AMC1 ORO.CC.125(d) and AMC1 ORO.CC.140 to remove the reference to 'halon'. When developing the proposed text, EASA has considered the wording used by ICAO in Doc 10002 'Cabin Crew Safety Training Manual'[25] and aligned it accordingly.

**GM1 ORO.CC.210(d) transposed as new AMC1 ORO.CC.210(d)**

Point (d) of point ORO.CC.210 requires cabin crew members to wear the operator's cabin crew uniform. The requirement is complemented by GM1 ORO.CC.210(d), which explains that the uniform should not impede cabin crew in the performance of their duties and should allow passengers to identify the operating cabin crew.

In both normal circumstances of a flight operation and in abnormal and emergency situations, a cabin crew member needs to act promptly, and the uniform should not become a hazard to the cabin crew member or a reason for a delayed action. In an emergency, the visibility of a uniform or cabin crew arm movements may become the only means for passengers to see and provide instructions on how to proceed; therefore, the uniform should be such that passengers can immediately recognise a cabin crew member. The design and material of cabin crew uniforms should be complementary to their role and duties in flight operations.

[23] Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes — CS-25 Amendment 12 published on 6 July 2012 (CS-25 Amendment 12 | EASA (europa.eu)).

[24] Commission Implementing Regulation (EU) 2019/133 of 28 January 2019 amending Regulation (EU) 2015/640 as regards the introduction of new additional airworthiness specifications (OJ L 25, 29.1.2019, p. 14) (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0133&qid=1667837833102).

[25] ICAO Doc 10002 Cabin Crew Safety Training Manual

The CSEG brought to the attention of EASA that the existence of the referenced guidance material was not sufficiently taken into consideration by operators, and in some cases the type and design of cabin crew uniforms prevented passengers from identifying the operating cabin crew members, i.e. those required for the safety of passengers during the flight operation. The CSEG has, therefore, recommended the transposition of the GM to AMC, which is proposed in this NPA. The content of the new AMC remains unchanged.

### 2.3.6. Management system (point ORO.GEN.200)

EASA proposes to amend point ORO.GEN.200 to reflect the latest amendments issued in the airworthiness domain. The closer the alignment, the easier it will be for an organisation that holds multiple approvals, certificates and declarations to develop a single, integrated management system to cover all the areas of activity covered by its certificates, approvals and declarations.

The proposal to amend point ORO.GEN.200 is aligned with point 145.B.200. Moreover, the proposed new point (c) enables operators that hold multiple certificates, declarations, approvals or authorisations to implement an integrated management system throughout their entire organisation. Such certificates, declarations, approvals or authorisations may come from other domains, such as airworthiness, training, ground handling, apron management services, specialised operations, etc.

### 2.3.7. Use of aircraft listed on an AOC by other operators for non-CAT operations (point ORO.GEN.310 and related GM, AMC to point ORO.DEC.100 and AMC to point ORO.SPO.115) — improvement of the current regulations and rules

Several Member States have identified issues with the application of point ORO.GEN.310 and restrictions in the scope that were not originally intended.

Current point ORO.GEN.310(a) needs to explicitly cover the case where an AOC holder has a training organisation (ATO).

Regarding point ORO.GEN.310(a)(2), EASA has received a proposal to restrict the potentially repetitive use of the maximum 30-day cycle during which the other operator may use the AOC holder's aircraft for its own operations before returning it to the AOC holder. For example, an NCC operator, a SPO operator or an ATO may use the aircraft of an AOC holder for 30 days, return it to the AOC holder, then 1 day later request it for another period of 30 days of operation; this pattern may be repeated many times, as the rule in its current form does not forbid it. Such implementation of this rule can be considered a potential abuse and goes beyond the intention for which it was created. EASA, therefore, proposes to allow the repetitive use of the 30-day cycle by the other operator for a maximum of 1 year, similarly to the current requirement in point ORO.AOC.110(d)(2).

**Since EASA is not aware of such evidence that the repetitive use of the 30-day cycle has a negative impact on safety, Member States are invited to comment on whether they consider the proposed restriction useful, or to provide examples of such cases.**

EASA also proposes amendments to GM2 ORO.GEN.310 based on implementation feedback received from Member States.

Member States also highlighted to EASA a possible conflict between point ORO.GEN.310 and the requirements related to the amendments to a declaration or authorisation for high-risk SPO. It was argued that points ORO.DEC.100(d) and ORO.SPO.115(a) require that a change to the declaration or

the high-risk (HR) SPO authorisation must lead to the operator notifying its competent authority and having an updated declaration/HR SPO authorisation.

EASA considers that the conditions of point ORO.GEN.310 take precedence over points ORO.DEC.100 and ORO.SPO.115, and if those conditions are met, there would be no need for making further updates to any approvals or declarations. The conditions in point ORO.GEN.310, particularly the obligation to have a special procedure between the AOC holder and the other operator that uses the aircraft, and the obligation to reflect that procedure in the operations manuals (on both sides) together with the detailed obligations of the non-AOC holder to record each flight when the aircraft is under its operational control, replace the obligations to amend the AOC on which the aircraft is listed and to update the declarations or the HR SPO authorisations. Otherwise, the rule would duplicate the administrative work that is already required under point ORO.GEN.310, without obvious safety benefits. Therefore, EASA does not propose any amendments to the rules to address this issue.

**Stakeholders are invited to comment on the need to further regulate the case when an aircraft registered on an AOC is used under point ORO.GEN.310 by more than one declaring organisation and is listed at the same time on more than one declaration.**

### 2.3.8. Miscellaneous amendments to the dangerous goods requirements

Some inconsistencies in the dangerous goods requirements have been identified throughout the text. Certain requirements, such as those related to the reporting of dangerous goods occurrences, did not seem to be consistent with each other in the various annexes to Regulation (EU) No 965/2012. In other cases, the inconsistency was with the latest edition of the related ICAO Standards. The proposed amendments aim to harmonise and update the text, while correcting some editorial errors. The proposed amendments affect the Definitions and Parts ARO, CAT, NCC, NCO, NCC and SPO.

### 2.3.9. Harmonisation of the management system requirements

As explained in Section 2.3.2 above, EASA proposes to amend the AMC and GM to point ORO.GEN.200(b) to provide more flexibility to helicopter operators as regards the definition of their management systems. One of the proposals is to no longer rely on the criterion of 20 FTEs to define the complexity of the operator. This is consistent with Part-M and Part-145.

**Stakeholders are invited to comment on whether a similar approach for aeroplane operations would be useful.**

## 2.4. What are the expected benefits and drawbacks of the proposal?

The expected benefits and drawbacks of the proposal are described in Section 2.3 above or in the rationale for each amendment proposed.

For the safety recommendation related to the risk of poisoning with carbon monoxide on board small aircraft, EASA has conducted a more detailed impact assessment which is described in Chapter 4. As to date this safety issue has not been assessed in any other EASA process to identify the best way to address the safety risk (such as, for example, a best intervention strategy (BIS)), it was decided to conduct an impact assessment under this RMT to determine the best means to address the related safety recommendation.

# 3. Proposed amendments and rationale in detail

The text of the amendment is arranged to show deleted, new or amended, and unchanged text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

## 3.1. Draft regulation (draft EASA opinion)

**Draft text**

**Cover Regulation**

## Article 1 Subject matter and scope

[...]

5. This Regulation shall not apply to air operations within the scope of Article ~~1(2)~~2(3)(a) of Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~.

[...]

## Article 3 Oversight capabilities

1. Member States shall designate one or more entities as the competent authority within that Member State with the necessary powers and allocated responsibilities for the certification and oversight of persons and organisations subject to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its implementing rules~~.

   [...]

2. If a Member State designates more than one entity as competent authority:

   [...]

   (b) coordination shall be established between those entities to ensure effective oversight of all organisations and persons subject to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its implementing rules~~ within their respective remit~~s~~.

   [...]

## Article 4 Ramp inspections

1. Ramp inspections of aircraft of operators under the safety oversight of another Member State or of a third country shall be carried out in accordance with Subpart RAMP of Annex II.

2. Member States shall ensure that alcohol testing ~~of flight crew and cabin crew members~~ is carried out on flight crew and cabin crew members of operators:

   (a) ~~with regard to operators~~ under their own oversight; and

(b) ~~as well as with regard to operators~~ under the oversight of another Member State or of a third country.

Such testing shall be performed by ramp inspectors within the framework of the ramp inspection programme of Subpart RAMP of Annex II.

3. By way of derogation from, or in addition to, point~~paragraph~~ 2, Member States may ensure alcohol testing of flight crew and cabin crew members to be carried out by other authorised officials. In such case, and in the case of alcohol testing of flight crew and cabin crew members of operators under their own oversight, testing may be carried out ~~and~~ outside the framework of the ramp inspection programme of Subpart RAMP of Annex II, provided that such alcohol testing meets the same objectives and adheres to the same principles as tests carried out under the framework of Subpart RAMP of Annex II.

4. The ~~R~~results of ~~such~~ alcohol tests shall be included in the centralised database in accordance with point (b) of point ARO.RAMP.145.

~~4~~5. Member States may carry out additional testing for psychoactive substances other than alcohol. In that case, the Member State shall notify the European Union Aviation Safety Agency ('the Agency') and the Commission.

***Rationale:*** *The amendment proposed to point 3 is designed to allow Member States to have alcohol tests performed by ramp inspectors and other officials as well, one not excluding the other. Other amendments proposed are of editorial nature.*

## Article 6 - Derogations

(2) By way of derogation from Article 5(1), aircraft referred to in Article 2(3)(d)~~4(5)~~ of Regulation (EU) 2018/1139~~(EC) No 216/2008~~ shall, in the case of aeroplanes, be operated under the conditions set out in Commission Decision C(2009) 7633 of 14 October 2009 when used in CAT operations. Any change to the operation that affects the conditions set out in that Decision shall be notified to the Commission and the European Union Aviation Safety Agency (hereinafter 'the Agency') before the change is implemented.

A Member State, other than an addressee of Decision C(2009)7633, which intends to use the derogation provided for in that Decision shall notify its intention to the Commission and the Agency before the derogation is implemented. The Commission and the Agency shall assess to what extent the change or the intended use deviates from the conditions of Decision C(2009)7633 or impacts on the initial safety assessment performed in the context of that Decision. If the assessment shows that the change or the intended use does not correspond to the initial safety assessment conducted~~done~~ for Decision C(2009)7633, the Member State concerned shall submit a new derogation request in accordance with Article 71~~14(6)~~ of Regulation (EU) 2018/1139~~(EC) No 216/2008~~.

[...]

~~5. Until 2 September 2017, exemptions granted before 22 March 2017 in accordance with Article 8(2) of Regulation (EEC) No 3922/91, as provided for in Article 6(5) of Regulation (EU) No 965/2012 as applicable before 22 March 2017, shall be considered to constitute approvals referred to in point (a) of CAT.POL.A.300 of Annex IV (Part-CAT). After 2 September 2017, those exemptions shall no longer be valid for the operation of single-engined aeroplanes.~~

~~If any change to the operation of those aeroplanes that affects the conditions set out in those exemptions is envisaged between 22 March 2017 and 2 September 2017, that envisaged change shall be notified to the Commission and the Agency before it is implemented. The Commission~~

~~and the Agency shall assess the envisaged change in accordance with Article 14(5) of Regulation (EC) No 216/2008.~~

[...]

***Rationale:*** *EASA proposes to delete point 5 of Article 6 since it is no longer relevant. Other amendments proposed are of editorial nature.*

### 3.1.1. Annex I (Definitions for terms used in Annexes II to VIII)

(2) 'acceptable means of compliance (AMC)' means non-binding standards adopted by the Agency to illustrate means to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts~~(EC) No 216/2008 and its implementing rules~~;

[…]

(3) 'acceptance checklist' means a document used to assist the operator in carrying out ~~a~~ the acceptance check to verify that all applicable requirements established in Part 7;1 of the ICAO Technical Instructions have been met with regard to dangerous goods~~on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met with~~;

[…]

(9) 'alternative means of compliance' means those means that propose an alternative to an existing acceptable means of compliance or those that propose new means to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts~~(EC) No 216/2008 and its implementing rules~~ for which no associated AMC have been adopted by the Agency;

[…]

(19) 'certification specifications' (CS) means technical standards adopted by the Agency indicating means to show compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts~~(EC) No 216/2008 and its implementing rules~~ and which can be used by an organisation for the purpose of certification;

[…]

(28a) 'correction' means the action to eliminate a detected non-compliance with the applicable requirements;

(28b) 'corrective action' means the action to eliminate or mitigate the root cause(s) and prevent the recurrence of an existing detected non-compliance or other undesirable condition or situation. The proper determination of the root cause(s) is crucial for defining effective corrective actions to prevent reoccurrence;

[…]

(33) 'dangerous goods (DG)' means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the ~~technical instructions~~ Technical Instructions or which are classified according to those Instructions~~instructions~~;

(34) 'dangerous goods accident' means an occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person, or major property or environmental damage;

(35) 'dangerous goods incident' means:

(a) an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained;

(b) any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants ~~or results in damage to the environment~~;

[…]

(96c) 'preventive action' means the action to eliminate the cause of a potential non-compliance or other undesirable potential situation;

[…]

(105a) 'safety-sensitive personnel' means persons who might endanger aviation safety if they perform their duties and functions improperly, including flight crew and cabin crew members, aircraft maintenance personnel, aerodrome operations personnel, rescue, firefighting and maintenance personnel, personnel allowed unescorted access to the movement area, and air traffic controllers;

(119) '~~technical instructions~~ Technical Instructions (TIs)' means the latest effective edition of ~~the~~ ICAO Doc 9284 'Technical instructions for the safe transport of dangerous goods by air', including the supplement and any addenda, approved and published by the International Civil Aviation Organiz~~s~~ation;

***Rationale:***

*The amendments proposed to the definitions related to dangerous goods follow the proposals from the Dangerous Goods Expert Group and aim to ensure consistency with ICAO Doc 9284 'Technical Instructions for the Safe Transport of Dangerous Goods'.*

*The amendments proposed to the definitions in points (28a), (28b) and (96c) are transposed from GM1 ORO.GEN.150 (which EASA also proposes to delete), since they are used in the annexes to Regulation (EU) 965/2012 (e.g. in Subpart ARO.RAMP).*

*The amendments proposed to the definition in point (105a) aim only to align it with the definition in Regulation (EU) No 923/2012 (SERA). The new categories of personnel added with this proposal are not under the direct control of the air operator, and the scope of this regulation does not affect them except for the personnel allowed unescorted access to the movement area. They are personnel of the air operator performing ground-handling tasks around the aircraft, and this proposed amendment would perfectly align with the same definition included in the draft EU ground-handling regulation (currently being developed under RMT.0728).*

*Consequently, points (b) and (c) of point CAT.GEN.MPA.170 applicable to air operators for detecting the misuse of psychoactive substances by safety-sensitive personnel under their direct control would also include the operators' ground-handling personnel.*

**Stakeholders are invited to submit their comments on whether this could potentially create any confusion with the current applicability of this definition as it is reflected in point CAT.GEN.MPA.170.**

### 3.1.2. Annex II (Part-ARO)

## ARO.GEN.005 Scope

This Annex establishes the requirements for the administration and management system, as well as the conditions for conducting certification, oversight and enforcement tasks, to be fulfilled by the Agency and Member States for the implementation and enforcement of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ regarding civil aviation air operations.

***Rationale:*** *Text is proposed to be added to cover the scope of the provisions in Section 3 of Subpart ARO.GEN. The reference to the Basic Regulation has been updated.*

## ARO.GEN.200 Management system

(a) The competent authority shall establish and maintain a management system, including as a minimum:

(1) documented policies and procedures to describe its organisation, means and methods to achieve compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~the Implementing Rules~~. The procedures shall be kept up to date and serve as the basic working documents within that competent authority for all related tasks;

[...]

(3) adequate facilities, ~~and~~ office accommodation, support, transportation and credentials for its personnel to perform the allocated tasks;

[...]

(b) The competent authority shall appoint, for each field of activity, including the management system, ~~appoint~~ one or more persons with the overall responsibility for the management of the relevant task(s).

(c) The competent authority shall establish procedures for participation in a mutual exchange of all necessary information and assistance with other competent authorities concerned, whether from within the Member State or in other Member States, including on:

(1) all findings raised, corrective ~~and follow-up~~ actions taken following such findings and enforcement measures taken as a result of oversight of persons and organisations that carry out ~~exercising~~ activities in the territory of a Member State, but certified or authorised by, or making declarations to, the competent authority of another Member State or the Agency; and

(2) stemming from mandatory and voluntary occurrence reporting as required by point ORO.GEN.160.

(d) A copy of the procedures related to the management system, and the amendments to them, shall be made available to the Agency for the purpose of standardisation.

***Rationale***

*The new text in point (a)(3) is proposed to transpose ICAO Annex 6 Part I, Appendix 5, point 3.4.*

*Some amendments to points (a)(1) and (c) have not been marked in this NPA because they were already submitted for consultation through RMT.0681 (transposing Regulation (EU) No 376/2014 on*

*occurrence reporting in the various aviation domains) and the related CRD[26] was published on 24 May 2019. Therefore, any additional comments on those parts will not be taken into account for the purpose of this NPA.*

*Point (c) is aligned with its equivalent point ARA.GEN.200 of Regulation (EU) 2020/2193 that amends Regulation (EU) No 1178/2011 on aircrew requirements. The amendments to point (c) stemming from RMT.0681 have been taken over in this NPA for the sake of fluency and currency of the text, but no further comments are expected on them.*

*Further amendments are proposed to point (c) following feedback from standardisation inspections in the AIR OPS domain. The version proposed here is the result of such feedback and the amendments made through RMT.0681.*

*In point (c)(1), the proposed reference to enforcement measures is also consistent with point ARO.GEN.220(a)(11).*

## ARO.GEN.205 Allocation of tasks to qualified entities

(a) The competent authority may allocate tasks related to the initial certification, specialised operation authorisation or continuing oversight of natural or legal persons ~~or organisations~~ subject to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules shall be allocated by Member States only~~ to qualified entities. When allocating tasks, the competent authority shall ensure that it has:

(1) put a system in place to initially and ~~continuously~~ continually assess whether ~~that~~ the qualified entity complies with Annex ~~V~~VI to Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~.

This system and the results of the assessments shall be documented;

(2) established a written ~~documented~~ agreement with the qualified entity, approved by both parties at the appropriate management level, which ~~clearly~~ defines:

(i) the tasks to be performed;

(ii) the declarations, reports and records to be provided;

(iii) the technical conditions to be met when~~in~~ performing such tasks;

(iv) the related liability coverage; and

(v) the protection ~~given to~~ of the information acquired when~~in~~ carrying out such tasks.

(b) The competent authority shall ensure that the internal audit process and safety risk management process required by point ARO.GEN.200(a)(4) covers all certification, authorisation or continuing oversight tasks performed by the qualified entity on its behalf.

***Rationale:*** *The amendments proposed to this point are of editorial nature and have been aligned with the equivalent point in Part-145 (see point 145.B.205 as amended by Commission Implementing Regulation (EU) 2021/1963).*

[26] CRD 2016-19 'Alignment of EASA Basic Regulation (Regulation (EU) 2018/1139) with the specific obligations stemming from Regulation (EU) No 376/2014' (https://www.easa.europa.eu/en/document-library/comment-response-documents/crd-2016-19).

## ARO.GEN.210 Changes in the management system

(a) The competent authority shall have a system in place to identify changes that affect its capability to perform its tasks and discharge its responsibilities as defined in ~~Regulation (EC) No 216/2008 and its Implementing Rules~~Regulation (EU) 2018/1139 and its delegated and implementing acts. This system shall enable the competent authority ~~it~~ to take action as appropriate to ensure that its management system remains adequate and effective.

(b) The competent authority shall update its management system in a timely manner to reflect any changes to ~~Regulation (EC) No 216/2008 and its Implementing Rules~~Regulation (EU) 2018/1139 and its delegated and implementing acts ~~in a timely manner~~, so as to ensure the effective implementation of the applicable amendments.

(c) The competent authority shall notify the Agency of changes affecting its capability to perform its tasks and discharge its responsibilities as defined in ~~Regulation (EC) No 216/2008 and its Implementing Rules~~Regulation (EU) 2018/1139 and its delegated and implementing acts.

## ARO.GEN.220 Record-keeping

(a) The competent authority shall establish a record-keeping system ~~of record-keeping~~ that provides~~ing~~ for adequate storage, accessibility and reliable traceability of:

[...]

(12) safety information and follow-up measures in accordance with point ARO.GEN.125; and

(13) the use of safeguard and flexibility provisions in accordance with Articles 70, 71 and 76(4) ~~14~~ of Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~.

(b) The competent authority shall maintain a list of all organisation certificates and specialised operation~~s~~ authorisations it has issued, as well as declarations it has received.

(c) All records referred to in points (a) and (b) shall be kept for the minimum period specified in this Regulation. In the absence of such indication, records shall be kept for a minimum period of 5~~five~~ years subject to applicable data protection law.

## ARO.GEN.305 Oversight programme

(a) The competent authority shall establish and maintain an oversight programme covering the oversight activities required by point ARO.GEN.300 and ~~by~~ Subpart ARO.RAMP.

(b) [...]

(c) For organisations certified by the competent authority, an oversight planning cycle not exceeding 24 months shall be applied.

The oversight planning cycle may be reduced if there is evidence that the safety performance of the organisation has decreased.

The oversight planning cycle may be extended to a maximum of 36 months if the competent authority has established that, during the previous 24 months:

(1) the organisation has demonstrated an effective management system, including compliance monitoring, identification of aviation safety hazards and management of associated risks;

(2) the organisation has continually~~ously~~ demonstrated under point ORO.GEN.130 that it has full control over all changes;

(3) no level 1 findings have been issued; and

(4) all corrective actions have been implemented within the time period accepted or extended by the competent authority as defined in point ARO.GEN.350(d)(2).

The oversight planning cycle may be further extended to a maximum of 48 months if, in addition to points (1) to (4)~~the above~~, the organisation has established, and the competent authority has approved, an effective continuous reporting system to the competent authority on the safety performance and regulatory compliance of the organisation itself.

[...]

***Rationale:*** *Amendments are proposed to point (c)(1) following experience gained from standardisation activities. The condition in the rule is quite limited regarding the compliance status of an audited organisation: an operator could have, for instance, poor compliance records showing a lack of effectiveness of its compliance-monitoring function, but if the findings raised by the competent authority are not linked to the condition listed in point (c)(2) and if the findings are corrected in due time, the four criteria could be considered met and the oversight cycle could be extended to 36 months. This situation should be avoided and, therefore, amendments are proposed to point (c)(1).*

## ARO.GEN.350 Findings and corrective actions — organisations

(a) The competent authority responsible for oversight in accordance with point ARO.GEN.300(a) shall have a system to analyse findings for their safety significance and to manage them with the purpose of:

(1) ensuring that compliance with the requirements is established as soon as possible; and

(2) preventing their reoccurrence.

(b) A level 1 finding shall be issued by the competent authority when any significant non-compliance is detected with the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, with the organisation's procedures and manuals, or with the terms of an approval, certificate, specialised operation authorisation or ~~with the~~ content of a declaration, which lowers safety or seriously endangers ~~hazards~~ flight safety.

[...]

(c) A level 2 finding shall be issued by the competent authority when any non-compliance is detected with the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, with the organisation's procedures and manuals, or with the terms of an approval, certificate, specialised operation authorisation, or ~~with the~~ content of a declaration, which is not classified as a level 1 finding and could lower safety or endanger~~hazard~~ flight safety.

(d) When a finding is detected during oversight or by any other means, the competent authority shall, without prejudice to any additional action required by Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, communicate the finding to the organisation in writing and request corrective action to address the non-compliance(s) identified. Where relevant, the competent authority shall inform the competent authority of the State in which the aircraft is registered.

(1) In the case of level 1 findings, the competent authority shall take immediate and appropriate action to prohibit or limit the activities of the organisation involved~~,~~ and, if appropriate, it shall take action to revoke the certificate, specialised operation~~s~~ authorisation or specific approval, or to limit or suspend it in whole or in part, depending on~~upon~~ the extent of the level 1 finding, until the organisation has taken successful corrective action ~~has been taken by the organisation~~.

(2) In the case of level 2 findings, the competent authority shall:

(i) grant the organisation a corrective-action implementation period appropriate to the nature of the finding, which ~~that~~ in any case ~~initially~~ shall initially not be more than 3~~three~~ months. At the end of this period, and subject to the nature of the finding, the competent authority may extend the ~~three~~3-month period subject to a satisfactory corrective action plan agreed by the competent authority; and

(ii) assess the corrective action ~~and implementation~~ plan proposed by the organisation and, if the assessment concludes that it is ~~they are~~ sufficient to address the non-compliance(s), accept it~~these~~.

[...]

(e) Without prejudice to any additional enforcement measures, when the authority of a Member State acting in accordance with ~~under the provisions of~~ point ARO.GEN.300(d) identifies any non-compliance with the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ by an organisation certified ~~by~~, or authorised, by or declaring its activity to the competent authority of another Member State or the Agency, it shall inform that competent authority and provide an indication of the level of finding.

***Rationale:***

*The proposed amendments ensure cross-domain consistency (particularly with Part-145).*

*However, point (a) is proposed to be amended following a long-awaited improvement of the rules to enable competent authorities to manage the findings more effectively. A new AMC1 is also proposed to close the gap in this respect.*

*Furthermore, point (d)(2)(ii) is proposed to be slightly amended to harmonise the wording used ('implementation plan' versus 'implementation period' versus 'corrective action plan') and require the competent authority to assess the corrective action in all cases (not only in case of extension).*

## ARO.GEN.355 Findings and enforcement measures — persons

(a) If, during oversight or by any other means, evidence is found by the competent authority responsible for oversight in accordance with point ARO.GEN.300(a) that shows a non-compliance with the applicable requirements by a person holding a licence, certificate, rating or attestation issued in accordance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, the competent authority shall act in accordance with points ARA.GEN.355(a) to (d) of Annex VI (Part-ARA) to Commission Regulation (EU) No 1178/2011[27].

(b) If, during oversight or by any other means, evidence is found showing a non-compliance with the applicable requirements by a person subject to the requirements laid down in Regulation

[27] OJ L 100, 5.4.2012, p. 1.

(EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ and not holding a licence, certificate, rating or attestation issued in accordance with that Regulation and its delegated and implementing acts~~Implementing Rules~~, the competent authority that identified the non-compliance shall take any enforcement measures necessary to prevent the continuation of that non-compliance.

## ARO.GEN.360 Findings and enforcement measures — all operators

If, during oversight or by any other means, evidence is found showing a non-compliance with the applicable requirements by an operator subject to the requirements laid down in Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, the competent authority that identified the non-compliance shall take any enforcement measures necessary to prevent the continuation of that non-compliance.

## ARO.OPS.235 Approval of individual flight time specification schemes

(a) The competent authority shall approve flight time specification schemes proposed by a CAT operator~~s~~ if the operator demonstrates compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008~~ and Subpart FTL of Annex III to this Regulation.

(b) Whenever a flight time specification scheme proposed by an operator deviates from the applicable certification specifications issued by the Agency, the competent authority shall apply the procedure described in Article 76(7)~~22(2)~~ of Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~.

(c) Whenever a flight time specification scheme proposed by an operator derogates from the applicable implementing rules, the competent authority shall apply the procedure described in Article 71~~14(6)~~ of Regulation (EU) 2018/1139~~(EC) No 216/2008~~.

(d) Approved deviations or derogations shall be subject, after being applied, to an assessment to determine whether such deviations or derogations should be confirmed or amended. The competent authority and the Agency shall each conduct an independent assessment based on information provided by the operator. The assessment shall be proportionate, transparent and based on scientific principles and knowledge.

***Rationale:*** *Updates of references to the Basic Regulation. Additionally, from lessons learnt from standardisation activities, it is proposed to add the word 'each' in point (d) to avoid confusion that this might be a joint assessment.*

## ARO.RAMP.005 Scope

This Subpart establishes the requirements to be followed by the competent authority or the Agency when exercising its tasks and responsibilities regarding the performance of:

(a) ramp inspections of aircraft used by third-country operators or ~~used~~ by operators under the regulatory oversight of another Member State when landed at aerodromes located in the territory subject to the provisions of the Treaty; and

(b) alcohol tests of flight crew and cabin crew members.

***Rationale:*** *This amendment is proposed to clarify the applicability of Subpart RAMP of Annex I to alcohol tests.*

## ARO.RAMP.100 General

[...]

(c) Within the development of the oversight programme established in accordance with point ARO.GEN.305, the competent authority shall establish an annual programme for the conduct of aircraft ramp inspections ~~of aircraft~~. This programme shall:

(1) be based on a calculation methodology that takes into account historical information on the number and nature of operators and their number of landings at its aerodromes, as well as safety risks; ~~and~~

(2) enable the competent authority to give priority to the inspection~~s~~ of aircraft on the basis of the list referred to in point ARO.RAMP.105(a)~~.~~; and

(3) enable the competent authority to give priority to alcohol tests on the basis of the list referred to in point ARO.RAMP.106(b).

(d) When it so deems necessary, the Agency, in cooperation with the Member States in whose territory the inspection shall take place, shall conduct ramp inspections of aircraft to verify compliance with the applicable requirements for the purpose of:

(1) certification tasks assigned to the Agency by Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008~~;

[...]

***Rationale:*** *The amendment to point (c) is proposed to provide a link between the annual programme for ramp inspections and the prioritisation list for alcohol testing.*

## ARO.RAMP.105 Prioritisation criteria

(a) The Agency shall provide competent authorities with a list of operators or aircraft identified as presenting a potential risk, for the prioritisation of ramp inspections.

(b) This list shall include:

(1) operators of aircraft identified on the basis of the analysis of available data in accordance with point ARO.RAMP.150(b)(4);

(2) operators or aircraft communicated to the Agency by the European Commission and identified ~~on the basis of~~:

(i) ~~an opinion expressed~~ by the Air Safety Committee (ASC) ~~with~~in the context of the implementation of Regulation (EC) No 2111/2005 that further verification of effective compliance with relevant safety standards through systematic ramp inspections is necessary; or

(ii) on the basis of information obtained ~~by the European Commission~~ from the Member States and from the Agency pursuant to Article 4(3) of Regulation (EC) No 2111/2005;

(3) all operators certified in a State that exercises regulatory oversight over operators included in Annex A of the list of operators subject to an operating ban pursuant to Regulation (EC) No 2111/2005;

(~~3~~4) ~~aircraft operated into the territory subject to the provisions of the Treaty by~~ operators included in Annex B of the list of operators subject to an operating ban ~~pursuant to Regulation (EC) No 2111/2005~~referred to in point (3);

~~(4) aircraft operated by operators certified in a State exercising regulatory oversight over operators included in the list referred to in (3);~~

(5) ~~aircraft used by a~~ third-country operators ~~that operates into, within or out of the territory subject to the provisions of the Treaty for the first time or~~ whose authorisation issued in accordance with Regulation (EU) No 452/2014 is limited or reinstated after suspension or revocation on safety grounds.

(c) The list shall be produced, in accordance with procedures established by the Agency, after every update of the ~~Community~~ list of operators subject to an operating ban pursuant to Regulation (EC) No 2111/2005, and in any case at least once every ~~four~~ 6 months.

***Rationale:*** *Amendments are proposed to point ARO.RAMP.105 to clarify which operators should be included in the list for the prioritisation of ramp inspections, as current text is somewhat ambiguous. The proposal also clarifies that third-country operators should be included in the priority list only when the authorisation was limited or reinstated after a suspension or revocation on safety grounds, and not because of administrative reasons. Furthermore, it is proposed to prolong the minimum interval for the update of the list to 6 months, which matches the new interval at which the analysis referred to in point (b)(1) is performed.*

## ARO.RAMP.106 Alcohol testing

[...]

(b) The Agency shall provide competent authorities with a list of Union and third-country operators for the prioritisation of alcohol testing within the ramp inspection programme ~~in accordance with ARO.RAMP.105~~ based on a risk assessment performed by the Agency, taking into account the robustness and effectiveness of existing psychoactive testing programmes.

[...]

(d) Whenever data concerning alcohol tests is included in the centralised database in accordance with point (b) of point ARO.RAMP.145, the competent authority shall ensure that such data excludes any personal details ~~data~~ of the crew member concerned.

***Rationale:*** *It is proposed to delete the reference to point ARO.RAMP.105 as the risk assessments performed by the Agency to establish both lists are not related.*

## ARO.RAMP.115 Qualification of ramp inspectors

[...]

(b) Ramp inspectors shall:

(1) [...]

(2) have successfully completed:

(i) appropriate specific theoretical and practical training~~,~~ in one or more of the following areas of inspection:

[...]

(E) alcohol testing;

(ii) [...]

(3) maintain the validity of their qualification by undergoing recurrent training and by performing either:

(i) a minimum of 12 inspections per calendar year, of which, when the ramp inspectors are qualified to perform alcohol testing, a minimum of 2 alcohol tests on crew members; or

(ii) a minimum of 2 alcohol tests on crew members per calendar year, when the ramp inspectors are qualified to perform only alcohol testing.

(c) The training referred to in (b)(2)(i) shall be delivered by a ~~the~~ competent authority or by any training organisation approved in accordance with point ARO.RAMP.120(a).

[...]

***Rationale:*** *This amendment is proposed to include alcohol testing in the list of areas of inspection for which ramp inspectors may be qualified. In addition, this amendment proposes a recency requirement for ramp inspectors that are qualified for alcohol testing.*

## ARO.RAMP.135 Follow-up actions on findings

(a) For a category 2 or 3 finding, the competent authority, or where relevant the Agency, shall:

(1) communicate the finding in writing to the operator, including a request for evidence of corrections made and corrective actions taken; and

(2) [...]

(b) In addition to point (a), in the case of a category 3 finding, the competent authority shall take immediate steps by:

(1) [...]

(2) requesting immediate corrections ~~corrective actions~~;

[...]

***Rationale:*** *This amendment is proposed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) No 965/2012 and the related AMC and GM.*

## ARO.RAMP.145 Reporting

[...]

(b) The competent authority or the Agency shall enter into the centralised database any information useful for the application of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ and for the accomplishment by the Agency of the tasks assigned to it in accordance with~~by~~ this Annex, including the relevant information referred to in point ARO.RAMP.110.

[...]

## ARO.RAMP.140 Grounding of aircraft

(a) In the case of a category 3 finding where it appears that the aircraft is intended or is likely to be flown without completion by the operator or owner of the appropriate correction~~corrective action~~, the competent authority shall:

[...]

***Rationale:*** *This amendment is proposed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) 965/2012 and the related AMC and GM.*

## ARO.RAMP.150 Agency coordination tasks

(a) [...]

(2) the information provided by third countries or international organisations with whom appropriate agreements have been concluded with the EU, or organisations with whom the Agency has concluded appropriate arrangements in accordance with Article ~~27~~90(2) of Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~.

[...]

## ARO.RAMP.155 Annual report

The Agency shall ~~prepare and submit to the Commission~~ publish an annual report on the ramp inspection system containing at least the following information:

[...]

(d) analysis of safety reports uploaded in the centralised database;

(~~d~~e) actions taken during the year;

(~~e~~f) proposals for further improving the ramp inspection system; and

(~~f~~g) annexes containing lists of inspections sorted ~~out~~ by State of operation, aircraft type~~, operator~~ and ratios per item.

***Rationale:*** *These amendments, together with the amendments proposed to point ARO.RAMP.160, propose to merge the two different ramp inspection annual reports currently required (one addressed to the Commission and the other to the public), since their contents are almost identical.*

## ARO.RAMP.160 ~~Information to the public and p~~Protection of information

~~(a)~~ Member States shall use the information received by them pursuant to points ARO.RAMP.105 and ARO.RAMP.145 solely for the purpose of implementing ~~of~~ Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its implementing rules~~ and shall protect it accordingly.

~~(b) The Agency shall publish an aggregated information report annually that shall be available to the public containing the analysis of the information received in accordance with ARO.RAMP.145. The report shall be simple and easy to understand, and the source of the information shall be de-identified.~~

***Rationale:*** *See the rationale for the amendments proposed to point ARO.RAMP.155.*

### 3.1.3. APPENDICES TO ANNEX II (PART-ARO)

# Appendix I to Annex II (Part-ARO)

**AIR OPERATOR CERTIFICATE**
**(Approval schedule for air transport operators)**

**Types of operation:** Commercial air transport (CAT) ☐ Passengers; ☐ Cargo;
☐ Other ([1]): ……

| ([4]) | State of the Operator ([2])<br>Issuing Authority ([3]) | ([5]) |
|---|---|---|
| AOC # ([6]):<br><br><br> | Operator Name ([7])<br>Dba Trading Name ([8])<br>Operator address ([10]):<br>Telephone ([11]):<br>Fax:<br>~~E~~ Email: | Operational Points of Contact: ([9])<br>Contact details~~,~~ at which operational management can be contacted without undue delay, are listed in …… ([12]). |

This certificate certifies that …… ([13]) is authorised to perform commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual, Annex V to Regulation (EU) 2018/1139 and its delegated and implementing acts.

| Date of issue ([14]): | Name and Signature ([15]):<br><br>Title: |
|---|---|

([1]) Other type of transportation to be specified.
([2]) Replaced by the name of the State of the operator.
([3]) Replaced by the identification of the issuing competent authority.
([4]) For use of the competent authority.
([5]) For use of the competent authority.
([6]) Approval reference, as issued by the competent authority.
([7]) Replaced by the operator's registered name.
([8]) Operator's trading name, if different. Insert ~~"~~'Dba'~~"~~ (for ~~"~~'Doing business as'~~"~~) before the trading name.
([9]) The contact details include the telephone and fax numbers, including the country code, and the email address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew members' competency, dangerous goods and other matters as appropriate.
([10]) Operator's principal place of business address.
([11]) Operator's principal place of business telephone and fax details, including the country code. Email to be provided if available.
([12]) Insertion of the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference. E.g.: "Contact details … are listed in the operations manual, gen/basic, chapter 1, 1.1"; or "… are listed in the operations specifications, page 1"; or "… are listed in an attachment to this document".
([13]) Operator's registered name.
([14]) ~~Issue d~~Date of latest issue of the AOC (dd-mm-yyyy). The date of the initial issue of the AOC could be added in a footnote to the date of latest issue.
([15]) Title, name and signature of the competent authority representative. In addition, an official stamp may be applied on the AOC.

***EASA Form~~FORM~~ 138 Issue 2***

***Rationale:***

*A Member State has suggested to indicate in the AOC the date of the latest issue, but also to indicate somewhere the date of the first issue or previous issues of the AOC.*

*Both EASA and ICAO refer to the 'date of issue' of the AOC, without providing any additional clarification as to which date this refers to exactly — the initial date of issue or the current version's date of issue. Neither do they prescribe a system of revisions (like in the continuing airworthiness regulations), which could lead one to believe that the date of issue is the date on which the respective version of the AOC was issued (not the date on which the initial AOC was issued).*

*It is thus proposed to amend Note 14 and indicate in the explanation that the date of the initial issue may be added in a footnote to the date of the most recent (latest) issue.*

# Appendix II to Annex II (Part-ARO)

OPERATIONS SPECIFICATIONS
(subject to the approved conditions in the operations manual)

Issuing authority contact details

Telephone([1]): _____; Fax: _____;

Email: _____

AOC([2]): Operator name([3]): Date([4]): Signature:

Dba trading name

Operations specifications #:

Aircraft model([5]):

Registration marks([6]):

Types of operations: Commercial air transport

☐ Passengers ☐ Cargo ☐Others([7]): _____

Area of operation([8]):

Special limitations([9]):

| Specific approvals: | Yes | No | Specification([10]) | Remarks |
|---|---|---|---|---|
| Dangerous goods: | ☐ | ☐ | | |
| *Low-visibility operations* | | | | |
| Take-off | ☐ | ☐ | RVR([11]): m | |
| Approach and landing | ☐ | ☐ | CAT([12])…. DA/H: ft, RVR: m | |
| Operational credits | ☐ | ☐ | CAT([13])….DA/H: ft, RVR: m | |
| RVSM([14]) ☐ N/A | ☐ | ☐ | | |
| ETOPS([15]) ☐ N/A | ☐ | ☐ | Maximum diversion time([16]): min. | |
| Complex navigation specifications for PBN operations([17]) | ☐ | ☐ | | ([18]) |
| Minimum navigation performance specification | ☐ | ☐ | | |
| Operations of single-engined turbine aeroplane at night or in IMC (SET-IMC) | ☐ | ☐ | ([19]) | |

| | | | | |
|---|---|---|---|---|
| Helicopter operations with the aid of night vision imaging systems | ☐ | ☐ | | |
| Helicopter hoist operations | ☐ | ☐ | | |
| Helicopter emergency medical service operations | ☐ | ☐ | | |
| Helicopter offshore operations | ☐ | ☐ | | |
| Cabin crew training([20]) | ☐ | ☐ | | |
| Issue of CC attestation([21]) | ☐ | ☐ | | |
| Use of type B EFB applications | ☐ | ☐ | ([22]) | |
| Continuing airworthiness | ☐ | ☐ | ([23]) | |
| Others([24]) | | | | |

(1) Telephone number ~~contact details~~ of the competent authority, including the country code. Email to be provided, as well as fax if available.

(2) Insertion of associated air operator certificate (AOC) number.

(3) Insertion of the operator's registered name and the operator's trading name, if different. Insert 'Dba' before the trading name (for 'Doing business as').

(4) Issue date of the operations specifications (dd-mm-yyyy) and signature of the competent authority representative.

(5) Insertion of ICAO designation of the aircraft make, model and series, or master series~~,~~ if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232).

(6) The registration marks are listed either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft may be entered in the ~~r~~'Remarks' column to the related specific approval.

(7) Other type of transportation to be specified (e.g. emergency medical service).

(8) Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries) as defined by the issuing authority.

(9) Listing of applicable special limitations (e.g. VFR only, Day only, etc.).

(10) List in this column the most permissive criteria for each specific approval ~~or the approval type~~ (with appropriate criteria).

(11) Insertion of approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.

(12) Insertion of applicable precision approach category: CAT II or CAT III. Insertion of minimum RVR in metres and DH in feet. One line is used per listed approach category.

(13) Insertion of applicable operational credit: SA CAT I, SA CAT II, EFVS, etc. Insertion of minimum RVR in metres and DH in feet. One line is used per listed operational credit.

(14) The Not Applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.

(15) Extended range operations (ETOPS) currently applies only to two-engined aircraft. Therefore, the Not Applicable (N/A) box may be checked if the aircraft model has less or more than two engines.

(16) The threshold distance may also be listed (in NM), as well as the engine type.

(17) Performance-based navigation (PBN): one line is used for each complex PBN specific approval (e.g. RNP AR APCH), with appropriate limitations listed in the 'Specifications' or 'Remarks' columns, or in both. Procedure-specific approvals of specific RNP AR APCH procedures may be listed in the operations specifications or in the operations manual. In the latter case, the related operations specifications must have a reference to the related page in the operations manual.

(18) Specify if the specific approval is limited to certain runway ends or aerodromes, or both.

(19) Insertion of the particular airframe or engine combination.

(20) Approval to conduct the training course and examination to be completed by applicants for a cabin crew attestation as specified in Annex V (Part-CC) to Regulation (EU) No 1178/2011.

(21) Approval to issue cabin crew attestations as specified in Annex V (Part-CC) to Regulation (EU) No 1178/2011.

(22) Insertion of the list of type B EFB applications together with the reference of the EFB hardware (for portable EFBs). This list is contained either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual.

(23) The name of the person or organisation responsible for ensuring that the continuing airworthiness of the aircraft is maintained and a reference to the regulation that requires the work, i.e. Subpart G of Annex I (Part-M) to Regulation (EU) No 1321/2014.

(24) Other approvals or data may be entered here, using one line (or one multi-line block) per authorisation (e.g. short landing operations, steep approach operations, reduced required landing distance, helicopter operations to or from a public interest site, helicopter operations over a hostile environment located outside a congested area, helicopter operations without a safe forced landing capability, operations with increased bank angles, maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval).

***EASA Form 139 Issue 7***

***Rationale:*** *The amendments to Notes 8 and 10 stem from the transposition of the amendments to ICAO Annex 6 Part I (Amendment 44).*

### 3.1.4. Annex III (Part-ORO)

## ORO.GEN.105 Competent authority

For the purpose of this Annex, the competent authority exercising oversight over organisations ~~operators~~ subject to ~~a~~ certification, ~~or~~ declaration obligation, or specialised operation authorisation, ~~shall be for operators having their principal place of business in a Member State, the authority designated by that Member State.~~ which have their principal place of business in a territory for which a Member State is responsible under the Chicago Convention, shall be:

(a) the authority designated by that Member State or by another Member State in accordance with Article 64 of Regulation (EU) 2018/1139; or

(b) the Agency, if the responsibility has been reallocated to the Agency in accordance with Articles 64 or 65 of Regulation (EU) 2018/1139.

***Rationale:*** *This implementing rule has been adapted to the possibility provided for by the Basic Regulation that EASA becomes the competent authority for air operators. The draft proposal is aligned with the equivalent requirement in Part-145).*

## ORO.GEN.110 Operator responsibilities

(a) The operator is responsible for the operation of the aircraft in accordance with Annex V~~IV~~ to Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~, as applicable, the relevant requirements of this Annex and its air operator certificate (AOC) or specialised operation authorisation (SPO authorisation) or declaration.

(b) Every flight shall be conducted in accordance with the ~~provisions of the~~ operations manual.

(c) The operator shall establish and maintain a system for exercising operational control over any flight operated under the terms of its certificate, SPO authorisation or declaration.

(d) The operator shall ensure that its aircraft are equipped and its crews are qualified as required for the area and type of operation.

(e) The operator shall ensure, for compliance with point ORO.GEN.200(a)(4), that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

(f) The operator shall establish procedures and instructions for the safe operation of each aircraft type, covering~~containing~~ ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. Those procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft. Procedures and instructions for a sterile flight crew compartment shall also be included.

(g) The operator shall ensure that all personnel are made aware that they shall comply with the laws, regulations and procedures of those States in which operations are conducted and that are pertinent to the performance of their duties.

(h) The operator shall establish a checklist for each aircraft type to be used by crew members in all phases of flight under normal, abnormal and emergency conditions in order to ensure that the operating procedures in the operations manual are followed. The design and the us~~ag~~e of checklists shall observe human factors principles and take into account the latest relevant documentation from the design approval holder.

[...]

***Rationale:*** *The reference in point (e) to point ORO.GEN.200(a)(4) is proposed to be added to link the operator's responsibility to ensure delivery of proper training to its personnel with its management system under the provisions of point ORO.GEN.200.*

## ORO.GEN.115 Application for an air operator certificate ~~AOC~~

(a) The application for an air operator certificate (AOC) or an amendment to an existing certificate shall be made in a form and manner established by the competent authority, taking into account the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~.

(b) Applicants for an initial certificate shall provide the competent authority with documentation demonstrating how they will comply with the requirements established in Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~. Such documentation shall include a procedure describing how changes not requiring prior approval will be managed and notified to the competent authority.

## ORO.GEN.120 Means of compliance

(a) Alternative means of compliance to those adopted by the Agency may be used by an operator to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~.

(b) When an operator subject to certification wishes to use ~~an~~ alternative means of compliance to the acceptable means of compliance (AMC) adopted by the Agency to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~, it shall, prior to implementing it, provide the competent authority with a full description of the alternative means of compliance. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the Implementing Rules are met.

The operator may implement these alternative means of compliance subject to prior approval by the competent authority and upon receipt of the notification as prescribed in point ARO.GEN.120(d).

(c) An operator required to declare its activity shall notify to the competent authority the list of alternative means of compliance it uses to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~.

(d) When an operator subject to SPO authorisation wishes to use alternative means of compliance, it shall comply with point (b) whenever such alternative means of compliance affect~~s~~ the standard operating procedures that are part of the authorisation and with point (c) for the declared part of its organisation and operation.

## ORO.GEN.130 Changes related to an AOC holder

[...]

(b) For any changes requiring prior approval in accordance with Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~ and its delegated and implementing acts ~~Implementing Rules~~, the operator shall apply for and obtain an approval issued by the competent authority. The application shall be

submitted before any such change takes place~~,~~ in order to enable the competent authority to determine that there is continued compliance with Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~ and its delegated and implementing acts ~~Implementing Rules~~ and to amend, if necessary, the operator certificate and related terms of approval attached to it.

[...]

## ORO.GEN.135 Continued validity of an AOC

(a) The operator~~'s~~ certificate shall remain valid subject to all ~~of~~ the following:

(1) [...]

(2) the competent authority being granted access to the operator as defined in point ORO.GEN.140 of this Annex ~~to determine continued compliance with the relevant requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts~~;

[...]

***Rationale:*** *The last part of point (a)(2) is not needed any more, as it is justified in point ORO.GEN.140; therefore, it is proposed to be deleted.*

## ORO.GEN.150 Findings and corrective actions

(a) After receipt of notification of findings, the operator shall:

(1~~a~~) identify the root cause(s) of, and factors contributing to, the non-compliance;

(2~~b~~) define a corrective action plan that addresses the root cause(s) and the factors contributing to the non-compliance; and

(3~~c~~) demonstrate the implementation of the corrective action(s) ~~implementation~~ to the satisfaction of the competent authority.

(b) The actions referred to in point (a) shall be performed within a period agreed with ~~that~~ the competent authority, as defined in point ARO.GEN.350(d).

***Rationale:*** *This point is proposed to be amended for consistency with its equivalent point ARO.GEN.350 of the authority requirements to address the improper closure of findings by competent authorities. It is the result of the lessons learnt from standardisation activities. The root-cause analysis in relation to the corrective action plan is now mentioned.*

## ORO.GEN.160 Occurrence reporting

(a) As part of its management system, the operator shall establish and maintain an occurrence-reporting system, including mandatory and voluntary reporting and follow-up of occurrences that meet the requirements of Regulation (EU) No 376/2014 and Regulation (EU) 2018/1139, as well as of their delegated and implementing acts.

(b) The operator shall report to the competent authority, and to the State of Registry in case of aircraft not registered in a Member State, any safety-related event or condition that endangers or, if not corrected or addressed, could endanger an aircraft, its occupants or any other person, and in particular any accident or serious incident.

(c) Without prejudice to point (b), the operator shall report to the competent authority and the aircraft design approval holder any incident, malfunction, technical defect, exceedance of technical limitations, occurrence that would highlight inaccurate, incomplete or ambiguous information contained in data established in accordance with Regulation (EU) No 748/2012, or other irregular circumstances that have or may have endangered an aircraft, its occupants or any other person and have not resulted in an accident or serious incident.

(d) Without prejudice to points (b) and (c), the operator shall consider additional reporting requirements for occurrences related to the transport of dangerous goods, as laid down in the relevant requirements of the applicable annexes to this Regulation (Annex IV (Part-CAT), Annex V (Part-SPA), Annex VI (Part-NCC), Annex VII (Part-NCO), and Annex VIII (Part-SPO)).

(e) Without prejudice to Regulation (EU) No 376/2014 and its delegated and implementing acts, reports in accordance with points (c) and (d) shall:

(1) be made as soon as practicable, but in any case within 72 hours after the operator has become aware of the event or condition to which the report relates unless exceptional circumstances prevent this;

(2) be made in a form and manner established by the competent authority of the operator, as defined in point ORO.GEN.105; and

(3) contain all pertinent information about the condition known to the operator.

(f) The operator shall ensure that the reporting system established under its management system includes procedures to allow the sharing of relevant safety information within the operator, as well as with other organisations with which the operator interacts, as relevant, considering the aviation domain(s) in which the reportable event has occurred.

~~(a) The operator shall report to the competent authority, and to any other organisation required to be informed by the State of the operator, any accident, serious incident and occurrence as defined in Regulation (EU) No 996/2010 of the European Parliament and of the Council1 and Regulation (EU) No 376/2014.~~

~~(b) Without prejudice to point (a) the operator shall report to the competent authority and to the organisation responsible for the design of the aircraft any incident, malfunction, technical defect, exceeding of technical limitations or occurrence that would highlight inaccurate, incomplete or ambiguous information contained in the operational suitability data established in accordance with Regulation (EU) No 748/2012 or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident.~~

~~(c) Without prejudice to Regulation (EU) No 996/2010 and Regulation (EU) No 376/2014, the reports referred in points (a) and (b) shall be made in a form and manner established by the competent authority and shall contain all pertinent information about the conditions known to the operator.~~

~~(d) Reports shall be made as soon as practicable, but in any case within 72 hours of the operator identifying the condition to which the report relates, unless exceptional circumstances prevent this.~~

~~(e) Where relevant, the operator shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified. This report shall be produced in a form and manner established by the competent authority.~~

***Rationale***

*Point ORO.GEN.160 was amended with RMT.0681 'Occurrence Reporting'. It was publicly consulted with the stakeholders through NPA 2016-19, and related CRD 2016-19[28] was published on 24 May 2019. No further comments are expected on the text that was already consulted with stakeholders under RMT.0681. That is why the text is not highlighted in blue.*

*However, further stakeholders, activities, and operations are included in the aviation regulatory system, to keep pace with the evolution of the aviation domain and the societal changes — for example, drone operations, urban air mobility, cybersecurity management, apron management service providers or ground-handling service providers. Consequently, the complexity of the activities in the aviation domain increases at a very rapid pace too. Interactions and interfaces among all these stakeholders have a direct impact on safety.*

*The current version of this point addresses only the scope of Regulation (EU) No 376/2014, which requires the reporting of occurrences to the competent authority. It does not provide any legal framework to encourage organisations (air operators) to share relevant safety information with other stakeholders with which they interact, except for design approval holders (point (c)). This is no longer sufficient.*

*This rule should be designed to cover on the one hand all reporting obligations of an aircraft operator under different regulations in a clear process and, on the other hand, enable the systematic exchange of relevant safety information not only in the form of reporting to the competent authority but also among organisations that should work together to improve safety in the context of their common activities (interfaces).*

*Therefore, it is proposed to further revise this rule by adding point (f) to fulfil the requirements stemming from both Regulation (EU) No 376/2014 and Regulation (EU) 2018/1139 (as regards the latter, its Annex V 'Essential requirements for air operations', point 8.1(d)). For aircraft operators, it is important to have a single reporting system to include all processes and procedures necessary for easy reporting, to cover both mandatory and voluntary reporting, both within their own organisation and outside if required. Such a reporting system should also enable the fast and uncomplicated extraction of relevant safety information that can be shared both with the personnel of their own organisation and with other organisations with which they interact in daily operations.*

*New proposed AMC and GM to point (f) further detail how reporting among organisations in the form of sharing relevant safety information should be developed and implemented, and to which organisations the air operator is expected to report, depending of course on the aviation domain in which a reportable event occurs.*

*This NPA will consider only the comments related to proposed point (f).*

## ORO.GEN.200 Management system

(a) The operator shall establish, implement and maintain a management system that includes:

(1) clearly defined lines of responsibility and accountability throughout the ~~operator~~ organisation, including a direct safety accountability of the accountable manager;

[…]

28 CRD 2016-19 - Alignment of EASA Basic Regulation (Regulation (EU) 2018/1139) with the specific obligations stemming from Regulation (EU) No 376/2014 | EASA (europa.eu)

(3) the identification of aviation safety hazards entailed by the activities of the operator, their evaluation and the management of associated risks, including taking actions to mitigate the risks and verify their effectiveness;

[…]

(b) The management system shall correspond to the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.

(c) If the operator holds one or more additional organisation certificates, declarations, approvals, or authorisations that fall within the scope of Regulation (EU) 2018/1139, the management system may be integrated with that required under that Regulation and its delegated and implementing acts for those additional certificate(s), declarations, approvals, or authorisations held.

**Rationale:**

*The management system requirements for air operators need to be updated to enable the implementation of an integrated management system for cases when the operator holds more than one certificate or declaration. Therefore, new text has been added in point (c).*

*Point (a)(7) has been amended through RMT.0681. The amendments are not marked, as they have been already commented upon (see CRD 2016-19[29]). No further comments are expected on it.*

## ORO.GEN.310 Use of aircraft listed on an AOC for non-commercial operations and specialised operations

(a) An Aaircraft listed on an operator's AOC may remain on the AOC if it is operated in any of the following situations:

(1) by the AOC holder itself, using the aircraft as a SPO operator or as a training organisation ~~for specialised operations in accordance with Annex VIII (Part-SPO)~~;

(2) by other operators~~,~~ for ~~non-commercial operations with motor-powered aircraft or for specialised~~ operations performed in accordance with Annex VI (Part-NCC), Annex VII (Part-NCO) or Annex VIII (Part-SPO), provided that the aircraft is used for a continuous period not exceeding 30 days.

[…]

***Rationale:***

*The proposed amendments reflect the feedback received from competent authorities after 2 years of implementation and the lessons learnt from oversight activities. The current wording clearly addresses the case when the AOC holder also has a SPO declaration, but it is not as clear whether the rule can be used also by an ATO, be it an ATO associated to an AOC holder or an individual ATO. The initial purpose of this rule was to include ATOs as well, and this was particularly addressed with the introduction of point NCC.GEN.101 in Annex VI (Part-NCC), as Part-ORO is not applicable to ATOs.*

*It is not recommended to interpret the text in the sense that the ATO case is covered by point (a)(2). The rule should enable organisations to develop and apply an integrated management system, and*

[29] https://www.easa.europa.eu/en/document-library/comment-response-documents/crd-2016-19

*this will be facilitated by applying point (a)(2) in the case of an AOC holder that also has an ATO associated to it.*

*Further explanations are provided in Section 2.3.7.*

## ORO.AOC.100 Application for an air operator certificate (AOC)

[...]

(c) Applicants shall demonstrate to the competent authority that:

(3) for CAT operations, they comply with ~~all~~ the essential requirements of Annex V to Regulation (EU) 2018/1139~~annex IV to Regulation (EC) No 216/2008~~, this Annex (Part-ORO), Annex IV (Part-CAT) and Annex V (Part-SPA) to this Regulation and Annex I (Part 26) to Regulation (EU) 2015/640[2];

[...]

## ORO.MLR.100 Operations manual — general

(a) The operator shall establish an operations manual (OM) as specified under 8.~~b~~2 of Annex ~~I~~V to Regulation ~~(EC) No 216/2008~~ (EU) 2018/1139.

[...]

## ORO.MLR.105 Minimum equipment list

(a) A minimum equipment list (MEL) shall be established as specified under point 5(c) of Article 30 of ~~8.a.3 of Annex IV to Regulation (EC) No 216/2008~~ Regulation (EU) 2018/1139, based on the relevant master minimum equipment list (MMEL) as defined in the data established in accordance with Regulation (EU) No 748/2012. If an MMEL has not been established as part of the operational suitability data, the MEL may be based on the relevant MMEL accepted by the State of Operator or State of Registry as applicable.

(b) The MEL and any amendment thereto shall be approved by the competent authority of the aircraft operator.

***Rationale:*** *The addition in point (b) is a clarification of the requirement that the MEL, as an air operator document, must be approved by the competent authority of the air operator. It is proposed to add this clarification following many questions EASA has received from stakeholders over the years.*

## ORO.CC.130 Differences training

(a) In addition to the training required in point ORO.CC.125, the cabin crew member shall complete appropriate training and checking covering any differences before being assigned on:

(1) [...]

(2) a currently operated aircraft type or variant with different:

(i) safety and emergency equipment;

[...]

***Rationale:*** *The proposed amendment rectifies an omission, as it does not make sense that differences training would only be required if there is a change in the location of the emergency equipment and not in the equipment itself.*

## ORO.CC.140 Recurrent training

[...]

(e) Validity periods:

(1) The annual recurrent training ~~validity period~~ shall be valid for 12 calendar months counted from the end of the month when the check was taken.

(2) The validity period of the additional triennial training elements specified in points (c)(2) and (d)(2) shall be 36 calendar months counted from the end of the month when the checks were taken.

(~~2~~3) If the recurrent training and checking ~~required in (a)~~ specified in points (1) or (2) are undertaken within the last 3~~three~~ calendar months of the validity period, the new validity period shall be counted from the original expiry date.

~~(3) For the additional triennial training elements specified in (c)(2) and (d)(2), the validity period shall be 36 calendar months counted from the end of the month when the checks were taken.~~

***Rationale:*** *See Section 2.3.5.*

### 3.1.5. Annex IV (Part-CAT)

## CAT.GEN.MPA.105 Responsibilities of the commander

(a) [...]

(3) have the authority to give all commands and take any appropriate actions for the purpose of ensuring ~~securing~~ the safety of the aircraft and of the persons and/or property carried therein in accordance with point 7.2~~7.c~~ of Annex V~~IV~~ to Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~;

[...]

(8) ensure that all operational procedures and checklists are complied with in accordance with the operations manual;

[...]

(b) The commander, or the pilot to whom the conduct of the flight has been delegated, shall, in an emergency situation that requires immediate decision and action, take any action they ~~he/she~~ consider~~s~~ necessary under the circumstances in accordance with point 7.3~~7.d~~ of Annex V~~IV~~ to Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~. In such cases, ~~he/she~~ they may deviate from the applicable rules, operational procedures and methods in the interest of safety.

[...]

## CAT.GEN.MPA.180 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:

[...]

(3) the original certificate of airworthiness (CofA) and the airworthiness review certificate (ARC);

[...]

***Rationale:*** *Consistency across the annexes to Regulation (EU) No 965/2012.*

## CAT.GEN.MPA.200 Transport of dangerous goods

[...]

(e) The operator shall, in accordance with the Technical Instructions ~~technical instructions~~, report without delay to the competent authority and the appropriate authority of the State of occurrence ~~in the event of~~:

(1) any dangerous goods accidents or incidents;

(2) the finding~~discovery~~ of undeclared or misdeclared dangerous goods in cargo or mail; ~~or~~

(3) the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of the Technical Instructions ~~technical instructions.~~;

(4) dangerous goods discovered to have been transported when not loaded, segregated, separated, or secured in accordance with Part 7;2 of the Technical Instructions; or

(5) dangerous goods discovered to have been transported without information having been provided to the commander in accordance with Part 7;4 of the Technical Instructions.

***Rationale:*** *See Section 2.3.8.*

## CAT.OP.MPA.175 Flight preparation

[...]

(b) The flight shall not be commenced unless the commander is satisfied that:

(1) all items stipulated in point 2(c)~~2.a.3~~ of Annex V~~IV~~ to Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~ concerning the airworthiness and registration of the aircraft, instrument and equipment, mass and centre of gravity (CG) location, baggage and cargo and aircraft operating limitations can be complied with;

[...]

## CAT.OP.MPA.181 Fuel/energy scheme — fuel/energy planning and in-flight re-planning policy — aeroplanes

[...]

(c) The operator shall ensure that the pre-flight calculation of the usable fuel/energy ~~that is~~ required for a flight includes:

[...]

(5) final reserve fuel/energy~~; that shall be the amount of fuel/energy that is calculated at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions according to the aeroplane estimated mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and shall not be less than:~~

~~(i) for aeroplanes with reciprocating engines, the fuel/energy to fly for 45 minutes; or~~

~~(ii) for turbine-engined aeroplanes, the fuel/energy to fly for 30 minutes;~~

(i) The final reserve fuel/energy shall be sufficient to:

(A) perform a go-around and another approach;

(B) manage an abnormal or emergency situation occurring during the approach and the go-around.

(ii) The calculations for the final reserve fuel/energy shall be based on the following conditions:

(A) holding altitude, which shall be 1 500 feet above the aerodrome elevation;

(B) holding speed and aircraft configuration, as determined by the operator;

(C) the estimated mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required;

(D) ISA temperature.

(iii) In determining the final reserve fuel/energy, the operator shall include adequate safety margins. At least the following aspects shall be considered as a minimum:

(A) differences in the fuel consumption from the planned conditions to the actual conditions;

(B) possible inaccuracy of the fuel/energy quantity indications;

(C) the possibility that the fuel/energy loaded may not be usable to complete depletion;

(D) human factors related to the management of a low fuel/energy situation by the crew;

(E) human factors related to the management of an abnormal/emergency situation by the crew;

[...]

***Rationale:*** *The amendments to point (c)(5) are proposed to cover aircraft that use energy for propulsion other than fuel.*

## CAT.POL.A.215 En-route — one-engine-inoperative (OEI)

[...]

(c) [...]

(3) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane is assumed to land after engine failure with the required fuel reserves in accordance with point CAT.OP.MPA.181 ~~CAT.OP.MPA.150~~, appropriate for an alternate aerodrome, if a safe procedure is used;

[...]

***Rationale:*** *This amendment is proposed to update the regulatory reference, following the amendments introduced by Commission Implementing Regulation (EU) 2021/1296 of 4 August 2021 amending and correcting Regulation (EU) No 965/2012.*

## CAT.POL.A.415 En-route — OEI

[...]

(e) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane is assumed to land after engine failure with the required fuel reserves in accordance with point CAT.OP.MPA.181 ~~CAT.OP.MPA.150~~, appropriate for an alternate aerodrome, if a safe procedure is used.

***Rationale:*** *This amendment is proposed to update the regulatory reference, following the amendments introduced by Commission Implementing Regulation (EU) 2021/1296 of 4 August 2021 amending and correcting Regulation (EU) No 965/2012.*

## CAT.POL.H.420 Helicopter operations over a hostile environment located outside a congested area

(a) Operations over a non-congested hostile environment without a safe forced landing capability ~~with turbine-powered helicopters with an MOPSC of six or less~~ shall only be conducted if the operator has been granted an approval by the competent authority, following a safety risk assessment performed by the operator. Before such operations take place in another Member State, the operator shall obtain an endorsement from the competent authority of that State.

[...]

***Rationale:*** *This amendment is proposed to make the rule technology-neutral, and because the limit to the MOPSC of the helicopter does not mitigate risks.*

## CAT.POL.MAB.105 Mass and balance data and documentation

(a) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight specifying the load and its distribution. The mass and balance documentation shall enable the commander to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

[...]

(5) Dry operating mass and the corresponding CG of the aircraft~~:~~;

~~(i) for performance class B aeroplanes and for helicopters the CG position may not need to be on the mass and balance documentation if, for example, the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is;~~

[...]

(e) Notwithstanding points (a)(5), (a)(10) and (a)(11), for performance class B aeroplanes and for helicopters, the CG position and limitations may not need to be on the mass and balance documentation if, for example, the load distribution is in accordance with a precalculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

***Rationale:*** *Correction of a mistake (deletion of text) that occurred during the transposition of JAA material.*

## CAT.IDE.A.185 Cockpit voice recorder

(a) The following aeroplanes shall be equipped with a cockpit voice recorder (CVR):

(1) aeroplanes with an MCTOM of more than 5 700 kg; and

(2) multi-engined turbine-powered aeroplanes with an MCTOM of 5 700 kg or less, with an MOPSC of more than nine and first issued with an individual CofA on or after 1 January 1990.

~~(b) Until 31 December 2018, the CVR shall be capable of retaining the data recorded during at least:~~

~~(1) the preceding 2 hours in the case of aeroplanes referred to in (a)(1) when the individual CofA has been issued on or after 1 April 1998;~~

~~(2) the preceding 30 minutes for aeroplanes referred to in (a)(1) when the individual CofA has been issued before 1 April 1998; or~~

~~(3) the preceding 30 minutes, in the case of aeroplanes referred to in (a)(2).~~

(b~~c~~) ~~By 1 January 2019 at the latest, t~~The CVR shall be capable of retaining the data recorded during at least:

(1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

(2) the preceding 2 hours in all other cases.

(c~~d~~) ~~By 1 January 2019 at the latest, t~~The CVR shall record on means other than magnetic tape or magnetic wire.

(d~~e~~) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members'~~'~~ voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including without interruption:

(i) for aeroplanes first issued with an individual CofA on or after 1 April 1998, the audio signals received from each boom and mask microphone in use;

(ii) for aeroplanes referred to in point (a)(2) and first issued with an individual CofA before 1 April 1998, the audio signals received from each boom and mask microphone, where practicable;

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(e~~f~~) The CVR shall start to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the CVR shall start automatically to record prior to the aeroplane moving under its own power and continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

(f~~g~~) In addition to point (e~~f~~), depending on the availability of electrical power, the CVR 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, in the case of:

(1) aeroplanes referred to in point (a)(1) and issued with an individual CofA on or after 1 April 1998; or

(2) aeroplanes referred to in point (a)(2).

(g~~h~~) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 16 June 2018 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

(h~~i~~) Aeroplanes with an MCTOM of over 27 000 kg and first issued with an individual CofA on or after 5 September 2022 shall be equipped with an alternate power source to which the CVR and the cockpit-mounted area microphone are switched automatically in the event that all other power to the CVR is interrupted.

***Rationale:*** *Amendments are proposed to points CAT.IDE.A.185 and CAT.IDE.A.190 to remove requirements that are not applicable any more.*

## CAT.IDE.A.190 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 16 June 2018 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

***Rationale:*** *See explanation for point CAT.IDE.A.185.*

## CAT.IDE.A.195 Data link recording

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 16 June 2018 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in point CAT.IDE.A.185~~(d) and (e)~~.

***Rationale:*** *The proposed amendment to point (d) is to remove the expired date of application of that provision. The proposed amendment to point (e) is of editorial nature.*

## CAT.IDE.A.220 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible to passengers and cabin crew during the flight; and

(~~2~~3) be kept up to date.

***Rationale:*** *See Section 2.3.3.*

## CAT.IDE.A.226 Universal precaution kit

(a) Aeroplanes with an MOPSC of more than 30 shall be equipped with at least one UPK when performing CAT operations with passengers to, from or within areas where a public health emergency of international concern (PHEIC) has been declared by the World Health Organization or by the regional or national public health authorities.

(b) The content of the UPK shall be such as to protect crew members who assist potentially infectious cases in accordance with the case definition made public by the public health authorities, and in cleaning up and appropriately discarding any potentially infectious contents.

***Rationale:*** *See Section 2.3.3.*

## CAT.IDE.H.145 Radio altimeters

(a) Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio warning below a preset~~pre-set~~ height and a visual warning at a height selectable by the pilot, when operating:

(1) out of sight of the land in a visibility of less than 8 000 m;

[...]

***Rationale:*** *The proposal will enable cheaper CAT flights in good weather conditions to islands or between islands located within the coastal corridor. For smaller helicopters, the cost of a radio altimeter meeting all the specifications of the rules may not be negligible (audio and visual warnings, with a preset and a selectable warning threshold).*

*Over water, a visibility of less than 8 km can rapidly lead to a loss of visual references. The flight should not be allowed without additional equipment and instruments.*

*The case is not straightforward in the sense that a serious operator that wishes to provide reliable transportation services may want to install a radio altimeter despite the proposed alleviation. The alleviation is likely to be useful mainly for seasonal activities in areas where the weather is likely to be favourable.*

*There is no safety impact. There is some potential economic benefit. Therefore, the impact of the proposed amendment is considered very low positive.*

## CAT.IDE.H.185 Cockpit voice recorder

[...]

(c) ~~By 1 January 2019 at the latest, t~~The CVR shall record on means other than magnetic tape or magnetic wire.

[...]

(g) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

***Rationale:*** *The proposed amendment to point (d) is to remove the expired date of application of that provision.*

## CAT.IDE.H.190 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

***Rationale:*** *Points CAT.IDE.H.190 and CAT.IDE.H.195 are proposed to be amended by removing the expired dates of application.*

## CAT.IDE.H.195 Data link recording

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

[...]

***Rationale:*** *See the rationale for the amendments proposed to point CAT.IDE.H.190.*

## CAT.IDE.H.220 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible after landing; and

(~~2~~3) be kept up to date.

***Rationale:*** *See Section 2.3.3*

## CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather

report or forecasts available to the commander indicate that the watersea temperature will be belowless than plus 1210 °C during the flight. The level of insulation provided shall be sufficient for the prevailing conditions and not excessive.

***Rationale:*** *See Section 2.3.2.*

### 3.1.6. Annex V (Part-SPA)

## SPA.DG.105 Approval to transport dangerous goods

To obtain the approval to transport dangerous goods, the operator shall in accordance with the Technical Instructions~~technical instructions~~:

(a) establish and maintain a training programme for all personnel involved and demonstrate to the competent authority that adequate training has been delivered~~given~~ to all personnel to enable them to perform the functions for which they are responsible;

[...]

***Rationale:*** *See Section 2.3.8.*

## SPA.DG.110 Dangerous goods information and documentation

The operator shall, in accordance with the Technical Instructions~~technical instructions~~:

[...]

(e) ensure that a copy of the information to the pilot-in-command or the commander is provided to the operational control personnel and ~~retained on the ground and that that copy, or the information contained in it,~~ is readily accessible ~~to the flight operations officer, flight dispatcher, or the designated ground personnel responsible for their part of the flight operations,~~ until after the completion of the flight to which the information refers;

[...]

***Rationale:*** *The proposed amendment follows a suggestion by the Dangerous Goods Expert Liaison Group (DGELG) to align the text with the ICAO Technical Instructions. At the same time, it is adjusted to fit also the amendments proposed with NPA(B) related to the clarification of the difference between a flight operations officer (FOO) and a flight dispatcher (FD) and the proposal to replace those specific functions with the more general term 'operational control personnel'. This is proposed because the tasks and duties related to dangerous goods, such as the NOTOC, can be performed by operational control personnel that may have a different job title than FOO or FD, and it is the air operator's decision to whom to assign the dangerous goods tasks. The general term 'operational control personnel' is more appropriate in this case, as it comprises all possible job titles.*

## SPA.NVIS.130 Crew requirements for NVIS operations

[...]

(f) Crew training and checking

(1) Training and checking shall be conducted by suitably qualified personnel in accordance with a detailed syllabus approved by the competent authority and included in the operations manual.

(2) Crew members

(i) All relevant elements of the crew training programmes defined in Subparts ORO.FC and ORO.TC, including helicopter/FSTD training, ~~Crew training programmes~~ shall: improve knowledge of the NVIS working environment and equipment; improve

crew coordination; and include measures to minimise the risks associated with entry into low-visibility conditions and NVIS normal and emergency procedures.

(ii) The measures referred to in point (f)(2)(i) shall be assessed during:

(A) night proficiency checks; and

(B) line checks.

(iii) the NVIS components of the proficiency checks and line checks referred to in point (f)(2)(ii) shall both have a validity period of 12 calendar months.

***Rationale:*** *See Section 2.3.2.*

## SPA.HHO.130 Crew requirements for HHO

[...]

(f) Training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the competent authority and included in the operations manual.

(2) Crew members:

(i) All relevant elements of the crew training programmes defined in Subparts ORO.FC and ORO.TC, including helicopter/FSTD training, ~~Crew training programmes~~ shall: improve knowledge of the HHO working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with HHO normal and emergency procedures and static discharge.

(ii) The measures referred to in point (f)(2)(i) shall be assessed during visual meteorological conditions (VMC) day proficiency checks, or VMC night proficiency checks when night HHO are undertaken by the operator.

(iii) The HHO components of the proficiency checks referred to in point (f)(2)(ii) shall have a validity period of 12 calendar months.

***Rationale:*** *See Section 2.3.2.*

## SPA.HOFO.110 Operating procedures

[...]

(b) The operator shall ensure that:

[...]

(3) each member of the flight crew wears an approved survival suit, as appropriate considering the water temperature and estimated rescue time; the level of insulation provided shall be sufficient for the prevailing conditions and not excessive;~~:~~

~~(i) when the weather report or forecasts available to the pilot-in-command/commander indicate that the sea temperature will be less than plus 10°C during the flight; or~~

~~(ii) when the estimated rescue time exceeds the calculated survival time; or~~

~~(iii) when the flight is planned to be conducted at night in a hostile environment;~~

[...]

***Rationale:*** *See Section 2.3.2.*

## SPA.HOFO.160 Equipment requirements

[...]

(c) *Helicopter terrain awareness warning system (HTAWS)*

Helicopters used in CAT operations with a maximum certified~~certificated~~ take-off mass of more than 3 175 kg or an MOPSC of more than 9 and first issued with an individual CofA after 31 December 2018 shall be equipped with an HTAWS that meets ~~the requirements for class A equipment as specified in~~ an acceptable standard.

(d) *Situational awareness at the offshore location*

Helicopters used in CAT operations with an MOPSC of more than 9 and first issued with an individual CofA after 1 January 2024 shall be equipped with a device that increases the situational awareness of the crew on both sides of the helicopter at the offshore location.

(e) The equipment referred to in points (a), (c) and (d) shall be approved in accordance with applicable airworthiness requirements.

***Rationale:***

*The proposed amendments are based on research on offshore operations, and on the Norwegian oil and gas standard (NOROG 066, amended in 2020).*

*Research conducted by EASA on offshore operations in 2015 concluded the following:*

> *'In Norway, all helideck crew are in radio communication with each other and with the pilot. In the UK, by contrast, the HLO is in VHF communication with the pilot, while the other helideck crew are in UHF communication with each other.*
>
> *Modern helicopters (e.g. H225, H175) have forward-looking tail-boom cameras that provide pilots with a view of each side of the helicopter. This is recommended by the Norwegian guidelines for new contracts[30].*
>
> *Recommended Practices*
>
> *R6.3 Forward-looking tail-boom cameras should be used to provide pilots with a view of the helideck on each side of the helicopter.'*

*NOROG 066 also mentions the following:*

> *'7.7 Camera monitoring of external area*
>
> *A camera is required to provide a video feed from areas essential for flight safety, with the image presented in the cockpit.'*

These documents call for increased situational awareness at the offshore location in the context of offshore oil and gas operations. Forward-facing tail boom cameras or equivalent systems are a cheap and efficient way to meet this safety requirement. The proposed requirement is limited to helicopters with an MOPSC of 10 or more to:

— limit the new requirement to the largest helicopters where the cost–benefit ratio is the highest;

[30] NOROG 'Recommended guidelines for flights to petroleum installations' NOROG 066, Norwegian Oil and Gas, June 2015.

— not impact on operators involved in operations to other than oil and gas platforms essentially based on the use of the helicopter hoist and using an MOPSC of 9 or less.

## SPA.HOFO.165 Additional procedures and equipment for operations in a hostile environment

[...]

(b) *Survival suits*

All passengers on board shall wear an approved survival suit, as appropriate considering the water temperature and estimated rescue time. The level of insulation provided shall be sufficient for the prevailing conditions and not excessive.~~:~~

~~(1) when the weather report or forecasts available to the commander/pilot in command indicate that the sea temperature will be less than plus 10 °C during the flight; or~~

~~(2) when the estimated rescue time exceeds the calculated survival time; or~~

~~(3) when the flight is planned to be conducted at night.~~

(c) *Emergency breathing system*

All persons on board shall carry and be instructed in the use of emergency breathing systems. Emergency breathing systems manufactured after 1 January 2025 shall be approved in accordance with the applicable airworthiness requirements.

(d) *Life rafts*

[...]

(4) Each life raft shall contain at least one approved survival emergency locator transmitter (ELT(S)); and

(5) Each life raft shall contain life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

(e) *Emergency cabin lighting*

The helicopter shall be equipped with an approved emergency lighting system with an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter.

[...]

(j) For commercial operations at a distance from the shore greater than 10 minutes' flight time, it shall be easy to visually identify the helicopter in the event of a capsize.

[...]

**Rationale:**

For the proposed amendments to point (b), see Section 2.3.2.

The proposed amendments to point (c) bring a small but necessary safety benefit by harmonising the design of emergency breathing systems (EBSs) to new, approved standards. EBSs that meet the new standards are likely to cost only slightly more than the existing EBSs. Existing EBSs are expected to be replaced with EBS meeting the new standard at the end of their life cycle. As regards helicopters that had not been operated offshore before, EBS meeting the new standard will be installed with no additional costs involved. The expected overall impact is low positive.

The amendments proposed to points (d) and (e) clarify that the required equipment needs to be approved in accordance with the applicable airworthiness requirements.

**Rationale to point (j) 'chevrons'**

The proposed amendments to point (j) are a follow-up of RMT.0120 on ditching occupant survivability (ditching certification). The comments received to NPA 2016-01 'Helicopter ditching and water impact occupant survivability'[31] led EASA to the conclusion that the criteria on underbelly painting or marking of the helicopter would better fit in rules for air operations rather than in certification specifications.

Ditching certification is required by the operating rules for CAT operations over hostile waters at a distance greater than 10 minutes' flight time (10 minutes kept as per ditching certification). The scope of the proposed rule is based on the above, with the following amendments:

— restriction in scope to offshore operations;

— extension to commercial operations.

Contrasting colour helps detect the helicopter by day. Reflective material helps detect it by night.

Chevrons (or alternatively the painting of the whole surface) enable rescuers to immediately tell the front from the aft of the helicopter.

The proposed amendments will entail a low cost and will help SAR services to locate a capsized helicopter before it sinks, following a water impact or ditching. If accident investigation bodies were to avoid a complex underwater search just once, the associated economic saving would likely outweigh the costs.

*Note: The measure is not expected to contribute to saving lives, since it will not reduce the time needed for SAR services to reach the site.*

### 3.1.7. Annex VI (Part-NCC)

## NCC.GEN.140 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:

[...]

(3) the original certificate of airworthiness (CofA) and the airworthiness review certificate (ARC);

[...]

(6) the list of specific approvals, if applicable, including an English translation of Appendix III to Annex II (Part-ARO) if it has been issued in another language;

[...]

***Rationale:*** *The amendments to point (a)(3) are proposed for consistency across the annexes to Regulation (EU) No 965/2012.*

*The additional text proposed for point (a)(6) comes from feedback received from ramp inspections. It is proposed that the list of specific approvals (Appendix to Annex II (Part-ARO)) be also provided in an*

[31] https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2016-01

*English translation, in order to be understood by a ramp inspector who may not speak the language in which it is originally issued.*

## NCC.GEN.150 Transport of dangerous goods

[...]

(e) The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence ~~in the event of~~:

(1) any dangerous goods accidents or incidents;

(2) the finding of undeclared or misdeclared dangerous goods in cargo or mail; or

(3) the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of the Technical Instructions;

(4) dangerous goods discovered to have been transported when not loaded, segregated, separated, or secured in accordance with the applicable requirements of Part 7;2 of the Technical Instructions; or

(5) dangerous goods discovered to have been transported without information having been provided to the commander in accordance with the applicable requirements of Part 7;4 of the Technical Instructions.

[...]

***Rationale:*** *The amendments proposed to point (e) are consistent with the equivalent points in point CAT.GEN.MPA.200.*

## NCC.IDE.A.160 Cockpit voice recorder

[...]

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

[...]

***Rationale:*** *Points NCC.IDE.A.160, NCC.IDE.A.165 and NCC.IDE.A.170 are proposed to be amended by removing the expired dates of application.*

## NCC.IDE.A.165 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

[...]

## NCC.IDE.A.170 Data link recorder

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

[...]

## NCC.IDE.A.190 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible to passengers and cabin crew during the flight; and

(~~2~~3) be kept up to date.

[...]

***Rationale:*** *See Section 2.3.3.*

## NCC.IDE.A.191 Universal precaution kit (UPK)

(a) Aeroplanes with an MOPSC of more than 30 shall be equipped with at least one UPK when performing NCC operations with passengers to, from or within areas where a public health emergency of international concern (PHEIC) has been declared by the World Health Organization or by the regional or national public health authorities.

(b) The content of the UPK shall be such as to protect crew members who assist potentially infectious cases in accordance with the case definition made public by the public health authorities, and who clean up and appropriately discard any potentially infectious contents.

***Rationale:*** *See Section 2.3.4.*

## NCC.IDE.A.245 Radio communication and surveillance equipment

[...]

***Rationale:*** *The title is proposed to be changed to include 'surveillance' for consistency with the corresponding point CAT.IDE.A.345 dealing with the same equipment. The content remains unchanged.*

## NCC.IDE.H.160 Cockpit voice recorder

[...]

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

***Rationale:*** *Points NCC.IDE.H.160, NCC.IDE.H.165 and NCC.IDE.H.170 are proposed to be amended by removing the expired dates of application.*

## NCC.IDE.H.165 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

## NCC.IDE.H.170 Data link recording

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

[...]

## NCC.IDE.H.190 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible after landing; and

(~~2~~3) be kept up to date.

[...]

***Rationale:*** *See Section 2.3.3.*

## NCC.IDE.H.226 Crew survival suits

Each crew member shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) flights over water beyond autorotational distance or safe forced landing distance from land, where in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

(b) the weather report or forecasts available to the commander/pilot-in-command indicates/indicate that the water ~~sea~~ temperature will be below~~less than~~ plus 12~~10~~ °C during the flight.

***Rationale:*** *See Section 2.3.2.*

### 3.1.8. Annex VII (Part-NCO)

## NCO.GEN.135 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:

[...]

(3) the original certificate of airworthiness (CofA) and the airworthiness review certificate (ARC);

[...]

***Rationale:*** *This amendment is proposed for consistency across the annexes to Regulation (EU) No 965/2012.*

## ~~NCO.OP.200 Airborne collision avoidance system (ACAS II)~~

~~When ACAS II is used, operational procedures and training shall be in accordance with Regulation (EU) No 1332/2011.~~

***Rationale:*** *It is proposed to delete point NCO.OP.200 as its content is repeated in point NCO.OP.220. The purpose is to avoid duplication.*

## NCO.OP.220 Airborne collision avoidance system (ACAS) II~~)~~

When ACAS II is used, the pilot-in-command shall apply the appropriate operational procedures and be adequately trained in accordance with Regulation (EU) No 1332/2011.

***Rationale:*** *The proposed new text is transposed from point NCO.OP.200, which is proposed to be deleted. The new text is the only difference in content between the two points.*

## NCO.IDE.A.145 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible to passengers during the flight; and

(~~2~~3) be kept up to date.

[...]

***Rationale:*** *See Section 2.3.3.*

## NCO.IDE.H.145 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible after landing; and

(~~2~~3) be kept up to date.

[...]

***Rationale:*** *See Section 2.3.3.*

## ~~NCO.SPEC.HESLO.110 Transportation of dangerous goods~~

~~The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the competent authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.~~

***Rationale:*** *EASA considers that this requirement is not needed because an exemption to the Technical Instructions should never be needed.*

*Chapter 7;7.1.1 of ICAO Doc 9284 'Technical Instructions for the Safe Transport of Dangerous Goods by Air' already embeds an alleviation that extends to any criteria of the Technical Instructions whenever the current point NCO.SPEC.HESLO.110 applies. There is only one condition: an authority approval is needed. All carriers of dangerous goods meet this requirement because they already hold a Subpart SPA.DG approval.*

*The implementation of Chapter 7;7.1.1. does not require to duplicate the Subpart SPA.DG approval or create additional exemptions.*

### 3.1.9. Annex VIII (Part-SPO)

## SPO.GEN.005 Scope

[...]

(c) In addition to~~Notwithstanding~~ point (a), the following operations with other-than complex motor-powered aircraft may be conducted in accordance with Annex VII (Part-NCO):

[...]

***Rationale:*** *This amendment is proposed to clarify the scope of Annex VIII.*

## SPO.GEN.140 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight on paper or digital media, and shall be easily accessible for inspection purposes~~as originals or copies unless otherwise specified~~:

[...]

(3) the original certificate of airworthiness (CofA) and the airworthiness review certificate (ARC);

[...]

***Rationale:*** *This amendment is proposed for consistency across the annexes to Regulation (EU) No 965/2012.*

## SPO.GEN.150 Transport of dangerous goods

[...]

(e) The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence~~ in the event of~~:

(1) any dangerous good accident or incidents;

(2) the finding of dangerous goods carried by task specialists or crew, or in their baggage, when not in accordance with Part 8 of the Technical Instructions~~.~~;

(3) dangerous goods discovered to have been transported when not loaded, segregated, separated, or secured in accordance with the applicable requirements of Part 7;2 of the Technical Instructions; or

(4) dangerous goods discovered to have been transported without information having been provided to the commander in accordance with the applicable requirements of Part 7;4 of the Technical Instructions.

[...]

***Rationale:*** *See Section 2.3.8.*

## SPO.POL.110 Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

[...]

(d) The pilot-in-command shall ensure that the loading of:

(1) the aircraft is performed under the supervision of qualified personnel; and

(2) traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

(e) The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in points (a) to (d). This system shall cover all types of intended operations.

(f) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight, or series of consecutive flights with no refuelling and with the same crew, specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

(1) aircraft registration and type;

(2) flight identification, number and date, as applicable;

(3) name of the pilot-in-command;

(4) name of the person who prepared the document;

(5) dry operating mass and the corresponding CG of the aircraft;

(6) mass of the fuel/energy at take-off and mass of trip fuel/energy;

(7) mass of consumables other than fuel/energy, if applicable;

(8) load components;

(9) take-off mass, landing mass, and zero fuel/energy mass;

(10) applicable aircraft CG positions; and

(11) the limiting mass and CG values.

(g) Where mass and balance data and documentation are generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.

***Rationale:***

*It is proposed to simplify the title of point SPO.POL.110, considering that balloons and sailplanes are no longer within the scope of this Regulation.*

*It is also proposed to reintroduce points (d) and (e), which were omitted by mistake with amending Regulation (EU) 2021/1296.*

*It is also proposed to redraft the rule for consistency with the other rules in Annex IV (Part-CAT). The proposed points (f) and (g) reflect the content of point SPO.POL.115, slightly amended for improvement and clarity. This way, the content of point SPO.POL.110 is also better connected to the content of the current AMC to point SPO.POL.115, which is related to the operator procedures already existing in point SPO.POL.110.*

*In points (f) and (g), the only change compared to the currently applicable text of point SPO.POL.115 is the following: 'series of flights' is changed to 'series of consecutive flights' because the context is different.*

*The definitions of 'series of flight' provided in Part-FCL, AMC1 FCL.050 'Pilot log books' and in AMC1 ORO.MLR.110 'Journey logs' do not apply.*

*Contrary to pilot logbooks, a series of flights need not have the same place of departure and arrival.*

*A series of flights considered for the same mass and balance assessment should not be constrained by a geographic area defined in the operations manual in the context of journey logs.*

*However, it makes sense to reassess mass and balance on each refuelling. It is also consistent with the use of technical logs. In case of refuelling with rotors turning, the amended AMC1 SPO.POL.110 applies and should provide the necessary flexibility.*

*A series of consecutive flights may include the disembarking or embarking of task specialists, as well as several take-offs and landings at different locations. A series of flights may include the positioning of task specialists as per Article 5(7) of Regulation (EU) No 965/2012.*

## ~~SPO.POL.115 Mass and balance data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

~~(a) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight, or series of flights, specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:~~

~~(1) aircraft registration and type;~~

~~(2) flight identification, number and date, as applicable;~~

~~(3) name of the pilot in command;~~

~~(4) name of the person who prepared the document;~~

~~(5) dry operating mass and the corresponding CG of the aircraft;~~

~~(6) mass of the fuel/energy at take-off and mass of trip fuel/energy;~~

~~(7) mass of consumables other than fuel/energy, if applicable;~~

~~(8) load components;~~

~~(9) take-off mass, landing mass, and zero fuel/energy mass;~~

~~(10) applicable aircraft CG positions; and~~

~~(11) the limiting mass and CG values.~~

~~(b) Where mass and balance data and documentation is generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.~~

***Rationale:*** *Point SPO.POL.115 is proposed to be deleted, as its content is proposed to be integrated within point SPO.POL.110 to ensure consistency with the same rules in Part-CAT.*

## SPO.POL.116 Mass and balance data and documentation — alleviations

Notwithstanding point SPO.POL.~~115(a)~~110(f)(5), (f)(10) and (f)(11), the CG position ~~may not~~ need not be on the mass and balance documentation~~,~~ if the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

***Rationale:*** *References are proposed to be changed as per proposed amendments. Amendments equivalent to those to point CAT.POL.MAB.105 are also proposed.*

## SPO.IDE.A.140 Cockpit voice recorder

[...]

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

***Rationale:*** *Points SPO.IDE.A.140, SPO.IDE.A.145 and SPO.IDE.A.150 are proposed to be amended by removing the expired dates of application.*

## SPO.IDE.A.145 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

## SPO.IDE.A.150 Data link recording

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time

of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

[...]

## SPO.IDE.A.165 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible to task specialists during the flight; and

(~~2~~3) be kept up to date.

***Rationale:*** *See Section 2.3.3.*

## SPO.IDE.A.220 Navigation and surveillance equipment

[...]

***Rationale:*** *The title is proposed to be changed to include 'surveillance' for consistency with point CAT.IDE.A.345 dealing with the same equipment. The content remains unchanged.*

## SPO.IDE.H.140 Cockpit voice recorder

[...]

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

[...]

***Rationale:*** *Points SPO.IDE.H.140, SPO.IDE.H.145 and SPO.IDE.H.150 are proposed to be amended by removing the expired dates of application.*

## SPO.IDE.H.145 Flight data recorder

[...]

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

[...]

## SPO.IDE.H.150 Data link recording

[...]

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. ~~By 1 January 2020 at the latest, t~~This device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

[...]

## SPO.IDE.H.165 First-aid kit

[...]

(b) First-aid kits shall ~~be~~:

(1) include basic medication, medical supplies, and instructions;

(~~1~~2) be ~~readily~~ accessible after landing; and

(~~2~~3) be kept up to date.

[...]

***Rationale:*** *See Section 2.3.3.*

## SPO.IDE.H.198 Survival suits — complex motor-powered helicopters

Each person on board shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) [...]

(b) the weather report or forecasts available to the pilot-in-command indicates/indicate that the water ~~sea~~ temperature will be below~~less than~~ plus 12~~10~~ °C during the flight.

***Rationale:*** *See Section 2.3.2.*

## SPO.SPEC.HEC.105 Specific HEC equipment

(a) The helicopter shall be equipped with:

(1) for HEC operations with a sling:

(i) ~~hoist operations equipment or~~ a cargo hook;

(ii~~2~~) one cargo safety mirror or alternative means to see the hook; and

(iii~~3~~) one load meter, unless there is another method of determining the weight of the load.

(2) for HEC operations with a hoist, hoist operations equipment.

(3) for other HEC operations, an airframe-mounted PCDS.

(b) The installation of all ~~hoist and cargo hook~~HEC equipment other than a simple PCDS, and any subsequent modifications shall have an airworthiness approval appropriate to the intended ~~function~~use.

***Rationale:*** *See Section 2.3.2.*

## SPO.SPEC.HESLO.101 Mass and balance data and documentation

(a) Notwithstanding points (f) and (g) of point SPO.POL.110, in the context of HESLO with a load meter installed, the operator may replace the mass and balance document with a summary of limitations indicating the maximum acceptable load to be read on the load meter for a given

helicopter, given crew composition and a given number of task specialists on board, a relevant altitude and temperature range, and a given fuel/energy load.

(b) The operator may use standard masses for the crew and for tasks specialists when determining the summary of limitations.

(c) The summary of limitations shall be available in the helicopter and accessible to the pilot-in-command on the ground.

***Rationale:*** *Amendments proposed for consistency with point SPO.SPEC.HESLO.105(b). The summary of limitations can be paper, computer or EFB based.*

## ~~SPO.SPEC.HESLO.110 Transportation of dangerous goods~~

~~The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the competent authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.~~

***Rationale:*** *This requirement is considered not needed because an exemption to the Technical Instructions should never be needed.*

*Chapter 7;7.1.1 of ICAO Doc 9284 'Technical Instructions for the Safe Transport of Dangerous Goods by Air' already embeds an alleviation that extends to any criteria of the Technical Instructions whenever the current point SPO.SPEC.HESLO.110 applies. There is only one condition: an authority approval is needed. All carriers of dangerous goods meet this requirement because they already hold a Subpart SPA.DG approval.*

*The implementation of 7;7.1.1. does not require to duplicate the Subpart SPA.DG approval or to create additional exemptions.*

### 3.2. Draft acceptable means of compliance (AMC) and guidance material (GM) (draft EASA decision)

#### 3.2.1. GM to the cover regulation

## GM1 Article 6.4a Derogations

**OTHER-THAN-COMPLEX MOTOR-POWERED AIRCRAFT**

The term 'other-than-complex motor-powered aircraft' is used synonymously with the terms 'other-than complex motor-powered aircraft' and 'other than complex motor-powered aircraft'. ~~Whenever one of these terms is used, it includes also non-motor-powered aircraft such as sailplanes.~~

***Rationale:*** *This amendment is made to take into account that the Air OPS Regulation no longer applies to sailplanes.*

### 3.2.2. GM to Annex I (Definitions)

## GM1 Annex I Definitions

**DEFINITIONS FOR TERMS USED IN THE ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL**

For the purpose of the Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 965/2012, the following definitions should apply:

~~(a)~~ 'Abnormal flight behaviour' means [...]

~~(a)~~ 'Accuracy' means [...]

~~(b)~~ 'Aircraft-based augmentation system (ABAS)' means [...]

~~(ba)~~ 'Airport moving map display (AMMD)' means [...]

~~(c)~~ 'Area navigation (RNAV)' means [...]

~~(d)~~ 'Availability' means [...]

~~(e)~~ 'Committal point' means [...]

~~(f)~~ 'Continuity of function' means [...]

~~(fa)~~ 'Controlled portable electronic device (C-PED)' means [...]

~~(fb)~~ 'EFB installed resources' means [...]

~~(fc)~~ 'EFB mounting device' means [...]

~~(fd)~~ 'EFB system supplier' means [...]

~~(g)~~ 'Emergency locator transmitter' [...]

~~(h)~~ 'Exposure time' means [...]

~~(i)~~ 'Fail-operational flight control system' means [...]

~~(j)~~ 'Fail-operational hybrid landing system' means [...]

~~(k)~~ 'Fail-passive flight control system' [...]

~~(l)~~ 'Flight control system' [...]

'HEC cycle' means either:

(a) if a rope is used, the pick-up, transportation and dropping of a person, including the flight to the place where the next person is picked up or the rope is taken off; or

(b) if a hoist is used, one down-and-up cycle of the hoist hook for the purpose of transporting a load or a person, including a transition to and from the hover;

~~(m)~~ 'HEMS dispatch centre' means [...]

'HESLO cycle' means the pick-up, transportation and dropping of a load, and the flight to the place where the next load is picked up or the rope is taken off;

'HESLO hour' means the flight time with a rope attached to the cargo hook for the purpose of transporting a load.

~~(n)~~ 'Hybrid head-up display landing system (hybrid HUDLS)' means [...]

~~(na)~~ 'Installed EFB' means [...]

~~(o)~~ 'Integrity' means [...]

~~(p)~~ 'Landing distance available (LDAH)' means [...]

~~(q)~~ 'Landing distance required (LDRH)', [...]

~~(r)~~ 'Lateral navigation' means [...]

~~(ra)~~ 'mass' and 'weight': [...]

~~(s)~~ 'Maximum structural landing mass' means [...]

~~(t)~~ 'Maximum zero fuel mass' means [...]

~~(ta)~~ 'Miscellaneous (non-EFB) software applications' means [...]

~~(u)~~ 'Overpack' [...]

~~(v)~~ 'Package' [...]

~~(w)~~ 'Packaging' [...]

~~(x)~~ 'Personal locator beacon (PLB)' is [...]

~~(xa)~~ 'Ramp inspection tool' means [...]

~~(y)~~ 'Receiver autonomous integrity monitoring (RAIM)' means [...]

~~(z)~~ 'Rotation point (RP)' means [...]

~~(za)~~ 'Runway condition assessment matrix (RCAM)' means [...]

~~(zb)~~ 'Runway condition code (RWYCC)' means [...]

~~(zc)~~ 'Runway surface condition' means [...]

~~(zd)~~ 'Runway surface condition descriptors' means [...]

~~(aaa)~~ 'Slippery wet runway' means [...]

~~(ab)~~ 'Touch-down and lift-off area (TLOF)' means [...]

~~(ac)~~ 'Transmitting PED (T-PED)' means [...]

~~(ad)~~ 'Vertical navigation' means [...]

~~(ae)~~ 'Viewable stowage' means [...]

***Rationale:***

*It is proposed to remove the numbering of the terms in this GM for the following reasons:*

1. *The current numbering is confusing, prone to mistakes, and difficult to follow. It is rigid and unfriendly — it hardly allows the insertion of new terms in alphabetical order without complicating the existing sequence.*

2. *Each term in the list appears only once. Arranging them alphabetically allows the reader to easily identify them just like searching for words in a dictionary, which follows the same logic. Any additional numbering of the terms brings no added value and is thus considered unnecessary.*

3. *Even in the case of translation, the terms may be listed in alphabetical order of the target language. There is no risk of confusion even when the order of the terms in the English language is changed in the target language because each term appears only once and the reference to a particular term cannot be mistaken for another.*

*In a long-term perspective, this approach seems to be the most logical one, as this list is expected to increase and update continually. With the current numbering system, it would become increasingly complicated to keep a logical sequence with every new term.*

*Eliminating the numbering of these terms would not create any difficulty in further references, since each term appears only once and cannot be mistaken for another. The easiest reference would indicate only GM1 Annex I (Definitions) without any risk of confusion.*

*If one is interested in knowing when exactly a certain term was introduced into the rules, they may can always consult the detailed list of amendments that is published with every EASA Decision. This can also be consulted in every revision of the Easy Access Rules.*

*Further explanations on the definitions introduced may be found in Section 2.3.2.*

## GM36 Annex I Definitions

**ELECTRONIC FLIGHT BAGS (EFBs)**

Devices used exclusively outside the aircraft (e.g. at the operator's dispatch centre) should not be considered EFBs.

***Rationale:*** *This new GM is proposed with the purpose of clearly differentiating electronic devices used exclusively outside the aircraft from EFBs.*

### 3.2.3. Annex II (Part-ARO)

## ~~AMC1 ARO.GEN.120(d)(3) Means of compliance~~

~~**GENERAL**~~

~~The information to be provided to other Member States following approval of an alternative means of compliance should contain a reference to the Acceptable Means of Compliance (AMC) to which such means of compliance provides an alternative, as well as a reference to the corresponding Implementing Rule, indicating as applicable the subparagraph(s) covered by the alternative means of compliance.~~

***Rationale:*** *This AMC is proposed to be deleted because its content refers to a previous version of point ARO.GEN.120(d)(3), which was amended with Regulation (EU) 2019/1384. The obligation for Member States to notify each other of the alternative means of compliance they have accepted no longer exists in the implementing rule.*

## AMC1 ARO.GEN.200(a) Management system

**ORGANISATIONAL STRUCTURE**~~**GENERAL**~~

[...]

***Rationale:*** *The subtitle of this AMC is proposed to be changed and aligned with its equivalent (i.e. AMC1 CAMO.B.200) in the CAMO domain.*

## ~~GM1~~AMC2 ARO.GEN.200(a) Management system

**GENERAL**

(a) The competent authority designated by each Member State should be organised in such a way that:

(1) there is specific and effective management authority in the conduct of all relevant activities;

(2) the functions and processes described in the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008[32]~~ and ~~its Implementing Rules and~~ related AMC~~s~~, Certification Specifications (CSs) and Guidance Material (GM) may be properly implemented;

(3) the competent authority's organisation and operating procedures for the implementation of the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ are properly documented and applied;

[...]

(b) A general policy in respect of the activities related to the applicable requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ should be developed, promoted and implemented by the manager at the highest appropriate level; for example, the manager at the top of the functional area of the competent authority that is responsible for such activities.

(c) [...]

(d) The general policy, ~~whilst~~ while also satisfying additional national regulatory responsibilities, should in particular take into account:

(1) the provisions of Regulation (EU) 2018/1139~~(EC) No 216/2008~~;

[...]

***Rationale:*** *This text has been transposed from GM to AMC as its content is more suitable at AMC level; it is also aligned with that in the CAMO domain, where the same change was made to AMC2 CAMO.B.200.*

## AMC1 ARO.GEN.200(a)(1) Management system

**DOCUMENTED POLICIES AND PROCEDURES**

(a) The organisation's various policies and procedures necessary for ~~elements of the organisation involved with~~ the activities related to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ should be documented in order to establish a reference source for the establishment and maintenance of the~~this~~ organisation.

[...]

~~[32] Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. OJ L 79, 19.3.2008, p. 1. Regulation as last amended by Commission Regulation (EU) No 6/2013 of 8 January 2013 (OJ L 4, 9.1.2013, p. 34).~~

(c) The documented procedures should cover, as a minimum, all ~~of~~ the following aspects:

[…]

(7) training of personnel and inspectors' qualification;

(8) cross-references to associated documents;

(9) assistance from other competent authorities or the Agency (where required);

(10) ethics, personal conduct, and the avoidance of actual or perceived conflicts of interest in the performance of official duties.

[…]

***Rationale:*** *New text is proposed to be inserted in point (c)(7) for alignment with ICAO Annex 6, and for clarification.*

*The amendments proposed to point (c)(10) transpose Appendix 5 to ICAO Annex 6 Part I (Technical guidance, tools and provision of safety-critical information).*

## AMC1 ARO.GEN.200(a)(2) Management system

**QUALIFICATION AND TRAINING — GENERAL**

[...]

(b) For each inspector, the competent authority should:

(1) define the competencies required to perform the allocated certification and oversight tasks, based on the knowledge, skills and attitude (KSA) concept;

[…]

(c) The competent authority may provide training through its own training organisation with qualified trainers or through another qualified training source.

(d) When training is not provided through a~~n internal~~ training organisation employing qualified trainers, adequately experienced and qualified persons (e.g. inspectors) may act as trainers, provided their training skills have been assessed by the competent authority. In this case~~f required~~, an individual training plan ~~should be established~~ covering specific training skills should be established. Records should be kept of such training and the assessment, as appropriate.

***Rationale:*** *The amendment to point (b)(1) is proposed to enable competent authorities to build the competency-based training programme for their inspectors on the KSA concept, which would be particularly relevant for the authority personnel responsible for the acceptance and continuing monitoring of the air operators' SMS. The amendments proposed to point (d) reflect feedback from standardisation inspections and lessons learnt during such inspections. The amendments proposed to point (d) aim to clarify what should be understood by 'its own training organisation' in point (c).*

## AMC2 ARO.GEN.200(a)(2) Management system

**INITIAL AND RECURRENT TRAINING ~~QUALIFICATION AND TRAINING~~ — INSPECTORS**

(a) Initial training programme:

[...]

(3) overview of Regulation (EU) 2018/1139, its delegated and implementing acts, ~~(EC) No 216/2008, its implementing rules~~ and the related AMC, CS, and GM;

[...]

(10) 'on-the-job' training, relevant to the inspector's tasks;

*Note:* The content and duration of the on-the-job training should be adapted to the particular training needs of every trainee and take into account the scope and complexity of the inspector's tasks. It should cover, as much as possible, the certification and oversight tasks that the inspector will be qualified to conduct, as well as the assessment of the operators' management systems, if applicable. The competent authority should assess whether the required competencies have been achieved before an inspector is authorised to perform a task without supervision.

(11) technical training, including training on aircraft-specific subjects, appropriate to the role and tasks of the inspector, in particular for those areas requiring approvals.

(12) Regulation (EU) No 376/2014 on the reporting, analysis and follow-up of occurrences in civil aviation.

[...]

***Rationale:*** *The proposed amendments to this AMC stem from lessons learnt during standardisation inspections. The note under point (a)(11) is the text of former GM4 ARO.GEN.200(a)(2), point (c). This AMC is also aligned with AMC3 CAMO.B.200(a)(3), and with AMC2 ADR.AR.B.005(a)(2) point (a)(3)(a).*

## AMC3 ARO.GEN.200(a)(2) Management system

**QUALIFICATION AND TRAINING — CREW RESOURCE MANAGEMENT (CRM)**

For the approval and oversight of the operator's CRM training, the inspectors of the competent authority should be qualified and trained as follows:

[...]

***Rationale:*** *The new text is proposed for consistency with another AMC. This AMC refers to inspectors' qualification for the oversight of CRM training, and AMC5 ARO.GEN.200(a)(2) to the approval of FTSS. There is currently a lack of consistency between the two AMC, as both should read 'approval and oversight' because the same level of inspector qualification should be required both for the initial and the continued assessment of compliance.*

## AMC5 ARO.GEN.200(a)(2) Management system

~~**FATIGUE RISK MANAGEMENT**~~ **INSPECTOR TRAINING ON FATIGUE RISK MANAGEMENT**

An inspector involved in the approval and oversight processes of an operator's flight time specification schemes and fatigue risk management (FRM) should receive the following training:
[...]

***Rationale:*** *The subtitle of this AMC is better worded. Additionally, the new text is proposed to address a consistency issue, similar to the change proposed in AMC3 ARO.GEN.200(a)(2).*

## GM3 ARO.GEN.200(a)(2) Management system

~~**SPECIFIC FLIGHT OPERATIONS INSPECTOR QUALIFICATION**~~

**SPECIFIC QUALIFICATIONS FOR FLIGHT OPERATIONS INSPECTORS**

[...]

## GM4 ARO.GEN.200(a)(2) Management system

**INSPECTOR TRAINING PROGRAMMES**

[...]

(b) The following documents, as appropriate to the role of the inspector, are relevant for the initial training programme for inspectors referred to in AMC2 ARO.GEN.200(a)(2):

[...]

(3) Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008, and related implementing rules~~ such as:

[...]

~~(c) The duration of the on-the-job training should take into account the scope and complexity of the inspector's tasks. The competent authority should assess whether the required competence has been achieved before an inspector is authorised to perform a task without supervision.~~

***Rationale:*** *It is proposed to transpose point (c) of this GM to AMC2 ARO.GEN.200(a)(2) as a note under point (a)(11). The transposition is based on feedback from EASA standardisation inspections. It is also aligned with its equivalent AMC in Part-CAMO: AMC3 CAMO.B.200(a)(3), note in point (a).*

## GM5 ARO.GEN.200(a)(2) Management system

~~**FATIGUE RISK MANAGEMENT**~~ **INSPECTOR TRAINING ON FATIGUE RISK MANAGEMENT**

[...]

## GM6 ARO.GEN.200(a)(2) Management system

~~**FATIGUE RISK MANAGEMENT**~~ **ADDITIONAL GUIDANCE ON INSPECTOR TRAINING ON FATIGUE RISK MANAGEMENT**

[...]

***Rationale:*** *The title of this GM is proposed to be amended to distinguish its content from the previous GM, which has the same title but a different content.*

## AMC1 ARO.GEN.200(a)(6) Management system

**SAFETY RISK MANAGEMENT PROCESS**

(a) The safety risk management process should be documented. The following details should be defined in the related documentation:

(1) means for hazard identification and the related data sources, taking into account data provided by other competent authorities with which the competent authority interfaces in the Member State, or by the competent authorities of other Member States;

(2) risk management steps including:

(i) analysis (in terms of probability and severity of the consequences of hazards and occurrences);

(ii) assessment (in terms of tolerability); and

(iii) control (in terms of mitigation) of risks to an acceptable level;

(3) who is responsible for hazard identification and risk management;

(4) who is responsible for the follow-up of risk-mitigation actions;

(5) the levels of management that have the authority to make decisions regarding risk tolerability;

(6) the means to assess the effectiveness of risk-mitigation actions; and

(7) the link with the compliance-monitoring function.

(b) To demonstrate that the safety risk management process is operational, the competent authority should be able to provide evidence that:

(1) the persons involved in internal safety risk management activities are properly trained;

(2) hazards that could impact the authority's capabilities to perform its tasks and discharge its responsibilities have been identified and the related risk assessment has been documented;

(3) regular meetings take place at appropriate levels of management of the competent authority to discuss the risks identified and to decide on the risk tolerability and possible risk-mitigation measures;

(4) in addition to the initial hazard identification exercise, the risk management process is triggered as a minimum whenever changes occur that may affect the competent authority's capability to perform any of the required tasks;

(5) a record of the actions taken to mitigate risks is maintained, showing the status of each action and the owner of the action;

(6) there is a follow-up on the implementation of all risk-mitigation actions;

(7) risk-mitigation actions are assessed for their effectiveness; and

(8) the results of the risk assessments are periodically reviewed to check whether they remain relevant (e.g. whether the assumptions are still valid, and whether there is new information available).

***Rationale:*** *New AMC and GM are proposed related to the safety risk management process. The AMC is aligned with AMC1 CAMO.B.200(a)(5), on which positive feedback from stakeholders has been*

*received. Further, the AMC and GM have been added following a recommendation to reflect such AMC and GM in other domains as well, not only for CAMO.*

## GM1 ARO.GEN.200(a)(4) Management system

**SAFETY RISK MANAGEMENT PROCESS**

(a) The purpose of safety risk management as part of the management system framework for competent authorities is to ensure the effectiveness of the management system. Like for any organisation, hazard identification and risk management are expected to contribute to effective decision-making, guide the allocation of resources, and contribute to organisational success.

(b) The safety risk management process required by point (a)(4) of point ARO.GEN.200 is intended to address the safety risks that are directly related to the competent authority's organisation and processes, and which may affect its capability to perform its tasks and discharge its responsibilities. This process is not intended to be a substitute for the State safety risk management defined in ICAO Annex 19 Chapter 3, section 3.3. This does not mean, however, that the competent authority may not use information and data that are obtained through its State Safety Programme (SSP), including oversight data and information, for the purpose of safety risk management as part of its management system.

(c) The safety risk management process is also to be applied to the management of changes (point ARO.GEN.210), which is intended to ensure that the management system remains effective whenever changes occur.

***Rationale:*** *This new AMC is proposed following the amendments made to the AMC to Part-CAMO and the introduction of safety management system elements in Part-CAMO. Its purpose is to enable the implementation of the requirement in point (a)(4) of point ARO.GEN.200 on the safety risk management process in the AIR OPS domain as well.*

## AMC1 ARO.GEN.305(a);(b) Oversight programme

**MAINTAINING THE OVERSIGHT PROGRAMME — REGULAR REVIEW**

(a) In order to ensure that its oversight programme is adequately maintained, as required by point ARO.GEN.305, the competent authority should regularly review the oversight planning cycle and related oversight programme for each organisation to ensure that they remain adequate regarding any changes in the nature, complexity or safety performance of each organisation.

(b) When reviewing the oversight planning cycle and related oversight programme, the competent authority should also consider any relevant information collected in accordance with points ORO.GEN.160 and ARO.GEN.300(f).

***Rationale:*** *The aim of this proposed new AMC is to ensure that the oversight planning cycle and programme established for an organisation remain current and address any new elements or changes organisations may introduce. Competent authorities have the flexibility to update the oversight planning cycle and oversight programme as appropriate to the changes introduced; this is why the term 'regularly' was preferred instead of defining a fixed interval (as it appears in the AMC to Part-CAMO). This AMC is also aligned with AMC1 CAMO.B.305(a);(b).*

## AMC1 ARO.GEN.305(b);(d);(d1) Oversight programme

**SPECIFIC NATURE AND COMPLEXITY OF THE ORGANISATION~~,~~ AND RESULTS OF PAST OVERSIGHT**

(a) When determining the oversight programme for an organisation, the competent authority should consider in particular the following elements, as applicable:

(1) the implementation by the organisation of industry standards, directly relevant to the organisation's activity subject to this Regulation;

(2) the procedure applied for and the scope of changes not requiring prior approval;

(3) specific approvals held by the organisation;

(4) specific procedures implemented by the organisation related to any flexibility provisions in accordance with Article 71 of Regulation (EU) 2018/1139 or alternative means of compliance used; ~~and~~

(5) number and type of ~~sub~~contractors; and

(6) the effectiveness of the organisation's management system in identifying and addressing non-compliances and safety hazards.

(b) For the purpose of assessing the complexity of an organisation's management system, AMC1 ORO.GEN.200(b) should be used.

(c) Regarding the results of past oversight, the competent authority should also take into account relevant results of ramp inspections of organisations it has certified or authorised, persons and other organisations having declared their activity or persons performing operations with other-than-complex motor-powered aircraft that were performed in other Member States in accordance with Subpart ARO.RAMP.

***Rationale:*** *The amendments proposed to point (a)(4) are relevant in the context of the COVID-19 pandemic. Quick reaction in emergency cases on the side of authorities and regulators to grant the necessary flexibility from the application of the current requirements has proven extremely important in the extended period of the pandemic experienced in 2020 and 2021.*

*In point (a)(5), the change of the term 'subcontractor' to 'contractor' is proposed to ensure consistency of the terms used in other parts of the rules, especially in point ORO.GEN.205 'Contracted activities'. This issue had been also signalled to EASA by a competent authority. The proposed addition of the term 'type' reflects alignment with AMC1 CAMO.B.305(b), issued with ED Decision 2020/002/R*[33]*.*

*Point (a)(6) is proposed to be added to align with AMC1 CAMO.B.305(b).*

## AMC2 ARO.GEN.305(b) Oversight programme

**PROCEDURES FOR THE OVERSIGHT OF OPERATIONS**

(a) [...]

(b) Audits and inspections, on a scale and frequency ~~appropriate to~~ commensurate with the operation, should cover at least:

(1) infrastructure,

[33] ED Decision 2020/002/R 'AMC & GM to Commission Regulation (EU) No 1321/2014' (https://www.easa.europa.eu/en/document-library/agency-decisions/ed-decision-2020002r).

(2) manuals,

(3) training,

(4) crew records,

(5) equipment,

(6) release of flight/dispatch,

(7) dangerous goods,

(8) organisation's management system, including the flight data monitoring programme when applicable,

(9) flight time limitations.

(c) The following types of inspections should be included~~, as part of~~ in the oversight programme on a scale and frequency commensurate with the operation:

[...]

The inspection should be a 'deep cut' through the items selected~~, and all findings should be recorded. Inspectors should review the root cause(s) identified by the organisation for each confirmed finding.~~

~~The competent authority should be satisfied that the root cause(s) identified and the corrective actions taken are adequate to correct the non-compliance and to prevent re-occurrence.~~

(d) [...]

(e) [...]

(f) In the first few months of a new operation, the competent authority~~inspectors~~ should carry out oversight activities with a particular focus on the operator's procedures, facilities, equipment, operational control and management system.

(fa) When the competent authority notices ~~They should also carefully examine any~~ conditions that may indicate a significant deterioration in the organisation~~'~~s financial management, it should immediately inform the competent licensing authority designated in accordance with Regulation (EC) No 1008/2008. When any significant financial problems~~difficulties~~ are identified, the competent authority~~inspectors~~ should conduct additional audits and/or inspections ~~increase technical surveillance~~ of the operation with particular emphasis on the upholding of safety standards and the effectiveness of the organisation's management system.

(g) [...]

(h) If the competent authority is informed of a significant decrease in the operator's compliance or safety performance, it should promptly conduct additional audits and/or inspections of the operation with particular emphasis on the upholding of safety standards and the effectiveness of the management system.

***Rationale:***

*The amendments proposed to point (b) are the result of lessons learnt from standardisation inspections and the alignment with ICAO Doc 8335 (for use of the same terminology) 'commensurate with' instead of 'appropriate to'.*

*New point (b)(8) is proposed as the results of several standardisation inspections confirm that the flight data monitoring (FDM) programme is not verified consistently during oversight, although the FDM*

*programme is part of the organisation's safety management system. A link should be created in Part-ARO to include the FDM programme within the oversight activity.*

*New point (b)(9) proposes to improve the oversight requirements by adding flight time limitations among the processes covered by audits and inspections. The list of audits and inspections does not mention flight time limitations, although this is done in practice.*

*This list could be further improved, if necessary, by aligning it with the list provided in GM2 ORO.GEN.200(a)(6).*

*The proposals in point (c) are also the result of lessons learnt from standardisation inspections and the alignment with ICAO Doc 8335. During several standardisation inspections, it has been observed that the competent authorities had established a risk-based oversight model, but the exposure (number of aircraft / fleet or number of flights) was not part of the model and there was no evidence that the model drove the number of inspections within a given cycle (i.e. flight, training, etc.). This resulted in operators with a number of flight inspections not commensurate with the scale of their activities.*

*In addition, ICAO Doc 8335 includes the following provision: 'Regardless of the method used, all significant aspects of the operator's procedures and practices should be evaluated and appropriate inspections, commensurate with the scale of the operator's activities, conducted at least once every 12 months' (to be noted that ICAO Doc 8335 does not differentiate audits from inspections). Furthermore, some sentences from point (c) are proposed to be deleted as they are inserted in new AMC1 ARO.GEN.350(d), where they are better placed in relation to the content of the implementing rule.*

*The proposed point (fa) adds new text to enable oversight in case of financial difficulties. It has been shown in the context of the COVID-19 pandemic in 2020 that the oversight of some operators having financial difficulties in such times needs to be enhanced, with the purpose of increasing safety. The term 'technical surveillance' stems from ICAO Doc 8335 and is not defined in Regulation (EU) No 965/2012, so it has been replaced by 'audits and inspections'. Furthermore, the term 'difficulties' has been replaced by 'problems', to align with the terminology in Regulation (EC) No 1008/2008 (see Article 8 Validity of an operating licence).*

*New point (h) has been proposed in response to other standardisation inspections to prevent situations in which an air operator receives findings from a safety-relevant SACA inspection, but the competent authority responsible for the issue of that AOC does not feel it has any legal obligation to schedule an additional oversight activity to identify whether the operator faces systemic issues and whether it had adequately addressed those findings. Neither the implementing rule nor the AMC mention that a significant decrease in an operator's safety performance should lead to conducting additional oversight activities. Point ARO.GEN.135 on safety problems is also quite general.*

## AMC1 ARO.GEN.305(b);(c);(d);(d1) Oversight programme

**INDUSTRY STANDARDS**

[...]

(c) In order to be able to credit any audits performed as part of certification in accordance with industry standards, the following should be considered:

[...]

(5) audit results are accessible to the competent authority and open to exchange of information in accordance with Article 72(1)~~15(1)~~ of Regulation (EU) 2018/1139 ~~(EC) No 216/2008~~; and

(6) the audit planning intervals of certification audits ~~i.a.w.~~ in accordance with industry standards are compatible with the oversight planning cycle.

[...]

## AMC1 ARO.GEN.305(c) Oversight programme

**OVERSIGHT PLANNING CYCLE — AUDIT AND INSPECTION**

[...]

***Rationale:*** *The subtitle is proposed to include new elements to distinguish this AMC from the next one, which has the same title but a different content.*

## AMC2 ARO.GEN.305(c) Oversight programme

**OVERSIGHT PLANNING CYCLE — AUDIT**

[...]

## AMC1 ARO.GEN.305(d1) Oversight programme

**OVERSIGHT OF AUTHORISATION HOLDERS**

[...]

(e) When scheduling audits and inspections, the competent authority should also take into account the activity conducted by the authorised organisations in other Member States. In this case, the competent authority should coordinate the audit and inspection schedule with the authority of the Member State in the territory of which ~~territory~~ the activity takes~~is taking~~ place.

[...]

## AMC1 ARO.GEN.330 Changes — organisations

**AOC HOLDERS**

(a) [...]

(b) The competent authority should maintain a ~~A~~ simple management system documentation status sheet~~ should be maintained~~, which contains information on when an amendment was received ~~by the competent authority~~ and when it was approved.

(c) The organisation should ~~provide~~ submit each amendment to the management system documentation ~~amendment~~ to the competent authority, regardless of whether those ~~including for the~~ amendments ~~that do not~~ require prior approval or not~~by the competent authority~~.

(1) ~~Where the amendment~~For changes requiring prior approval, ~~requires competent authority approval,~~ the competent authority, when satisfied, should indicate its approval in writing.

(2) ~~Where the amendment~~For changes not requiring a ~~does not require~~ prior approval, the competent authority should acknowledge receipt in writing within 10 working days.

(d) For changes requiring prior approval, in order to verify the organisation'~~'~~s compliance with the applicable requirements, the competent authority should:

(1) assess the organisation's management of the related change, including the safety risk assessment;

(2) conduct an audit of the organisation, limited to the extent of the changes~~;~~ ~~-~~ ~~I~~if required for verification, the audit should include interviews and inspections carried out at the organisation's facilities;~~-~~

(3) when the organisation intends to add a new aircraft type to its fleet, require the conduct of one or more demonstration flights operated as if they were commercial flights, or conduct an in-flight inspection at the earliest opportunity.

***Rationale:***

*This AMC is proposed to be amended following feedback from standardisation inspections, and also for consistency purposes and clarification of the intent.*

*Regarding the amendments proposed to point (c), point ARO.GEN.330(a) mentions the verification of the operator's compliance with the applicable requirement when it submits a change for prior approval. In particular, the competent authority should assess the proper implementation of the management of change process (mentioned in AMC1 ORO.GEN.200(a)(1);(2);(3);(5) and in AMC1 ORO.GEN.200(a)(3)) for each change requiring prior approval, as part of the verification of compliance in accordance with point ARO.GEN.330(a).*

*However, the current text of AMC1 ORO.GEN.130(b) states that the operator should submit its safety risk assessment of a change requiring prior approval 'upon request' — which implies it is not done systematically. That is why 'upon request' is proposed to be removed from AMC1.ORO.GEN.130(b), and AMC1 ARO.GEN.330 is proposed to be changed accordingly.*

*The proposed new point (d)(3) adds a demonstration flight for cases when new aircraft types are added to the fleet, based on the wording of point (a)(3) of AMC1 ARO.GEN.310(a) relating to demonstration flights in the case of the initial issue of an AOC.*

## AMC1 ARO.GEN.350(a) Findings and corrective actions — organisations

**MANAGEMENT OF FINDINGS**

(a) In order to ensure that the identified non-compliances are adequately addressed by the organisation, the competent authority should:

(1) review the root cause(s) identified by the organisation for each confirmed finding together with the corrective action plan;

(2) be satisfied that the root cause(s) identified and the corrective actions proposed by the operator are adequate to correct the non-compliance and to prevent its reoccurrence;

(3) assess the implementation of the accepted corrective actions;

(4) be satisfied that the accepted corrective actions have been adequately implemented; and

(5) close the finding only after points (1) to (4) have been completed.

(b) In the case of level 2 findings, the competent authority should first grant the organisation a period to submit the root cause(s) and the corrective action plan. This period should be of a shorter duration than that of the corrective action implementation period to provide sufficient time for the organisation and the authority to agree on an acceptable corrective action plan and for the organisation to implement it before the end of the implementation period.

(c) The competent authority should monitor all due dates agreed in accordance with points (a) and (b).

***Rationale:***

*This proposed new AMC contains elements transferred from AMC2 ARO.GEN.305(b) where they had been included initially, although they were not relevant for the content of the rule. Additionally, new elements have been introduced following repetitive feedback received from standardisation inspections during which numerous non-compliances were detected on the management of findings raised by competent authorities.*

*AMC1 ORO.GEN.150(b), the equivalent of this AMC in Part-ORO, is proposed to be amended accordingly, so that the mentioned shorter period that the organisation has to provide the root-cause analysis and the corrective action plan to the competent authority is also reflected.*

## GM1 ARO.GEN.355(b) Findings and enforcement measures — persons

**GENERAL**

[...]

(a) persons subject to the requirements laid down in Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008 and its Implementing Rules~~ who are not required to hold a licence, certificate or attestation; and

(b) [...]

## AMC1 ARO.OPS.200 Specific approval procedure

**PROCEDURES FOR THE APPROVAL OF CARRIAGE OF DANGEROUS GOODS**

When verifying compliance with the applicable requirements of point SPA.DG.100, the competent authority should check that:

(a) the procedures specified in the operations manual, including emergency procedures, are sufficient for the safe transport of dangerous goods;

(b) operations personnel are properly trained in accordance with the ICAO 'Technical Instructions for the Safe Transport of Dangerous Goods by Air' (ICAO Doc 9284 ~~AN/905~~), and the training programme is maintained, is consistent with the operations conducted, and approved; and

(c) a reporting scheme is in place.

[...]

## AMC5 ARO.OPS.200 Specific approval procedure

**APPROVAL OF THE USE OF A TYPE B EFB APPLICATION — OPERATIONAL EVALUATION TEST**

When an operator notifies the competent authority of its intention to conduct an operational evaluation test through the submission of a plan, the competent authority should verify the operator's compliance (in terms of content, scope and duration) with the applicable requirements, and once satisfied, should notify accordingly the operator, which may then conduct it.

***Rationale:*** *This new AMC5 is proposed to be added following feedback from standardisation inspections to clarify the need for the competent authority to formally notify the operator once satisfied with the submitted plan for the operational evaluation test so that the operator may start it. It is also expected to ensure a harmonised approach by competent authorities in such cases.*

## AMC1 ARO.OPS.300 ~~Introductory~~ Flights listed in paragraph 4a(c) of Article 6

**MARGINAL ACTIVITY**

The competent authority should publish criteria specifying to which extent it considers an activity marginal and how this is being overseen.

## GM1 ARO.OPS.300 ~~Introductory~~ Flights listed in paragraph 4a(c) of Article 6

**ADDITIONAL CONDITIONS**

For ~~introductory~~ the flights listed in paragraph 4a(c) of Article 6 and carried out in the territory of a~~the~~ Member State, the competent authority may establish additional conditions such as defined area of the operations, time period during which such operations are to be conducted, safety risk assessments to be accomplished, aircraft to be used, specific operating procedures, notification requirements, maximum distance flown, pilot qualification, maximum number of passengers on board~~on board~~, and further restrictions on the maximum take-off mass.

## AMC1 ARO.RAMP.100(b) General

**SUSPECTED AIRCRAFT**

In determining whether an aircraft and/or its operation are/is suspected of not being compliant with the applicable requirements, the following should be taken into account:

[...]

(e) lists, referred to in point ARO.RAMP.106, indicating that the operator or the State of operator has been prioritised for alcohol testing;

(e~~f~~) [...]

(f~~g~~) [...]

(g~~h~~) [...]

(~~h~~i) [...]

***Rationale:*** *This proposed amendment is designed to add the prioritisation list for alcohol testing in the list of criteria to be taken into account to determine whether an aircraft and/or its operation are/is suspected of not being compliant with the applicable requirements.*

## AMC1 ARO.RAMP.100(c) General

**ANNUAL RAMP INSPECTION PROGRAMME**

[...]

(c) For layer 1 operators, the annual ramp inspection programme should meet the target numbers of inspections as assigned by the Agency for the Member States' territories in the ICAO EUR region.

[...]

(d) For layer 2 operators, the total planned number of inspections as defined in the annual ramp inspection programme should not be less than the layer 2 operators target assigned by the Agency for the Member State's territories in ICAO EUR region.

[...]

(g) The competent authority should ensure that layer 2 operators, including unforeseen ones which cannot be a part of the established annual programme, receive inspections proportionate to the traffic pattern in the State. The following priority criteria should be considered before deciding to inspect the aircraft:

(1) prioritised ramp inspections as per point ARO.RAMP.105(a);

(2) prioritised alcohol tests as per point ARO.RAMP.106(b);

(~~2~~3) aircraft suspected of not being compliant with the applicable requirements; and

(~~3~~4) inspection of an operator which was not inspected in accordance with Subpart ARO.RAMP in any State in the previous 12 months;

[...]

***Rationale:*** *This proposed amendment is designed to add the prioritisation list for alcohol testing in the list of criteria to be taken into account before deciding to inspect the aircraft of a layer 2 operator.*

## AMC1 ARO.RAMP.110 Collection of information

**COLLECTION OF INFORMATION**

The information should include:

(a) [...]

(b) information on action(s) taken following~~subsequent to~~ a ramp inspection, such as:

[...]

(3) correction(s) and corrective action(s) required;

[...]

(c) follow-up information concerning the operator, such as:

(1) implementation of correction(s) and corrective action(s); and

[...]

***Rationale:*** *This proposed amendment is designed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) No 965/2012 and its AMC and GM.*

## AMC1 ARO.RAMP.115(a)(b) Qualification of ramp inspectors

**ELIGIBILITY CRITERIA**

(a) The candidate should be considered eligible to become a ramp inspector provided they~~he/she~~ meet~~s~~ the following criteria:

(1) [...]

(2) relevant education or training and appropriate recent work experience (over the previous 5 years) in accordance with one of the following items:

[...]

(vii) has successfully completed professional training in the field of alcohol testing or in the medical field, followed by experience gained in that field; or

(viii) has successfully completed post-secondary aeronautical education with a duration of at least 3 years, followed by aeronautical experience.

***Rationale:*** *This proposed amendment is designed to introduce a specific eligibility criterion for candidate ramp inspectors who will be qualified only for alcohol testing.*

## AMC4 ARO.RAMP.115(a)(b) Qualification of ramp inspectors

**ON-THE-JOB TRAINING**

[...]

(h) Certain OJT items may be replaced by alternative training using representative examples (e.g. documents, dangerous goods, alcohol testing) when no operational environment is required ~~(e.g. documents, dangerous goods)~~.

***Rationale:*** *This amendment is proposed to add alcohol testing in the list of examples of privileges for which OJT may be replaced by alternative training.*

## AMC5 ARO.RAMP.115(a)(b) Qualification of ramp inspectors

**EXTENSION OF THE RAMP INSPECTOR PRIVILEGES**

(a) The competent authority may extend the privileges of a ramp inspector provided that the following conditions are met:

(1) the relevant knowledge of the ramp inspector has been satisfactorily complemented by additional theoretical and/or practical training relevant to the ~~scope of the extension~~ new privileges; and

(2) [...]

(b) [...]

(c) Certain OJT items may be replaced by alternative training using representative examples (e.g. documents, dangerous goods, alcohol testing) when no operational environment is required ~~(e.g. document inspections, dangerous goods)~~.

***Rationale:*** *This amendment is designed to add alcohol testing in the list of examples of privileges for which OJT may be replaced by alternative training, in the context of extension of the inspectors' privileges.*

## AMC6 ARO.RAMP.115(a)(b) Qualification of ramp inspectors

**RECENT EXPERIENCE AND REQUALIFICATION**

(a) Except for inspectors for which the qualification is limited to alcohol testing, ~~T~~the minimum number of inspections to be performed by a ramp inspector to meet the recent experience requirement should be 12 per calendar year.

[...]

***Rationale:*** *This amendment is designed to exclude ramp inspectors qualified only for alcohol testing from the requirement related to recent experience.*

## AMC1 ARO.RAMP.120(a)(4) Approval of training organisations

**TRAINING INSTRUCTORS**

[...]

(c) Notwithstanding point (a), for the delivery of the theoretical and practical training on ~~D~~dangerous ~~G~~goods, the competent authority may accept instructors who are certified in accordance with the latest effective edition of the Technical Instructions for the ~~latest effective edition of the~~ Safe Transport of Dangerous Goods by Air (ICAO Doc 9284 ~~AN/905~~), provided that they possess adequate English language communication skills.

## AMC2 ARO.RAMP.120(a) Approval of training organisations

**OVERSIGHT OF APPROVED RAMP INSPECTION TRAINING ORGANISATIONS**

[...]

(b) An oversight cycle not exceeding 24 months should be applied. The oversight planning cycle may be extended to a maximum of 48 months if the competent authority has established that during the previous 24 months:

(1) all corrections and corrective actions have been implemented within the time period accepted or extended by the competent authority; and

[...]

***Rationale:*** *This amendment is proposed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) No 965/2012 and its AMC and GM.*

## AMC1 ARO.RAMP.125(c) Conduct of ramp inspections

**PROOF OF INSPECTION**

(a) [...]

(2) When handing over the POI to the pilot-in-command/commander or the operator's representative, the inspector should ask them~~him/her~~ to sign the POI whilst explaining that the signature does in no way imply acceptance of the listed findings.

[...]

## AMC1 ARO.RAMP.135(a) Follow-up actions on findings

**FOLLOW-UP ACTIONS FOR CATEGORY 2 OR CATEGORY 3 FINDINGS**

(a) Exceptionally, where multiple category 2 findings have been raised and the accumulation of these findings or their interaction justifies correction(s) ~~corrective action~~ before the flight takes place, the class of action may be increased to the actions foreseen by point ARO.RAMP.135(b).

(b) When communicating findings to the operator, the inspecting authority should:

(1) [...]

(2) request evidence of the corrections and corrective actions taken, or alternatively the submission of a corrective action plan followed by evidence that planned corrections and corrective actions have been taken;

[...]

***Rationale:*** *This amendment is proposed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) No 965/2012 and its AMC and GM.*

## AMC1 ARO.RAMP.135(b) Follow-up actions on findings

**CLASSES OF ACTIONS FOR CATEGORY 3 FINDINGS**

[...]

(d) Whenever the operator is required to implement corrections ~~take corrective actions~~ before departure (Class 3b action), inspectors should verify that the operator has taken such actions. Depending on the circumstances, this verification may take place after the departure.

(c) Whenever a category 3 finding is raised, the aircraft should be grounded ~~only~~ (Class 3c action) only if the crew refuses to implement ~~take~~ the necessary corrections ~~corrective actions~~ or to respect imposed restrictions on the aircraft flight operation. However, grounding might be appropriate if an operator refuses to grant access in accordance with point ORO.GEN.140 (in case of an EU operator) or contrary to Regulation (EU) No 452/2014 (in case of a third-country operator). The inspecting authority should then ensure that the aircraft will not depart for as long as the reasons for the grounding remain. Any records of communication undertaken pursuant to point ARO.RAMP.140(b), as well as other evidence~~s~~, should be collected and kept as evidential material.

(d) If inspectors have imposed any restrictions and/or corrections~~corrective actions~~, these should be mentioned in the ramp inspection report.

***Rationale:*** *This amendment is proposed to ensure the consistent use of the terms 'correction' and 'corrective action' throughout Regulation (EU) No 965/2012 and its AMC and GM.*

### 3.2.4. Annex III (Part-ORO)

## AMC1 ORO.GEN.110(e) Operator responsibilities

**MEL TRAINING PROGRAMME**

(a) In order to ensure compliance with points ORO.GEN.110(e) and ORO.GEN.200(a)(4), ~~T~~the operator should develop a training programme for ground personnel dealing with the use of the MEL and detail such training in the continuing airworthiness maintenance exposition (CAME) and the operations manual (OM) as appropriate. Such training programme should include:

[...]

***Rationale:*** *This amendment is proposed to ensure that this AMC is applied in the context of the operator's management system, namely the requirement that the operator must ensure its personnel are trained and remain competent to perform their tasks.*

## AMC2~~1~~ ORO.GEN.110(e~~a~~) Operator responsibilities

**SECURITY TRAINING PROGRAMME FOR CREW MEMBERS — CAT OPERATIONS**

Without prejudice to Regulation (EC) No 300/2008, and to ensure compliance with points ORO.GEN.110(e) and ORO.GEN.200(a)(4), the CAT operator should establish and maintain a security training programme for crew members, including theoretical and practical elements.

[...]

## AMC3~~2~~ ORO.GEN.110(e~~a~~) Operator responsibilities

**SECURITY TRAINING PROGRAMME FOR GROUND PERSONNEL — CAT OPERATIONS**

In accordance with Regulation (EC) No 300/2008, and to ensure compliance with points ORO.GEN.110(e) and ORO.GEN.200(a)(4), the CAT operator should establish and maintain a security training programme for its ground personnel ~~to acquaintappropriate employees~~ to include, as applicable, ~~with~~ preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

## GM2~~1~~ ORO.GEN.110(e~~a~~) Operator responsibilities

**SECURITY TRAINING PROGRAMME FOR CREW MEMBERS**

[...]

## AMC2 ORO.GEN.110(fe) Operator responsibilities

**GROUND OPERATIONS WITH PASSENGERS EMBARKING, ON BOARD OR DISEMBARKING IN THE ABSENCE OF FLIGHT CREW**

For ground operations, whenever passengers ~~are~~ embark~~ing~~, are on board or disembark~~ing~~ in the absence of flight crew members, the operator should:

(a) establish procedures to alert the aerodrome operator ~~services~~ in the event of ground emergency or urgent need; and

(b) ensure that at least one person on board the aircraft is qualified to apply these procedures and ensure proper coordination between the aircraft and the aerodrome operator~~services~~.

***Rationale:*** *The numbering of this AMC is proposed to be amended as its content is related to point (f) of the rule. Its subtitle is also proposed to be amended to better reflect the content of the introductory sentence.*

*The terminology is proposed to be updated and in line with Regulation (EU) No 139/2014 (by replacing 'aerodrome services' with 'aerodrome operator') and with the aerodrome operator's emergency response plan.*

## ~~GM2 ORO.GEN.110(e) Operator responsibilities~~

~~**AERODROME SERVICES**~~

~~Aerodrome services refer to units available at an aerodrome that could be of assistance in responding to an urgent need or an emergency, such as rescue and firefighting services, medical and ambulance services, air traffic services, security services, police, aerodrome operations, air operators.~~

***Rationale:*** *This GM is proposed to be deleted. It is no longer necessary because the content of the relevant AMC (i.e. AMC2 ORO.GEN.110(e)) is proposed to be clarified.*

## GM1 ORO.GEN.110(j) Operator responsibilities

**DANGEROUS GOODS TRAINING PROGRAMME**

(a) The dangerous goods training programme is a means to ensure that the personnel acquire and apply knowledge, skills and attitudes to perform their function competently.

(b) It includes the following elements:

(1) the result from the training needs analysis,

(2) the training plan,

(3) the assessment plan,

(4) the evaluation measures.

***Rationale:*** *This new GM is proposed to support the operator's DGs training programme to achieve its purpose of preparing competent personnel to perform their functions, in line with a competency-based training and assessment process.*

## GM2 ORO.GEN.110(j) Operator responsibilities

**APPROVAL OF THE DANGEROUS GOODS TRAINING PROGRAMME — OPERATIONS PERSONNEL**

The approval of the dangerous goods training programme is required for operations personnel only, according to the ICAO Technical Instructions.

The term 'operations personnel' comprises the following (non-exhaustive list):

(a) Personnel performing functions during flight:

(1) flight crew,

(2) cabin crew,

(3) technical crew,

(4) task specialist (for SPO).

*Note: In point (a), 'during flight' also includes the time interval when the aircraft is on the ground, with all the doors closed and engines running, either before departure or after landing, between the runway and the parking stand.*

(b) Personnel performing the following functions:

(1) passenger and baggage acceptance;

(2) cargo acceptance (dangerous goods and general cargo);

(3) various functions related to the operational control system (e.g. flight operations officers (FOOs), flight dispatchers (FDs), load planners, etc.);

(4) handling of passengers, baggage and cargo (dangerous goods and general cargo);

(5) operational point of contact for dangerous goods as required by ICAO Annex 6 Part I and Appendix 6 to Annex 6 Part I;

(6) if applicable, dangerous goods manager and other personnel with managing responsibilities.

***Rationale:***

*A new GM is proposed to point ORO.GEN.110(j) to clarify the term 'operations personnel' for the purpose of dangerous goods training.*

*The legal requirement for the approval of the dangerous goods training for operations personnel is in point ORO.GEN.110(j). This is a transposition of the ICAO Technical Instructions and Annex 6 SARPs. Furthermore, AMC3 ORO.MLR.100 'Contents of the operations manual for CAT operations', and in particular OM-D (Training) point 2.4 specifies that OM-D should detail the content of the training syllabi and checking programme for the operations personnel. However, the understanding of 'operations personnel' may differ among air operators and competent authorities; therefore, the clarification of this term was considered necessary.*

*In point (b)(3), the term 'operational control personnel' has been used in order to align it with the rest of the proposed amendments included in NPA(C) of RMT.0392 regarding this category of personnel. According to ICAO Doc 9868 'Procedures For Air Navigation Services — Training' and Doc 10106 'Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment', which provide a competency framework and a detailed competency-based training and assessment programme for this category of personnel, there is a clear distinction between a flight*

*operations officer (FOO) qualification (considered to be a basic qualification for generic operational control tasks) and other, more advanced qualifications, associated to various functions associated to a system of operational control of an air operator. One of these advanced qualifications is a flight dispatcher (FD) qualification; other qualifications are required for various roles such as operations (and network) controller, operational data manager, operational engineer, performance engineer, etc.*

*Considering the ICAO documents mentioned above in support of Annex 1 and 6 (Parts I and III), EASA proposes a full set of amendments to Regulation (EU) No 965/2012 related to this category of personnel. It will include a clarification of the terms 'FOO', 'FD' and other operational control roles, a new definition of the more generic term 'operational control personnel' to replace the more restrictive one that exists today covering only FOO/FD, as well as distinct training requirements for the FOO qualification and the advanced qualifications for the various roles involved in the operational control system of an air operator. As side note, this difference in the terms and the definition of FOO/FD currently existing in ICAO Annex 6 will be proposed to be discussed also at ICAO level.*

*The full set of the proposed training requirements for operational control personnel will be published soon as a separate NPA under RMT.0392.*

## GM1 ORO.GEN.130(a) Changes related to an AOC holder

**GENERAL**

[...]

~~(c) Changes requiring prior approval may only be implemented upon receipt of formal approval by the competent authority.~~

***Rationale:*** *Point (c) is proposed to be deleted because the same content is included in point (b) of point ORO.GEN.130.*

## AMC1 ORO.GEN.130(b) Changes related to an AOC holder

**MANAGEMENT OF CHANGES REQUIRING PRIOR APPROVAL**

For changes requiring prior approval, the operator~~s~~ should conduct a safety risk assessment and submit ~~provide~~ it to the competent authority ~~upon request~~.

***Rationale:*** *This amendment stems from standardisation inspections. Point ARO.GEN.330(a) mentions the verification of the operator's compliance with the applicable requirements when it submits a change for prior approval. In particular, the competent authority should assess the proper implementation of the management of change process (mentioned in AMC1 ORO.GEN.200(a)(1);(2);(3);(5) and in AMC1 ORO.GEN.200(a)(3)) for each change requiring prior approval, as part of the verification of compliance in accordance with point ARO.GEN.330(a).*

*However, this AMC states that the operator should submit its safety risk assessment of a change requiring prior approval 'upon request' — which implies it is not done systematically. This is why 'upon request' is proposed to be removed and AMC1 ARO.GEN.330 is proposed to be amended accordingly.*

## AMC1 ORO.GEN.150(b) Findings and corrective actions

**GENERAL**

The corrective action plan defined by the operator should address the effects of the non-compliance, as well as its root cause(s) and contributing factors(s).

In the case of level 2 findings, the operator should submit a root-cause analysis and a corrective action plan to the competent authority within a specified period of time. This period should be shorter than the corrective action implementation period in order to provide sufficient time for the competent authority to agree on the submitted corrective action plan and for the operator to implement it before the end of the implementation period.

***Rationale:*** *This AMC is proposed to be amended so that it is better aligned with the implementing rule and also with the amendments to Part-ARO (AMC1 ARO.GEN.350(d)). See the rationale to AMC1 ARO.GEN.350(d) for further clarification.*

## GM1 ORO.GEN.150 Findings and corrective actions

~~**GENERAL**~~

~~(a) Preventive action is the action to eliminate the cause of a potential non-compliance or other undesirable potential situation.~~

~~(b) Corrective action is the action to eliminate or mitigate the root cause(s) and prevent recurrence of an existing detected non-compliance or other undesirable condition or situation. Proper determination of the root cause is crucial for defining effective corrective actions to prevent reoccurrence.~~

~~(c) Correction is the action to eliminate a detected non-compliance.~~

**CAUSAL ANALYSIS**

(a) It is important that the causal analysis do not primarily focus on establishing who or what caused the non-compliance, but why it was caused. Establishing the root cause or causes of a non-compliance often requires an overarching view of the events and circumstances that led to it, to identify all the possible systemic and contributing factors (regulatory, human factors, organisational factors, technical, operational, etc.) in addition to the direct factors.

(b) A narrow focus on single events or failures, or the use of a simple, linear model, such as a fault tree, to identify the chain of events that led to the non-compliance may not properly reflect the complexity of the issue. Such an approach might lead to ignoring or overlooking important factors that must be addressed to prevent a reoccurrence.

An inappropriate or partial causal analysis often leads to defining ‘quick fixes’ that only address the symptoms of the non-conformity. A peer review of the results of the causal analysis may increase its reliability and objectivity.

(c) A system description of the organisation that considers the organisational structures, processes and their interfaces, procedures, staff, equipment, facilities, and the environment in which the organisation operates will support both effective causal (reactive) and hazard (proactive) analyses.

***Rationale:*** *The three terms in the current GM are used in other annexes (e.g. in Subpart ARO.RAMP) at implementing rule and AMC level, and their consistent use should be ensured. Therefore, it is proposed to move these definitions to Annex I (Definitions).*

*The proposed new text of GM1 is aligned with GM1 CAMO.A.150. It is considered useful for operators in understanding why it matters to focus on 'why' instead of 'what/who' when performing the root-cause analysis of a non-compliance.*

## AMC1 ORO.GEN.160(f) Occurrence reporting

**REPORTING TO OTHER ORGANISATIONS**

(a) Reporting to other organisations should depend on the type of operations, the operator's interfaces with other organisations, their respective safety policies and procedures, as well as the extent of contracting in accordance with point ORO.GEN.205.

(b) The operator should share relevant safety information from the reported occurrences, considering the relevance of each occurrence, with any of the following organisations with which it has interfaces:

(1) the continuing airworthiness management organisation managing its aircraft;

(2) the organisation responsible for the aircraft maintenance;

(3) the relevant aerodrome operators;

(4) the relevant air navigation services providers;

(5) the relevant ground-handling service providers;

(6) any other organisation covered by an aviation regulation, if relevant.

***Rationale:*** *See the rationale to AMC2 below.*

## AMC2 ORO.GEN.160(f) Occurrence reporting

**PROCEDURE FOR REPORTING TO OTHER ORGANISATIONS**

(a) The operator should develop and implement a procedure for reporting to other organisations, which should be included in its management system documentation as a means to ensure a proactive approach to the management of safety risks and the continuous improvement of its safety management process.

(b) Such procedure should establish an interface between the organisations and should include as a minimum:

(1) the identification of the applicable requirements for reporting;

(2) the scope of such reporting, considering the operator's interfaces with other organisations, including organisations contracted in accordance with point ORO.GEN.205;

(3) means to identify the relevant safety issue;

(4) a description of the process of sharing relevant safety information, including any forms used, means, and timelines, considering the safety management policies and procedures in place;

(5) details on how to ensure the effective and timely exchange of information relating to occurrences ;

(6) criteria to determine which party is responsible for taking further action, if so required;

(7) safeguards to ensure confidentiality of the person reporting and protection of personal data; and

(8) the responsibilities of the organisations and personnel involved in reporting.

***Rationale:***

*The text of this AMC was previously part of AMC1 ORO.GEN.160(c), which was consulted with NPA 2016-19[34] under RMT.0681, which dealt with the transposition of Regulation (EU) No 376/2014 into the EU aviation regulations.*

*AMC1 and AMC2 to ORO.GEN.160(f) are proposed to be further amended, compared to the version published in NPA 2016-19, with the purpose to improve the exchange of safety-relevant information between the air operator and the organisations with which it interacts, and which have a safety-critical role to play. The more accurate reference to new point (f) proposed to be added to point ORO.GEN.160 has also been included in the title of both AMC.*

*Regulation (EU) No 376/2014 requires that the air operator report to its competent authority and the design approval holder. It does not require that organisations report or share safety-relevant information with each other. Nevertheless, point 8.1(c) of Annex V 'Essential requirements for air operations' to Regulation (EU) 2018/1139 (the Basic Regulation) includes the obligation for the air operator to manage the safety risks and aim for continuous improvement of its management system. The air operator may fulfil this obligation by adopting a proactive and predictive approach to its SMS by sharing safety-relevant information with other organisations. These other organisations can be the aerodrome operator, the organisation responsible for the management of aircraft continuing airworthiness (Part-M), the maintenance organisation (Part-145), a training organisation that may use the aircraft of an AOC holder, a provider of air navigation services, a ground-handling service provider, etc.*

*AMC1 and AMC2 to ORO.GEN.160 aim to simplify the process applied by the air operator to comply with the occurrence reporting obligations laid down in Regulation (EU) 376/2014 and with the improvement of its management system required by Annex V to the Basic Regulation. The AMC enable the air operator to share the safety-relevant information already included in the mandatory report also with other organisations, with the purpose of improving the safety of their common processes and procedures (interfaces).*

[34] Alignment of implementing rules and acceptable means of compliance/guidance material with Regulation (EU) No 376/2014 — Occurrence reporting (https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2016-19).

## GM1 ORO.GEN.160(f) Occurrence reporting

**REPORTING TO OTHER ORGANISATIONS**

The operator may develop a customised list of occurrences to be reported to other organisations, adapted to their aircraft or operation and the organisations they interface with. Such customised list is included or referenced in the organisation's management system documentation. Any such lists should, however, not be considered definitive or exhaustive, and the reporter's judgement of the degree of risk or potential hazard involved is essential.

A non-exhaustive list of reportable occurrences is detailed in the annexes to Commission Implementing Regulation (EU) 2015/1018.

***Rationale:*** *This GM has been drafted under RMT.0681 and is kept in this NPA for information purposes only. No comments are expected on it, as the text was already consulted through NPA 2016-19*[35] *under RMT.0681.*

## AMC1 ORO.GEN.200(a)(3) Management system

**COMPLEX OPERATORS — SAFETY RISK MANAGEMENT**

[...]

(c) Internal safety investigation

(1) In line with its safety culture policy, the operator should define how to investigate incidents, such as errors or near misses, in order to understand not only what happened but also how it happened and to prevent or reduce the probability of them reoccurring in the future and their consequences.

(2) The scope of internal safety investigations should extend beyond the scope of occurrences required to be reported to the competent authority.

[...]

***Rationale:*** *Point (c)(1) is proposed to enable an operator to understand why a certain event has taken place in order to find the best mitigation measure to prevent it from reoccurring. The text is aligned with that of point (c)(1) of AMC1 CAMO.A.200(a)(3).*

## AMC2 ORO.GEN.200(a)(3) Management system

**RISKS ASSOCIATED WITH FLYING OVER OR NEAR CONFLICT ZONES**

When intending to operate over or near conflict zones, the operator should conduct a risk assessment to properly identify, evaluate and manage the associated risks, and take appropriate risk-mitigation measures. The risk assessment and mitigation measures put in place should ensure that a flight does not commence or continue as planned unless it has been verified by every reasonable means available that the airspace containing the intended route from the aerodrome of departure to the aerodrome of arrival, including the intended take-off, destination and en-route alternate aerodromes, can be safely used for the planned operation.

[35] https://www.easa.europa.eu/en/document-library/notices-of-proposed-amendment/npa-2016-19

***Rationale:*** *This new AMC transposes ICAO standard 4.1.2 of Annex 6 Part I, issued with Amendment 44, which became applicable on 5 November 2020. More explanations may be found in Section 2.3.1.*

**EASA encourages stakeholders to state their opinion on whether this AMC should be applicable only to CAT operators with aeroplanes, since the initial scope was to align the rules with ICAO Annex 6 Part I. If it is considered that this AMC is too burdensome for other types of operators (NCC, SPO), then a limitation of the scope of this AMC will be included in the text or the AMC will be moved to Part-CAT.**

## GM5 ORO.GEN.200(a)(3) Management system

**ADDITIONAL GUIDANCE ON ASSESSING THE RISKS OF FLYING OVER OR NEAR CONFLICT ZONES**

(a) The term 'reasonable means' used in AMC2 ORO.GEN.200(a)(3) is meant to denote the use, at the point of departure or while the aircraft is in flight, of information available to the operator either through official information published by the aeronautical information services or readily obtainable from other sources.

(b) The operator may consult ICAO Doc 10084 'The Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones' for further guidance on the risk assessment when flying over or near conflict zones.

***Rationale:*** *This new GM transposes ICAO standard 4.1.2 of Annex 6 Part I, issued with Amendment 44, which became applicable on 5 November 2020. More explanations may be found in Section 2.3.1.*

**Stakeholders are invited to comment on whether this GM should be applicable only to CAT operators with aeroplanes, since the initial scope was to align the rules with ICAO Annex 6 Part I. If it is considered that this GM is too burdensome for other types of operators (NCC, SPO), then a limitation of the scope of this GM will be included in the text or the GM will be moved to Part-CAT.**

## AMC1 ORO.GEN.200(a)(6) Management system

**COMPLIANCE MONITORING — GENERAL**

(a) Compliance monitoring

[...]

(b) ~~Organisations~~ The operator should monitor compliance with the procedures it has ~~they have~~ designed to ensure safe activities. In doing so, ~~they~~ the operator should as a minimum, and where appropriate, monitor compliance with the following:

(1) privileges of the operator;

(2) manuals, logs, and records;

(3) training standards;

(4) management system procedures and manuals;

(5) activities of the organisation carried out under the supervision of the nominated persons in accordance with point ORO.GEN.210(b); and

(6) any outsourced activities in accordance with point ORO.GEN.205~~,~~ for compliance with the contract.

The planning cycle of the operator's compliance-monitoring activities should not exceed 24 months or the duration of the oversight planning cycle established by the competent authority for each operator, whichever is shorter.

(c) Organisational set-up

[...]

(3) The compliance-monitoring manager should:

(i) have direct access to the accountable manager;

(ii) not be one of the other persons referred to in point ORO.GEN.210(b);

(iii) be able to demonstrate relevant knowledge, background and appropriate experience related to the activities of the operator, including knowledge and experience in compliance monitoring; and

[...]

(d) Compliance-monitoring documentation

[...]

(2) In addition, relevant documentation should also include the following:

[...]

(vi) the compliance-monitoring programme, reflecting:

[...]

(B) audit and inspection procedures including an audit and inspection plan that is implemented, maintained, and continually reviewed and improved;

(C) [...]

(D) route-cause analysis for the findings identified during internal compliance-monitoring activities;

(E) follow-up and corrective action procedures; and

(F~~E~~) recording system.

[...]

***Rationale:*** *The new text in point (b) is proposed following a suggestion from a Member State to establish a period for an audit cycle performed by the operator, similarly to the ARO requirement.*

*The root-cause analysis for the findings has been also added in point (d)(D) for a better tracing of the findings and the corrective actions.*

## GM3 ORO.GEN.200(a)(6) Management system

**NON-COMPLEX OPERATORS — COMPLIANCE MONITORING**

(a) Compliance-monitoring audits and inspections may be documented on a 'Compliance-Monitoring Checklist', and any findings recorded in a 'Non-compliance Report'. The following documents may be used for this purpose.

| **COMPLIANCE-MONITORING CHECKLIST**<br>Year: | | | |
|---|---|---|---|
| Subject | Date checked | Checked by | Comments/Non-compliance Report No. |
| [...] | | | |
| **Ground Handling** | | | |
| Contracts with ground-handling organisations established and valid, as appropriate ~~if applicable~~ | | | |

***Rationale:*** *The text is proposed to be amended because the dangerous goods training is applicable to all operators, including those that do not carry dangerous goods under a specific approval.*

## AMC1 ORO.GEN.200(b) Management system

**SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY — AEROPLANES**

(a) An operator should be considered ~~as~~ complex when it has a workforce of more than 20 full-time equivalents (FTEs) involved in the activity subject to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008[36] and its Implementing Rules~~.

(b) Operators with up to 20 FTEs involved in the activity subject to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(EC) No 216/2008[37] and its Implementing Rules~~ may also be considered complex based on an assessment of the following factors:

(1) in terms of complexity, ~~the~~ extent and scope of the contracted activities subject to the approval or declaration;

[...]

***Rationale:*** *The scope of AMC1 is proposed to be restricted to aeroplanes.*

*The wording 'activities subject to the approval' is amended to also include 'declarations' for consistency with Parts NCC and SPO.*

**Stakeholders are invited to express their opinion on whether AMC1 ORO.GEN.200(b) 'Management system' should be amended in a way similar to AMC2 ORO.GEN.200(b), to reflect a more performance-based approach.**

## AMC2 ORO.GEN.200(b) Management system

**SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY — HELICOPTERS**

(a) The operator should assess the nature and complexity of its activities to ensure that the complexity of its management system is appropriate to the attributes of the organisation (system description).

~~[36] Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. OJ L 79, 19.3.2008, p. 1.~~

~~[37] Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. OJ L 79, 19.3.2008, p. 1.~~

(b) If the operator holds a HEMS, HOFO or HHO specific approval, it should implement all the elements and processes of a management system applicable to complex operators.

(c) If the operator does not hold a HEMS, HOFO or HHO specific approval, it should implement all the elements and processes of a management system applicable to a complex operator, unless it has determined that, based on the assessment in point (a), a simpler management system can effectively:

(1) monitor compliance of its activities, including compliance of all contracted activities, which are subject to Regulation (EU) 2018/1139 and its delegated and implementing acts;

(2) assess and manage risks associated with its operations.

(d) When the operator has assessed that a simpler management system may suffice, all the following should apply:

(1) The operator should implement the management system elements and processes to an appropriate degree to address the particular challenges related to the complexity posed by the size of the operator and the nature and safety risks of its activity.

(2) Whenever the operator does not implement certain elements or processes of a management system applicable to complex operators, it should document all justifications and mitigation measures that allow it to do so.

(3) The operator should implement at least all the elements and processes of a management system applicable to a non-complex operator, including those described in AMC1 ORO.GEN.200(a)(1);(2);(3);(5), AMC1 ORO.GEN.200(a)(4), AMC1 ORO.GEN.200(a)(5) and AMC1 ORO.GEN.200(a)(6) 'Management system'.

(4) The management system documentation should clearly describe the scale and method of implementation.

(5) The operator should review the elements in points (2) and (4) together with the effectiveness of its management system on a regular basis. The operator should also review the elements in points (2) and (4) in case of any significant change to the organisation, as part of its change management process;

(6) The operator should retain all documents associated with points (2) and (5) for at least 5 years.

***Rationale:*** *See Section 2.3.2.*

## GM1 ORO.GEN.200(b) Management system

**SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY — HELICOPTERS**

The following factors may be considered by the operator when assessing the nature and complexity of its activities to establish the level of complexity required for the management system:

(a) Size of the operator:

(1) number of personnel employed,

(2) number of passengers carried per flight and per year,

(3) type(s) of operation(s).

(b) Complexity of the risks to be managed:

(1) risks associated with operations requiring a specific approval,

(2) risks associated with specialised operations,

(3) risks associated with a fleet consisting of different types or groups of types of aircraft,

(4) operations in challenging environments,

(5) staff competency.

(c) Ability to effectively communicate, report and decide at the correct level of the organisation:

(1) permanent and temporary outbases,

(2) complexity of the organisational structure,

(3) effectiveness of just culture.

(d) Complexity of the management of contracted activities:

(1) extent and scope of contracted activities,

(2) impact on safety management,

(3) impact on compliance.

(e) Any other factor that is relevant to the operation.

***Rationale:*** *See Section 2.3.2.*

## AMC1 ORO.GEN.205 Contracted activities

**RESPONSIBILITIES~~Y~~ WHEN CONTRACTING ACTIVITIES**

(a) The operator may decide to contract certain activities to external organisations.

(b) A written agreement should exist between the operator and the contracted organisation clearly defining the contracted activities, ~~and~~ the applicable requirements, and each party's responsibilities.

(c) The contracted safety- and security-critical ~~related~~ activities relevant to the agreement should be included in the operator'~~-~~s safety management, security management, and compliance-monitoring programmes.

(d) The operator should ensure that the contracted organisation has the necessary authorisation or approval when required, or operates under a declaration, and commands the resources and competence to undertake the activities~~task~~.

***Rationale:*** *The proposed amendments to points (b) and (c) are particularly relevant for today's reality as aircraft operators are more and more reliant on external service providers. The service level agreements include each party's responsibilities; the responsibilities of each party as regards the safety of an activity where more than one stakeholder is involved will have to be included in the oversight of the competent authority. In the absence of requirements for authority oversight, the air operator needs to verify the safety of services provided by the contracted organisations.*

*The addition of text in point (d) is proposed to establish the connection between this Regulation and the already adopted or upcoming regulations, which establish requirements for service providers that discharge their responsibilities under a declaration regime (e.g. apron management service providers*

*(Regulation (EU) No 139/2014), declared training organisations (Regulation (EU) No 1178/2011), or ground-handling service providers in the future).*

*EASA will propose further amendments to this AMC and to point ORO.GEN.205 under RMT.0728 'Development of requirements for ground handling'[38] to clarify the allocation of responsibilities for common activities between the aircraft operator and the ground-handling service provider. This rule will have to be extended in scope to enable the discharge of responsibilities by organisations that act under a declaration regime. Those organisations have their own management system which includes an SMS to cover their own activities, processes and personnel, and will be capable of discharging their responsibilities in relation to the safety requirements applicable to them. Consequently, the scope of the air operators' responsibilities that currently cover all the safety aspects of the services provided by external providers under a contract is expected to be limited.*

## GM1 ORO.GEN.205 Contracted activities

**CONTRACTING — GENERAL**

(a) Operators may decide to contract certain activities to external organisations for the provision of services related to areas such as:

(1) ground de-icing/anti-icing;

(2) ground handling;

(3) flight support (including performance calculations, flight planning, navigation database and dispatch);

(4) training; ~~and~~

(5) manual preparation~~.~~;

(6) cargo operations;

[…]

***Rationale:*** *The proposed new point (6) was suggested in a comment to the ToR of RMT.0392[39]. It is linked to the new AMC to point CAT.OP.MPA.160 on the safety of the cargo compartment.*

## AMC1 ORO.GEN.310(b);(d);(f) Use of aircraft listed on an AOC for non-commercial operations and specialised operations

**RESPONSIBILITIES OF THE OTHER OPERATOR**

(a) The other operator using the aircraft listed on an AOC for operations under point ORO.GEN.310 should include the following elements in its procedure:

(1~~a~~) a description of the way in which the shifting of operational control is communicated, including how, when and to whom the information is communicated;

(2~~b~~) a description of the specific responsibilities resulting from having the operational control of the flight performed with the aircraft listed on the AOC;

(3~~c~~) a description of the means to ensure that the relevant personnel are instructed to:

38 https://www.easa.europa.eu/en/document-library/terms-of-reference-and-group-compositions/tor-rmt0728
39 https://www.easa.europa.eu/en/document-library/terms-of-reference-and-group-compositions/tor-rmt0392

(i~~1~~) contact the organisation responsible for the management of the continuing airworthiness of the aircraft of the AOC holder (CAMO or CAO) for any defect or technical malfunction which occurs before or during the operation.

The information about any defect or malfunction should be transmitted to the CAMO or CAO of the AOC holder before the aircraft is used for the next flight. The same information should be confirmed by the entries in the aircraft technical log system; and

(ii~~2~~) report any occurrence in accordance with the applicable rules and the internal procedures; and

(4~~d~~) a customised list of occurrences, as developed by the AOC holder, which the other operator should use when informing the AOC holder of any safety-relevant issue or event that occurred while the aircraft was under its operational control.

(b) When the other operator ceases to use the aircraft registered on an AOC and returns it to the AOC holder after a maximum of 30 days of continued use, it should ensure that its declaration properly reflects this change by removing the respective aircraft from the declaration.

***Rationale:*** *A new point is proposed to be added to this AMC following feedback from competent authorities after a period of more than 2 years of implementation of the new rules addressing the use of aircraft registered on an AOC by other, non-CAT operators. New point (b) is proposed to address the case when the same aircraft could be found on different declarations and in such case the responsibility for the operational control of the flights performed with the same aircraft becomes confusing. This partially addresses the particularly complicated situation in which the AOC holder uses one or some of its aircraft in its capacity as SPO operator or ATO operator and at the same time another SPO operator or ATO uses the same aircraft.*

*All other points have been renumbered accordingly.*

## GM2 ORO.GEN.310 Use of aircraft listed on an AOC for non-commercial operations and specialised operations

**SPECIFIC APPROVALS**

(a) *Specific approvals (SPA) of the AOC holder using its aircraft for non-commercial operations and specialised operations*

(1) When the AOC holder performs operations in accordance with Part-NCC or Part-NCO, the SPA granted for the AOC extend over these operations, as in such cases the provisions of point ORO.AOC.125 apply.

(2) When the AOC holder performs operations in accordance with Part-SPO, as a declared operator, either:

(i) the SPA applicable to its SPO activities for the same aircraft are already granted within its AOC; ~~.~~ ~~I~~in this case, the operator does not need to apply for them again; or

(ii) the SPA applicable to its SPO activities for the same aircraft are partially different from the SPA already granted within its AOC; ~~.~~ ~~I~~in this case, the SPA~~specific approval~~ will cover all the different aspects involved in the SPO operation or training of relevant personnel; in this case, the operator needs to apply for the approval of

the different elements used in its SPO operation and indicate that the other parts that are not different from its CAT operation have already been approved; or

(iii) the SPA are not granted within its AOC; ~~.~~ in this case, the operator applies for the relevant SPA to its competent authority, in accordance with Part-SPA; ~~.~~ This means that all the elements required for a SPA will be provided to the competent authority: evidence of the relevant airworthiness approval, specific equipment approval, operational procedures, and training programme specific for each of the SPA applied for.

[...]

***Rationale:*** *The new text proposed is the result of feedback received from competent authorities after 2 years of implementation of this rule. It further explains what is expected from an operator that is both an AOC holder and a SPO operator when parts of its specific approvals granted for CAT operations differ for its SPO operations. Without duplicating the already approved elements of a particular SPA used in CAT operations, it is however expected that the operator will also apply for a specific approval to cover the different elements of its SPO activities.*

## AMC1 ORO.AOC.100 Application for an air operator certificate ~~AOC~~

[…]

## AMC1 ORO.AOC.110 Leasing agreement

**GENERAL**

~~(a)~~ The operator intending to lease-in an aircraft should provide the competent authority with the following information:

(a) For wet lease ~~wet-lease~~ of aircraft from a third-country operator and all dry-lease operations:

(1) the aircraft type, registration markings and serial number, as soon as they are available;

(2) the name and address of the registered owner;

(3) a copy of the valid certificate of airworthiness;

(4) a copy of the lease agreement or description of the lease provisions, except financial arrangements; and

(5) duration of the lease; ~~.~~

~~(b)~~ (6) In case of wet lease-in, a copy of the AOC of the third-country operator and the areas of operation.

(b ~~c~~) The information mentioned in point (a) ~~above~~ should be accompanied by a statement signed by the lessee that the parties to the lease agreement fully understand their respective responsibilities under the applicable regulations.

(c) For the wet lease of aircraft from an operator registered in a State where the Treaties apply:

(1) the aircraft type and registration markings;

(2) a copy of the AOC and the areas of operation;

(3) the duration of the lease;

(4) for long-term wet lease (more than 7 months), a description of how the operator intends to comply with the requirements of point ORO.GEN.205.

(d) The operator may also request the competent authority to approve a list of preapproved EU operators for wet-lease purposes. This list should be valid for 24 months from the date of its approval.

The operator should provide the competent authority with a copy of the AOC and areas of operation of all European operators it intends to put on the list and an extract of its internal documentation that describes how the responsibilities for the wet-lease operations are shared between the lessee and lessor.

(e) If the operator intends to use the preapproved list for a short-term wet-lease agreement of a maximum of 7 days to cover urgent operational needs or to overcome operational difficulties, it should send a prior notification to the competent authority. This prior notification should include:

(1) the aircraft type and registration markings of the leased aircraft,

(2) the flight schedule, and

(3) the overall duration of the lease.

***Rationale:***

*The proposed amendments to this AMC stem from an AltMoC to point ORO.AOC.110 that has been applied in a Member State, based on the following argumentation:*

*In the case when an air operator intends to wet-lease an aircraft from an operator that is registered in an EASA State, both the lessor and the lessee are subject to the same EU regulations applicable to their operation, personnel licensing, and airworthiness. Both air operators are part of the EASA system. Therefore, the lessee will not have to provide the certificate of airworthiness of the respective aircraft or their serial number, or details of their owners since this information is already in the possession of another Member State's competent authority, and its validity is under that authority's oversight. This practically ensures the necessary level of control that does not need to be duplicated and verification of that data needs no reassessment.*

*As both operators (in that case, lessee and lessor) are subject to the AIR OPS Regulation, requesting a signed statement that 'they understand their respective responsibilities under the applicable regulations' or 'a copy of the lease agreement or description of the lease provisions, except financial arrangements' is no longer necessary. Nevertheless, the flight schedule would need to be provided for the authority to have full knowledge of the operation and for ramp inspections to account for the wet-leased aircraft. Since all the documents pertaining to the aircraft of EU operators are already accessible to the competent authorities that have issued them, the proposals do not entail any decrease in oversight capabilities.*

*The list of preapproved air operators for wet-lease purposes can be a way to streamline the approval process in the case of short-term wet leases (less than 7 days), like the framework contract applicable in the case of third-country operators (see GM1 ORO.AOC.110(c)). The necessary information required for the approval of a wet lease is provided in a two-step process: first, providing the AOC and the approved areas of operation to have the list approved, and then, before the wet-lease agreement is concluded, providing to the competent authority the flight schedule, duration of the lease and aircraft*

*type and registration markings. Furthermore, to have the list approved, the operator has to provide the competent authority with a copy of its internal procedures showing how the responsibilities for the wet-leased operations are shared between the lessor and the lessee, so as to ensure that the short-term wet-lease operations are correctly taken into account for the risk assessment and management of changes under its management system.*

*The proposed amendment has no safety impact but brings benefits as regards decrease of the administrative burden on operators and competent authorities.*

## AMC3 ORO.MLR.100 Operations manual — general

**CONTENTS — CAT OPERATIONS**

(a) The operations manual (OM) should contain at least the following information, where applicable, as relevant for the area and type of operation:

[...]

0 ADMINISTRATION AND CONTROL OF THE OPERATIONS MANUAL

[...]

0.2 System of amendments and revisions:

(a) Details of the person(s) responsible for the issuance and insertion of amendments and revisions.

(b) A description of the revision system indicating the revised sections, revision number and date of effectiveness. ~~A record of amendments and revisions with insertion dates and effective dates.~~

(c) A statement that handwritten amendments and revisions are not permitted, except in situations requiring immediate amendment or revision in the interest of safety.

(d) ~~A description of the system for the annotation of pages or paragraphs and their effective dates.~~

~~(e) A list of effective pages or paragraphs~~

~~(f)~~ Annotation of changes (in the text and, as far as practicable, on charts and diagrams).

(eg) Temporary revisions.

(fh) A description of the distribution system for the manuals, amendments and revisions.

[...]

3 MANAGEMENT SYSTEM

A description of the management system, including at least the following:

(a) safety policy;

(b) the process for identifying safety hazards and for evaluating and managing the associated risks;

(c) compliance-monitoring system;

(d) allocation of duties and responsibilities;

(e) documentation of all key management system processes;~~.~~

(f) flight crew support programme.

[...]

6 CREW HEALTH PRECAUTIONS

6.1 Crew health precautions. The relevant regulations and guidance to crew members concerning health, including the following:

(a) alcohol and other intoxicating liquids,

(b) narcotics,

(c) drugs,

(d) sleeping tablets,

(e) antidepressants~~anti-depressants~~,

(f) pharmaceutical preparations,

(g) immunisation,

(h) deep-sea diving,

(i) blood/bone marrow donation,

(j) meal precautions prior to and during flight,

(k) sleep and rest,

(l) surgical operations.

6.2 Policy on the prevention and detection of misuse of psychoactive substances by flight and cabin crew members and by other safety-sensitive personnel under the operator's direct control, including training and testing procedures.

6.3 Policy and procedures for the psychological assessment of flight crew.

[...]

8.3 Flight Procedures:

[...]

8.3.19 Methodology for the conduct of the in-flight check of the landing distance assessment at time of arrival (LDTA).

[...]

B AIRCRAFT OPERATING MATTERS — TYPE RELATED

Taking account of the differences between types/classes, and variants of types, under the following headings:

[...]

2 NORMAL PROCEDURES

The normal procedures and duties assigned to the crew, the appropriate checklists, the system for their use and a statement covering the necessary coordination procedures between flight and cabin/other crew members. The normal procedures and duties should include the following:

(a) pre-flight,

(b) pre-departure,

(c) altimeter setting and checking,

(d) departure briefing,

(~~d~~e) taxi, take-off and climb,

(~~e~~f) noise abatement,

(~~f~~g) cruise and descent,

(~~g~~h) approach, landing preparation and briefing,

(~~h~~i) VFR approach,

(~~i~~j) IFR approach,

(~~j~~k) visual approach and circling,

(~~k~~l) missed approach,

(~~l~~m) normal landing,

(~~m~~n) post-landing,

(~~n~~o) for aeroplanes, operations on wet and contaminated runways.

[...]

4 PERFORMANCE

4.0 Performance data should be provided in a form that can be used without difficulty.

4.1 Performance data. Performance material that provides the necessary data for compliance with the performance requirements prescribed in Annex IV (Part-CAT). For aeroplanes, this performance data should be included to allow the determination of the following:

(a) take-off climb limits — mass, altitude, temperature;

(b) take-off field length (for dry, wet and contaminated runway conditions);

(c) net flight path data for obstacle clearance calculation or, where applicable, take-off flight path;

(d) the gradient losses for banked climb-outs;

(e) en-route climb limits;

(f) approach climb limits;

(g) landing climb limits;

(h) landing field length (for dry, wet and contaminated runway conditions) including the effects of an in-flight failure of a system or device, if it affects the landing distance;

(i) landing field length for the purpose of the in-flight check of the landing distance at time of arrival (LDTA);

(j~~i~~) brake energy limits;

(k~~j~~) speeds applicable for the various flight stages (also considering dry, wet and contaminated runway conditions).

4.1.1 Supplementary data covering flights in icing conditions. Any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative.

4.1.2 If performance data, as required for the appropriate performance class, is~~are~~ not available in the AFM, then other data should be included. The OM may contain cross-reference to the data contained in the AFM where such data is~~are~~ not likely to be used often or only in an emergency.

[...]

***Rationale:***

*The proposed amendments are designed to:*

— *update the content of the operations manual (OM) in relation to the list of effective pages. This concept is becoming obsolete with the use of electronic versions of OMs, which use a different system to revise them, inform users about new revisions and keep OMs up to date. Therefore, point 02 in OM-A is expanded to address this scope. With this proposed amendment, several AltMoC to Section 02 of OM-A have been addressed;*

— *include some specific elements required to be described in the OM in a dedicated paragraph to ensure harmonisation among EU operators (i.e. flight crew support programme, psychological assessment, LDTA);*

— *add the departure briefing in the list of procedures to be established by the operator to ensure alignment with ICAO Annex 6 Part I, Appendix 2 point 2.1.23.*

## AMC1 ORO.DEC.100(d) Declaration

**CHANGES**

The new declaration should be submitted before the change becomes effective indicating the date as of which the change would apply.

When the operator uses an aircraft registered on another operator's AOC in accordance with point ORO.GEN.310, a change of declaration is not required if the continuing use of this aircraft does not exceed 30 days as indicated in point (a)(2) of point ORO.GEN.310.

***Rationale:*** *New text is proposed in this AMC to ensure consistency with the application of point ORO.GEN.310 and a consistent understanding of the flexibility provided by that rule. The entire concept of point ORO.GEN.310 was efficiency gains on both sides: for the AOC holder and the declaring organisation(s) (or ATOs) that use the AOC holder's aircraft for a continued period of maximum 30 days. If the AOC holder is relieved from the administrative burden of removing the aircraft from its AOC as long as the other operator(s) returns (return) it within 30 days, the same principle should apply for the declaring operators too. The other operators should not have to change their declaration for the same amount of time as the AOC has before removing the aircraft from its AOC if it continues to remain in the other operator's use: 30 days for both parties. Point ORO.GEN.310 takes precedence over point ORO.DEC.100.*

## AMC1 ORO.SPO.115 Changes

**CHANGES RELATED TO THE USE OF AN AIRCRAFT REGISTERED ON AN AOC**

When the operator uses an aircraft registered on another operator's AOC in accordance with point ORO.GEN.310, a change of the high-risk authorisation is not required if the continuing use of this aircraft does not exceed 30 days as indicated in point (a)(2) of point ORO.GEN.310.

***Rationale:*** *A new AMC is proposed for insertion to ensure consistency with the application of point ORO.GEN.310 and a consistent understanding of the flexibility provided by that rule. The entire concept of point ORO.GEN.310 was efficiency gains on both sides: for the AOC holder and the declaring organisation(s) (or ATOs) that use the AOC holder's aircraft for a continued period of maximum 30 days. If the AOC holder is relieved from the administrative burden of removing the aircraft from its AOC as long as the other operator(s) returns (return) it within 30 days, the same principle should apply for the operators that have an authorisation for high-risk SPO too. The other operators should not have to change their authorisation for the same amount of time as the AOC has before removing the aircraft from its AOC if it continues to remain in the other operator's use: 30 days for both parties. Point ORO.GEN.310 takes precedence over point ORO.SPO.115.*

## AMC1 ORO.CC.100 Number and composition of cabin crew

**DETERMINATION OF THE NUMBER AND COMPOSITION OF CABIN CREW**

[...]

(b) When scheduling cabin crew for a flight, the operator should establish procedures that take account of the experience of each cabin crew member. The procedures should be supported by a risk assessment and should specify that the required cabin crew composition includes some cabin crew members who have ~~at least~~ ~~3 months~~ experience that is equivalent to at least 3 months of active and busy rosters as an operating cabin crew member.

A 3-month period should not be taken as the only possible reference to measure cabin crew experience. The number of sectors or flight hours considered necessary for the cabin crew member to be experienced should be equivalent to at least 3 months of active and busy rosters.

Each operator should have the possibility to make the choice of either sectors or flight hours, whichever suits them best. The decision process should be conducted in coordination with the competent authority and should be supported by a risk assessment.

The operator should take the following elements into account, as a minimum:

(1) Sufficient time provided to all newly joined cabin crew members to build up the necessary knowledge and skills, and to practise their role of ensuring the safety of the aircraft occupants in actual flight operations.

(2) The peak and low operational seasons and the operator's type of operations (short/medium/long/ultra-long-haul).

(c) In addition to the senior cabin crew member, the minimum required cabin crew should not consist only of newly joined cabin crew members.

***Rationale:*** *See Section 2.3.5*

## AMC1 ORO.CC.125(d) Aircraft type-specific training and operator conversion training

**TRAINING PROGRAMME — OPERATOR CONVERSION TRAINING**

The following training elements should be covered as relevant to the aircraft type and the related operator's specifics:

[...]

(e) Fire and smoke training

(1) Each cabin crew member should receive realistic and practical training in the use of all firefighting~~fire-fighting~~ equipment, including protective clothing representative of that carried in the aircraft.

(2) Each cabin crew member should:

(i) extinguish an actual fire typical~~characteristic~~ of an aircraft interior fire ~~except that, in the case of halon extinguishers, an alternative extinguishing agent may be used~~ with an extinguishing agent representative of that carried in the aircraft or with an environmentally friendly extinguishing agent; and

[...]

***Rationale:*** *See Section 2.3.5.*

## AMC1 ORO.CC.140 Recurrent training

**TRAINING PROGRAMMES**

(a) Elements of the annual recurrent training programme

[...]

(4) Training in aero-medical aspects and first aid, including related equipment, should include a review of all the elements specified in point 5 of Appendix 1 to Part-CC to Regulation (EU) No 1178/2011.

(b) Additional triennial elements of the recurrent training programme

(1) [...]

(2) Training in the use of all firefighting equipment, including protective clothing, representative of that carried in the aircraft should include ~~individual~~ practice by each cabin crew member to extinguish a fire typical~~characteristic~~ of an aircraft interior fire with an~~the~~ extinguishing agent representative of that carried in the aircraft or with an environmentally friendly extinguishing agent. ~~except that, in the case of halon extinguishers, an alternative extinguishing agent may be used~~ Training should place particular emphasis on identifying the actual source of fire or smoke.

(3) [...]

***Rationale:*** *See Section 2.3.5.*

## ~~GM1 ORO.CC.210(d)~~ AMC1 ORO.CC.210(d) Additional conditions for assignment to duties

**OPERATOR'S CABIN CREW UNIFORM**

The uniform to be worn by operating cabin crew should be such as not to impede the performance of their duties, as required for the safety of passengers and flight during operations, and should allow passengers to identify the operating cabin crew including in an emergency situation.

***Rationale:*** *See Section 2.3.5.*

### 3.2.5. Annex IV (Part-CAT)

## AMC1 CAT.GEN.MPA.105(a)(8) Responsibilities of the commander

**OPERATIONAL PROCEDURES — AIRCREW BRIEFINGS**

(a) Flight crew briefings should be conducted for, but not limited to, the following phases of operation:

(1) pre-flight,

(2) departure, and

(3) arrival.

(b) Cabin crew briefing should be conducted for at least the following phases of operation:

(1) pre-flight, and

(2) first departure of the day.

***Rationale:*** *ICAO Annex 6 Appendix 2 'Organisation and contents of an operations manual' point 2.1.23, as well as one ICAO USOAP protocol question, mentions departure and approach briefings. However, the Air OPS rules mention only the approach briefing, but nothing about departure briefings.*

*ICAO Doc 8168 'Procedures for Air Navigation Services (PANS) — Aircraft Operations' Volume III 'Aircraft Operating Procedures' includes provisions on the content of departure and approach briefings in Section 6 Chapter 3.*

*This new AMC proposes to address this issue, but the proposal is limited to CAT operations.*

**Stakeholders are invited to express their opinion on whether such an AMC would be useful also beyond the CAT domain, for other multi-crew operations such as NCC.**

## GM1 CAT.GEN.MPA.105(a)(8) Responsibilities of the commander

**AIRCREW BRIEFINGS**

Guidance on aircrew briefings may be found in ICAO Doc 8168 'Procedures for Air Navigation Services (PANS) — Aircraft Operations' Volume III 'Aircraft Operating Procedures' Chapter 3.

## AMC1 CAT.GEN.MPA.105(b) Responsibilities of the commander

**REPORTING OF ANY DEVIATION FROM RULES, OPERATIONAL PROCEDURES AND METHODS**

If required by the State in which the incident occurs, the commander should submit to the appropriate authority of that State a report on any deviation from rules, operational procedures and methods applied in the interest of safety; in that event, the commander should also submit a copy of it to the competent authority. Such reports should be submitted as soon as possible and normally within 10 days.

***Rationale:*** *A new AMC is proposed for consistency with Part-NCC and Part-NCO, and also for compliance with ICAO Standard 3.1.6 of Annex 6 Part I.*

## AMC1 CAT.GEN.MPA.140 Portable electronic devices

**TECHNICAL PREREQUISITES FOR THE USE OF PORTABLE ELECTRONIC DEVICES (PEDs~~S~~)**

[...]

(f) Batteries in C-PEDs and cargo tracking devices

Lithium-type batteries in C-PEDs and cargo tracking devices should meet:

(1) United Nations (UN) Transport~~ation~~ Regulations: 'Recommendations on the transport of dangerous goods', UN ST/SG/AC.10/1, and 'UN M~~m~~anual of T~~t~~ests and C~~c~~riteria', UN ST/SG/AC.10/11; and

[...]

## AMC3 CAT.OP.MPA.160(b) Stowage of baggage and cargo

**SAFETY OF ITEMS CARRIED IN THE AEROPLANE CARGO COMPARTMENT**

When establishing procedures to ensure that all baggage and cargo in the cargo compartment are stowed in such a way as to prevent movement, the operator should take the following into account:

(a) Safe transport of items in the cargo compartment

As part of the hazard identification and risk management processes under point ORO.GEN.200, the operator should establish policies and procedures for the transport of items in the cargo compartment. Such items include baggage, mail, cargo, company material, as well as other equipment used in cargo transportation such as unit load devices (ULDs), tracking devices, etc. The policies should include the conduct of a specific safety risk assessment that addresses at least the following elements, as applicable:

(1) hazards associated with the properties of the items to be transported;

(2) capabilities of the operator;

(3) operational considerations (e.g. area of operations, diversion time);

(4) capabilities of the aeroplane and its systems (e.g. cargo compartment fire suppression capabilities);

(5) containment characteristics of ULDs;

(6) packing and packaging;

(7) safety of the supply chain for items to be transported; and

(8) quantity and distribution of dangerous goods to be transported.

(b) Fire protection

The elements of the cargo compartment(s) fire protection system, as approved by the State of Design or State of Registry, and a summary of the demonstrated cargo compartment fire protection certification standards should be provided in the aeroplane flight manual or other documentation supporting the operation of the aeroplane.

(c) These procedures should ensure, with reasonable certainty, that in the event of a fire in the cargo compartment, the fire can be detected and sufficiently suppressed or contained by the elements of the aeroplane design associated with cargo compartment fire protection, until the aeroplane makes a safe landing.

(d) As part of its management system, the operator should periodically revise its risk assessment to ensure that new hazards introduced in its operations are addressed.

***Rationale:*** *This AMC and the next GM transpose the ICAO SARPs of Annex 6 Part I Chapter 15, included in Amendment 44, which became applicable on 5 November 2020.*

*The text is kept general, without referring to the nature of specific items, as it is meant to establish a framework to assess the risk of transporting any item in the cargo compartment.*

*The purpose of the new AMC is not to cover the usual procedures of cargo loading or restraining. These aspects are usually included in the operator's procedures on mass and balance. They will be further addressed in the future EU regulation on ground-handling activities.*

*In point (a), at the end of the first paragraph, 'as applicable' has been added because not all these elements may apply to all operators. For example, not all operators use ULDs, and not all operators transport dangerous goods.*

*Point (d) has been added following the guidelines in ICAO Doc 10102 'Guidance for Safe Operations Involving Aeroplane Cargo Compartments'.*

*More explanations may be found in Section 2.3.3.*

**Questions to stakeholders:**

1. **EASA invites stakeholders to comment on whether this AMC should also be applicable to NCC and SPO operations with aeroplanes. It should be considered that the initial scope of this additional AMC was the transposition of the ICAO SARPs of Annex 6 Part I Chapter 15 into the EU rules (so, to cover only CAT operations). However, cargo compartment safety should not be managed differently for CAT versus NCC operations, and it is likely that NCC operators may wish to apply this AMC for the safe transport of items in the cargo compartment in their NCC flights.**
2. **Stakeholders are invited to express their opinion on whether the content of point (b) should be transposed at implementing rule level, considering its safety relevance.**

## GM1 CAT.OP.MPA.160(b) Stowage of baggage and cargo

**ADDITIONAL GUIDANCE ON CARGO COMPARTMENT SAFETY**

When establishing procedures to ensure that all baggage and cargo in the cargo compartment are stowed in such a way as to prevent movement, the operator should take the following into account:

(a) It is not expected that the operator conduct a risk assessment for every single flight, but rather for all operations that involve the transport of items in the cargo compartment, based on the specific type of operation. Thus, the safety risk assessment could be developed considering the following aspects:

(1) types of operations;

(2) types of items carried: their specific properties (flammability, toxicity, physical state: liquid, solid, gas) and in which quantities;

(3) other individual items carried in the cargo compartment that could be a potential source of fuel and easily ignite (e.g. cardboard packaging, lithium batteries or battery-powered devices);

(4) whether the carriage of cargo material involves a longer supply chain, such as postal operators, shippers, freight forwarders, ground-handling service providers, and other air operators, or other modes of transport;

(5) whether the items are carried in passenger baggage, or as cargo/mail items, or company material, including types of containers and packaging standards;

(6) implementation of new aircraft systems;

(7) revision of existing systems;

(8) development of operational procedures based on the relevant class of the cargo compartment of the aircraft in the operator's fleet;

(9) any deviation from the operation for which the initial risk assessment was defined;

(10) monitoring of the effectiveness of existing mitigation measures.

(b) Operators may consult ICAO Doc 10102 'Guidance for Safe Operations Involving Aeroplane Cargo Compartments' for more guidance on the following aspects:

(1) the hazards associated with the transport of items in the cargo compartment;

(2) the conduct of a specific safety risk assessment in accordance with the Safety Management Manual (SMM) (ICAO Doc 9859), and the responsibilities as regards the transport of dangerous goods;

(3) examples of mitigation measures;

(4) the elements of cargo compartment fire protection and associated demonstrated standards.

(c) Further guidance may also be found in the FAA Advisory Circular (AC) No 120-121 'Safety Risk Management Involving Items in Aircraft Cargo Compartments'[40].

***Rationale:*** *The driver for this new GM is alignment with ICAO and the transposition of the SARPs from new Chapter 15 of Annex 6 Part I into the EU rules.*

[40] https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_120-121.pdf

*This GM contains elements from ICAO Doc 10102 and FAA AC 120-121.*

***Question to stakeholders***

**EASA invites stakeholders to comment on whether this GM should also be applicable to NCC and SPO operations with aeroplanes. It should be considered that the initial scope of the additional AMC and GM was the transposition of the ICAO SARPs of Annex 6 Part I Chapter 15 into the EU rules (so, to cover only CAT operations). However, cargo compartment safety should not be managed differently for CAT versus NCC operations, and it is likely that NCC operators may wish to use the information provided in this GM for the safe transport of items in the cargo compartment in their NCC flights.**

## AMC1 CAT.OP.MPA.181(c)(5) Fuel/energy scheme — fuel/energy planning and in-flight replanning policy — aeroplanes

**FINAL RESERVE FUEL — SUFFICIENT FUEL FOR ANOTHER APPROACH**

The minimum approach time should be enough to cover all the following:

(a) performing a standard go-around on runway heading after crossing the threshold of the opposite runway, and fly for 1 minute;

(b) a crosswind leg of at least 1 minute;

(c) a downwind leg;

(d) a based leg;

(e) a final approach of at least 1 minute; and

(f) a landing.

## AMC2 CAT.OP.MPA.181(c)(5) Fuel/energy scheme — fuel/energy planning and in-flight replanning policy — aeroplanes

**TURBINE-ENGINED AEROPLANES AND RECIPROCATING ENGINE AEROPLANES — FINAL RESERVE FUEL**

The final reserve fuel should be the amount of fuel/energy that is calculated at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions according to the aeroplane's estimated mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and should not be less than:

(a) for aeroplanes with reciprocating engines, the fuel/energy to fly for 45 minutes; or

(b) for turbine-engined aeroplanes, the fuel/energy to fly for 30 minutes.

***Rationale:*** *This new proposed AMC contains the text of the current point (c)(5) of point CAT.OP.MPA.181, and new text is proposed for point (c)(5) of point CAT.OP.MPA.181 to address the final reserve fuel for aircraft that use sources of propulsion other than fuel.*

## GM1 CAT.OP.MPA.181(c)(5) Fuel/energy scheme — fuel/energy planning and in-flight replanning policy — aeroplanes

**USABILITY OF THE FUEL/ENERGY**

(a) The operator should consider adding to its safety risk assessment various risks and possible mitigation measures associated with low fuel quantity or, in the case of batteries, low level of energy. The following examples could be considered; however, this is a non-exhaustive list:

(1) typically, low fuel quantity poses a higher risk of engine flame-out because of factors such as g forces, which may not allow feeding of the engine; or

(2) increased risk of fuel contamination while the battery can have an electrical output drop.

(b) The operator should also consider other safety risks specific to the technology used for the propulsion system of a given aeroplane. For example, for flights above 1 500 feet or lower than 1 500 feet, or in different temperature values, the fuel consumption changes, depending on the propulsion energy used. A fuel cell is sensitive to oxygen and air density, batteries are sensitive to temperature, etc., unless there are significant changes in the fuel/energy consumption at temperatures different from the ISA temperature.

## GM2 CAT.OP.MPA.181(c)(5) Fuel/energy scheme —fuel/energy planning and in-flight replanning policy — aeroplanes

**MANAGEMENT OF AN ABNORMAL OR EMERGENCY SITUATION**

The operator should consider sufficient time to allow the flight crew to manage an abnormal or emergency situation such as, for example, a slat flap locked, one-engine-out, or sudden airport closure due to an emergency, etc.

## AMC8 CAT.OP.MPA.182 Fuel/energy scheme — aerodrome selection policy — aeroplanes

**BASIC FUEL SCHEME WITH VARIATIONS — PLANNING MINIMA**

[...]

**Table 3 — Basic fuel scheme with variations — planning minima — aeroplanes**
**Destination alternate aerodrome, fuel ERA aerodrome**

| Row | Type of approach operation | Aerodrome ceiling (cloud base or vertical visibility) | RVR/VIS |
|---|---|---|---|
| 1 | Type B instrument approach operations | DA/H + 200 ft | RVR/VIS + 550 m |
| 2 | 3D Type A instrument approach operations, based on a facility with a system minima ~~minimum~~ of 200 ft or less | DA/H or MDA/H* + 200 ft | RVR/VIS** + 800 m |
| 3 | Two or more usable type A instrument approach operations***, each based on a separate navigation aid | DA/H or MDA/H* + 200 ft | RVR/VIS** + 1 000 m |

| | | | |
|---|---|---|---|
| 4 | Other type A instrument approach operations | DA/H or MDA/H + 400 ft | RVR/VIS + 1 500 m |
| 5 | Circling approach operations | MDA/H + 400 ft | VIS + 1 500 m |
| **Crosswind planning minima: see Table 1 of AMC3 CAT.OP.MPA.182** | | | |
| Wind limitations should be applied taking into account the runway condition (dry, wet, contaminated). | | | |

~~* The higher of the usable DA/H or MDA/H.~~

[...]

## AMC9 CAT.OP.MPA.182 Fuel/energy scheme — aerodrome selection policy — aeroplanes

**BASIC FUEL SCHEME WITH VARIATIONS — PLANNING MINIMA**

**Table 4 — Basic fuel scheme with variations — planning minima**

**Destination alternate aerodrome, fuel ERA aerodrome, isolated destination aerodrome**

| Row | Type of approach | Aerodrome ceiling (cloud base or vertical VIS) | RVR/VIS |
|---|---|---|---|
| 1 | Two or more usable type B instrument approach operations to two separate runways*** | DA/H~~*~~ + 100 ft | RVR** + 300 m |
| 2 | One usable type B instrument approach operation | DA/H + 150 ft | RVR + 450 m |
| 3 | 3D Type A instrument approach operations, based on a facility with a system minima ~~minimum~~ of 200 ft or less | DA/H or MDA/H* + 200 ft | RVR/VIS** + 800 m |
| 4 | Two or more usable type A instrument approach operations~~—~~***, each based on a separate navigation aid | DA/H or MDA/H* + 200 ft | RVR/VIS** + 1 000 m |
| 5 | One usable type A instrument approach operation | DA/H or MDA/H + 400 ft | RVR/VIS + 1 500 m |
| 6 | Circling approach operations | MDA/H + 400 ft | VIS + 1 500 m |
| **Crosswind planning minima: see Table 1 of AMC3 CAT.OP.MPA.182** | | | |
| Wind limitations should be applied taking into account the runway condition (dry, wet, contaminated). | | | |

~~* The higher of the usable DA/H or MDA/H.~~

[...]

## AMC1 CAT.OP.MPA.255 Ice and other contaminants — flight procedures

**FLIGHT IN EXPECTED OR ACTUAL ICING CONDITIONS — AEROPLANES**

(a) In accordance with ~~Article~~ point 2(e)~~(a)5.~~ of Annex V~~IV~~ 'Essential requirements for air operations' to Regulation (EU) 2018/1139 and its delegated and implementing acts ~~(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.

[...]

## AMC1 CAT.OP.MPA.295 Use of airborne collision avoidance system (ACAS)

**COMPLIANCE WITH THE ACAS REQUIREMENTS OF REGULATION (EU) No 923/2012**

In establishing the operational procedures and training programmes for ACAS, the air operator should also ensure compliance with the relevant requirements for ACAS contained in the Annex (Rules of the air) to Regulation (EU) No 923/2012.

***Rationale:*** *A new AMC is proposed to be introduced in the context of lesson learnt from standardisation inspections. Its purpose is to improve safety and compliance: this AMC reinforces cross-domain requirements as the Air Operations rules on ACAS should be implemented together with the rules on ACAS published in Part-SERA. In fact, for those operators that already comply with the SERA requirements in their operational procedures and training, this new AMC creates no additional work.*

## AMC2 CAT.POL.H.305(b) Helicopter operations without an assured safe forced landing capability

**IMPLEMENTATION OF THE SET OF CONDITIONS**

To obtain an approval under point CAT.POL.H.305(a), the operator conducting operations without an assured safe forced landing capability should implement the following:

(a) Attain and then maintain the helicopter/engine modification standard defined by the manufacturer, which ~~that~~ has been designated to enhance reliability during the take-off and landing phases.

(b) Perform~~Conduct~~ the preventive maintenance actions recommended by the helicopter or engine manufacturer ~~as follows~~ including the following:

(1) engine oil spectrometric and debris analysis, ~~—~~as appropriate;

(2) engine trend monitoring, based on available power assurance checks for turbine engines and on cylinder compression checks for reciprocating engines;

(3) for turbine engines, engine vibration analysis (plus any other vibration monitoring systems where fitted); ~~and~~

(4) for reciprocating engines, cylinder and induction/exhaust valve borescope inspections, as appropriate; and

(5) oil consumption monitoring.

(c) The usage monitoring system should fulfil at least the following:

(1) Recording of the following data:

(i) date and time of recording, or a reliable means of establishing these parameters;

(ii) amount of flight hours recorded during the day plus total flight time;

(iii) for turbine engines:

(A) $N_1$ (gas producer rpm~~RPM~~) cycle count;

(~~iv~~B) $N_2$ (power turbine rpm~~RPM~~) cycle count (if the engine features a free turbine);

(~~v~~C) turbine temperature exceedance: value, duration;

(~~vi~~D) power-shaft torque exceedance: value, duration (if a torque sensor is fitted);

(iv) for reciprocating engines:

(A) cylinder head temperature exceedance: value, duration;

(B) oil temperature exceedance: value, duration;

(C) manifold absolute pressure (MAP) exceedance (if appropriate to engine configuration): value, duration;

(~~vii~~v) engine shaft(s) / crankshaft speed or rpm exceedance: value, duration;~~.~~

(vi) any additional data specific to the engine technology, the exceedance of which should be recorded in order to minimise engine power loss occurrence, as specified by the engine manufacturer.

[...]

***Rationale:*** *The AMC is proposed to be amended to include reciprocating engine technology including Wankel engine designs. Point (c)(1)(vi) is proposed to be introduced to cover any specific needs associated with other engine technologies.*

*The amendments proposed to AMC2 CAT.POL.H.305(b) are based on existing AltMoC.*

*The proposal maintains an existing safety objective and extends it to reciprocating engine powered helicopters. It has no safety impact. There will be a positive impact on level playing field by extending the same safety criteria to such helicopters. Economic benefits might materialise by enabling access to some markets for such helicopters provided they can meet the same safety level as turbine-powered helicopters.*

*The overall impact is positive.*

## AMC3 CAT.POL.MAB.100(e) Mass and balance, loading

**ALTERNATIVE MASS VALUES FOR PASSENGERS — HELICOPTERS**

(a) When following AMC2 CAT.POL.MAB.100(e), the operator may replace Table 1 of AMC2 CAT.POL.MAB.100(e) by the following Table 1, or with any greater increment for revised standard mass values:

***Table 1: Alternative increments for revised standard mass values***

| Number of passenger seats | Required mass increment |
|---|---|
| 1–5 incl. | 4 kg |
| 6–9 incl. | 2 kg |
| 10–19 incl. | 0 kg |

(b) When following AMC1 CAT.POL.MAB.100(e):

(1) The operator may replace Table 2 of AMC1 CAT.POL.MAB.100(e) with the following Table 2, or with any greater values of passenger masses provided that procedures are in place to proactively identify and address any significant deviation from the alternative mass values:

***Table 2: Alternative masses for passengers — helicopters with a total number of passenger seats of 19 or less***

| Passenger seats: | 1–5 | 6–9 | 10–19 |
|---|---|---|---|
| **Male** | 92 kg | 90 kg | 88 kg |
| **Female** | 74 kg | 72 kg | 70 kg |
| **Children** | 35 kg | 35 kg | 35 kg |

(2) Notwithstanding point (f) of AMC1 CAT.POL.MAB.100(e), whenever the operator identifies a significant deviation from the alternative mass values, it should:

(i) determine the actual mass of such passengers by weighing or by adding an adequate mass increment; the operator should reassess the helicopter mass and balance accordingly;

(ii) ensure that passengers are rescheduled on other flights, as necessary to ensure that the helicopter's mass and CG remain within the limits.

***Rationale:*** *See Section 2.3.2*

## AMC1 CAT.POL.MAB.105(c) Mass and balance data and documentation

**SIGNATURE OR EQUIVALENT**

~~Where a signature by hand is impracticable or it is desirable to arrange the equivalent verification by electronic means, the following conditions should be applied in order to make an electronic signature the equivalent of a conventional hand-written signature:~~

~~(a) electronic 'signing' by entering a personal identification number (PIN) code with appropriate security, etc.;~~

~~(b) entering the PIN code generates a print-out of the individual's name and professional capacity on the relevant document(s) in such a way that it is evident, to anyone having a need for that information, who has signed the document;~~

~~(c) the computer system logs information to indicate when and where each PIN code has been entered;~~

(a) When an electronic means is used as an equivalent to a handwritten signature for the mass and balance documentation, the operator should ensure that such electronic means:

(1) uses a unique identification code or access protocol that enables easy identification of the person responsible for the supervision of the aircraft loading and distribution and of the commander; that unique identification code or access protocol may be used as an electronic signature;

(2) indicates, for each flight number and aircraft registration marks, the assigned commander and the person responsible for the supervision of aircraft loading and distribution;

(3) allows only authorised personnel to complete or modify the mass and balance documentation provided to the commander;

(3) logs information about the date and device identification for each log-in for mass and balance documentation purposes;

(4) complies with the security requirements applicable to the electronic communication of data and unique identification of individuals.

(bd) Tthe use of the electronic signature~~PIN code~~ is, from a legal ~~and responsibility~~ point of view, considered ~~to be~~ fully equivalent to a handwritten signature ~~by hand~~;

(ce) Tthe requirements for record-keeping remain unchanged~~; and.~~

(df) A~~a~~ll personnel concerned are made aware of the conditions associated with electronic signature and this is documented.

***Rationale:*** *The amendments proposed to the AMC follow an AltMoC that proposes a different means of compliance to point CAT.POL.MAB.105(c) to ensure that the electronic signature for the mass and balance documents provided to the commander is equivalent to a handwritten signature.*

*The purpose of the proposed amendments is the modernisation of the AMC to enable various electronic methods to identify the persons responsible for the mass and balance documentation of each flight. Today there are several electronic programmes that convey mass and balance data from the load planning through to the commander for authorisation and to the persons responsible for aircraft loading and distribution. Such documents that used to be transmitted in paper format and signed by hand are often replaced by electronic transmission of data, and wet signature is often replaced by a unique identification code assigned to each individual that has to sign a mass and balance document, or a unique access protocol for the programme that computes mass and balance calculations and loading. Today, these unique codes or protocols are the equivalent of an electronic signature.*

*The rules need to ensure that the electronic signing of documents is easily recognised by modern IT technologies and software provided they fulfil at least several criteria related to reliability and security of data transmission, the clear identification of the responsible persons, and the completeness and accuracy of information.*

## AMC1.1 CAT.POL.MAB.105(c) Mass and balance data and documentation

**SIGNATURE OR EQUIVALENT — HELICOPTER OPERATIONS WITH ROTORS TURNING**

In the context of helicopter operations with rotors turning, the operator may consider the signature of a designated ground operations personnel to be the equivalent to the commander's handwritten signature provided all the following conditions are met:

(a) The operator has established a procedure to ensure that the commander receives the relevant data of the mass and balance document.

(b) The operator has ensured that the commander is able to verify the essential elements of the mass and balance document.

(c) The commander is able to communicate their agreement or disagreement. If the commander is requested not to shut off the engines/rotors or if unsafe to do so, verbal communication through radio communication or equivalent means should be possible.

(d) A single ground personnel should be responsible for all the following:

(1) preparation of the mass and balance document;

(2) boarding of passengers and loading of cargo;

(3) communication with the commander as per points (a) and (c);

(4) compliance with any requests from the commander communicated as per point (c);

(5) handwritten or electronic signature of the mass and balance document on behalf of the commander, as required under point (c).

(e) The ground personnel specified in point (d) should be appropriately trained and have demonstrated competence in the performance of their tasks.

***Rationale:*** *This new AMC proposes that the best practices in helicopter operations become a means of compliance, considering that the current framework does not foresee helicopter specifics such as helicopter operations with rotors turning.*

## GM2 CAT.IDE.A.191 Lightweight flight recorder

**INSTALLATION OF CAMERAS**

When cameras are installed for the purpose of compliance with point CAT.ID~~A~~E.A.191, it is advised to install them so that they do not capture images of head and shoulders of the flight crew members whilst seated in their normal operating position.

## AMC1 CAT.IDE.A.220 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~**

[...]

(b) The following should be included in the first-aid kit:

[...]

(4) Additional equipment. The following additional equipment should be carried on board ~~as~~ as part of a first-aid kit. ~~each aircraft equipped with a first-aid kit, though not necessarily in the first-aid kit.~~ The additional equipment need not be located together with the other components of a first-aid kit. One single piece of additional equipment should be sufficient to complement all first-aid kits required to be carried on board. When operating multi-deck aircraft, operators should assess whether ~~if~~ the additional equipment is needed on each deck. The additional equipment should include, as a minimum:

[...]

(ii) bag-valve masks (masks in three sizes: one for adults, one for children, and one for infants). For CAT operations not involving the transport of children or infants (e.g. cargo operations), the respective mask sizes need not be included;

(iii) suitable airway management devices (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways) on all aircraft required to carry at least one cabin crew;

[...]

***Rationale:*** *See section 2.3.3*

## AMC1 CAT.IDE.A.226 Universal precaution kit

**NUMBER OF UNIVERSAL PRECAUTION KITS (UPKs)**

When determining the number of UPKs required to equip the aircraft, the aircraft operator should consider the number of cabin crew on board and the risk of transmission of a given pathogen as described by the public health authorities.

***Rationale:*** *See Section 2.3.4.*

## AMC2 CAT.IDE.A.226 Universal precaution kit

**CONTENT OF THE UPK**

(a) The basic content of the UPK should include the following items:

(1) dry powder that can convert small liquid spill into a sterile granulated gel;

(2) germicidal disinfectant for surface cleaning;

(3) skin wipes;

(4) face/eye mask (separate or combined);

(5) gloves (disposable);

(6) protective apron;

(7) a large absorbent towel;

(8) pick-up scoop with scraper;

(9) biohazardous waste disposal bag;

(10) instructions.

(c) The basic content of the UPK may be further enhanced by any other item of equipment that may be needed in accordance with the risk assessment performed by the operator considering the case definition made public by the public health authorities.

***Rationale:*** *See Section 2.3.4.*

## AMC1 CAT.IDE.H.220 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~**

[...]

(b) The following should be included in the first-aid kit:

[...]

(4) Additional equipment. The following additional equipment should be carried on board ~~each aircraft equipped with a first-aid kit, though not necessarily in the first-aid kit~~. The additional equipment need not be located together with the other components of the first-aid kit. The additional equipment should include, as a minimum:

[...]

(iii) suitable airway management devices (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways) on all aircraft required to carry at least one cabin crew;

[...]

(6) For helicopters with a MOPSC of 6 or less, the operator may determine, based on a risk assessment that should consider at least the average duration of a flight and the availability of medical services in the area of operation, that the bag-valve masks referred to in point (4)(ii) need not be carried on board. When the assessment concludes that bag-valve masks are not needed, the operator should include at least one disposable resuscitation aid in the FAK.

***Rationale:*** *See section 2.3.3.*

## GM1 CAT.IDE.H.220 First-aid kit

**LOCATION AND USE**

The location of the first-aid kit is normally indicated using internationally recognisable signs.

~~The first-aid kit 'should be readily accessible for use' in helicopter operations should be understood as the first-aid kit being either accessible in flight or immediately after landing.~~

It is recommended to locate the first-aid kit in the passenger cabin.

In some operations, ~~it is not practicable to use the first-aid kit during flight. Therefore,~~ the first-aid kit may~~can~~ be carried in the cargo compartment, where it will be easily accessible for use as soon as the aircraft has landed, when one of the following conditions is~~are~~ met:

(a) precautionary landing sites are available;

(b) it is impractical for persons to move within the cabin ~~the lack of cabin space is such that movement~~ or the use of the first-aid kit is impaired; ~~and~~ or

(c) the ~~installation~~ carriage of the first-aid kit in the cabin is not practicable.

***Rationale:*** *See section 2.3.3*

## GM4 CAT.IDE.H.220 First-aid kit

**LITHIUM BATTERIES**

The ~~R~~risks related to the presence of lithium batteries should be assessed. All equipment powered by lithium batteries and carried on a~~n aeroplane~~ helicopter should comply with ~~the provisions of~~ AMC1 CAT.GEN.MPA.140(f), including applicable technical standards such as (E)TSO-C142 'NON-RECHARGEABLE LITHIUM CELLS AND BATTERIES'.

## AMC1 CAT.IDE.H.295 Crew survival suits

**APPROPRIATE INSULATION OF CREW SURVIVAL SUITS**

The operator should ensure that crew survival suits provide appropriate insulation in relation to water temperature as per Table 1 of AMC1 SPA.HOFO.110(b)(3).

***Rationale:*** *See Section 2.3.2.*

### 3.2.6. Annex V (Part-SPA)

## AMC1 SPA.LVO.120(b) Flight crew competence

**INITIAL TRAINING FOR LVTO IN AN RVR BELOW~~LESS THAN~~ 400 M**

The operator should ensure that ~~the~~ flight crew members have completed the following training and checking prior to being authorised to conduct take-offs in an RVR below 400 m unless credits related to training and checking for previous experience in LVTOs on similar aircraft types are defined in the operational suitability data established in accordance with Regulation (EU) No 748/2012:

[...]

(d) The operator should ensure that a flight crew member has completed a check in an FSTD before conducting LVTOs in RVRs below~~of less than~~ 150 m. The check should require the execution of:

(1) at least one LVTO in the minimum approved visibility;

(2) at least one rejected take-off at minimum approved RVR~~ in an aircraft or FSTD~~.

For pilots with previous experience with an EU operator of LVTOs in RVRs below~~of less than~~ 150 m, the check may be replaced by successful completion of the FSTD and/or flight training specified in points (a), (b) and (c).

[...]

## AMC1 SPA.DG.105(a) Approval to transport dangerous goods

**TRAINING PROGRAMME**

(a) ~~The operator should indicate for the approval of the training programme how the training will be carried out. For formal training courses, the course objectives, the training programme syllabus/curricula and examples of the written examination to be undertaken should be included.~~ To approve the training programme, the operator should:

(1) perform a training needs analysis, including identification of the persons concerned and characteristics of the persons to be trained;

(2) detail the results of this analysis; and

(3) describe how the training and the assessment will be carried out, and which evaluation measures and process will be applied.

(b) [...]

(c) Training intended to give general information and guidance may be delivered 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. The person being trained should familiarise themselves with ~~receive an overall awareness of~~ the subject overall. This training should include an ~~written, oral or computer-based~~ examination covering all areas of the training programme, showing that a required minimum level of knowledge has been acquired.

(d) Training intended to give an in-depth and detailed appreciation of the whole subject or particular aspects of it should be adapted to the person being trained and address all the training needs previously identified by the operator. ~~by formal training courses, which should include a written examination, the successful passing of which will result in the issue of the proof of qualification. The course may be by means of tuition, as a self-study programme, or a~~

~~mixture of both.~~ The person being trained should gain sufficient knowledge and competence so as to be able to apply the detailed rules of the Technical Instructions.

(e) Training in emergency procedures should include as a minimum:

[...]

(3) for crew members other than flight crew members:

(i) dealing with incidents arising from dangerous goods carried by passengers;

(ii) dealing with issues related to lithium batteries and PEDs; or

(iii) dealing with damaged or leaking packages in flight.

(f) Recurrent ~~T~~training should be provided within 24 months from the previous training as specified in the Technical Instructions. ~~conducted at intervals of no longer than 2 years. If the recurrent training is undertaken within the last 3 calendar months of the validity period, the new validity period should be counted from the original expiry date.~~

***Rationale:*** *See section 2.3.8.*

## AMC1 SPA.NVIS.130(f) Crew requirements for NVIS operations

**CHECKING OF NVIS CREW MEMBERS**

(a) Validity period of the recurrent checking

(1) The validity period should be counted from the end of the month when the checking was taken.

(2) When the check is completed within the last 3 months of the validity period, the new validity period should be counted from the original expiry date.

(b) The checks required in point SPA.NVIS.130(f) may be combined with those checks required for the underlying activity.

***Rationale:*** *See Section 2.3.2.*

## AMC1 SPA.HHO.130(f) Crew requirements for HHO

**CHECKING OF HHO CREW MEMBERS**

Validity period of the recurrent checking

(a) The validity period should be counted from the end of the month when the checking was taken.

(b) When the check is completed within the last 3 months of the validity period, the new validity period should be counted from the original expiry date.

***Rationale:*** *See Section 2.3.2*

## AMC1 SPA.NVIS.140 Information and documentation

**OPERATIONS MANUAL**

The operations manual should include:

(a) equipment to be carried and its limitations;

(b) the minimum equipment list (MEL) entry covering the equipment specified;

(c) ~~risk analysis, mitigation and management;~~

~~(d)~~ pre- and post-flight procedures and documentation;

(d~~e~~) [...]

(e~~f~~) [...]

(f~~g~~) [...]

(g~~h~~) [...]

(h~~i~~) [...]

(i~~j~~) [...].

***Rationale:*** *The proposed amendments are made following feedback received from standardisation inspections.*

*Points SPA.NVIS.140, SPA.HEMS.140 and SPA.HHO.140 mandate operators to include in the OM several mitigating measures established as part of their risk analysis and management process. In NVIS operations only, point (c) of AMC1 SPA.NVIS.140 states that the OM should include 'risk analysis, mitigation and management'. This content is already covered by the implementing rule, so there is no need for repetition at AMC level.*

*The AMC is proposed to be amended and aligned with the similar AMC1 to points SPA.HEMS.140 and SPA.HHO.140.*

## GM1 SPA.NVIS.140 Information and documentation

**CONCEPT OF OPERATIONS**

[...]

**4. OPERATIONS**

Operations procedures should accommodate the capabilities and limitations of the systems described in Section 3 of this GM as well as the restraints of the operational environment.

All NVG operations should fulfil all applicable requirements in accordance with Regulation (EU) 2018/1139~~(EC) No 216/2008~~.

## AMC1 SPA.HOFO.110(b)(3) Operating procedures

**ADDITIONAL PROCEDURES AND EQUIPMENT FOR OPERATIONS IN A HOSTILE ENVIRONMENT — FLIGHT CREW SURVIVAL SUITS**

(a) All flight crew members should wear an approved survival suit if one or more of the following criteria are met:

(1) the weather report or forecasts available to the commander/pilot-in-command indicates/indicate that the water temperature will be below plus 12 °C during the flight;

(2) the estimated rescue time exceeds the calculated survival time;

(3) the flight is planned to be conducted at night and the weather report or forecasts available to the commander/pilot-in-command indicates/indicate that the water temperature will be below plus 15 °C during the flight.

(b) Survival suits should meet standard prEN 4863.

(c) The operator should ensure that flight crew survival suits provide appropriate insulation in relation to water temperature as per Table 1. The operator may use the average monthly temperature of the relevant month at a relevant location.

**Table 1: Survival suite insulation categories — flight crews**

| Survival suit insulation category \ Water temperature | Category 1 insulation | Category 2 insulation | Category 3 insulation | Category 4 insulation |
|---|---|---|---|---|
| >15°C | Optional | | | |
| 12–15°C | Optional (day)<br>X (night) | Optional (day)<br>X (night) | | |
| 10–12°C | | X | | |
| 7–10°C | | X | X | |
| 5–7°C | | | X | |
| 2–5°C | | | X | X |
| < 2°C | | | | X |

*Note: The insulation categories are those defined in standard prEN 4863.*

***Rationale:*** *See Section 2.3.2.*

## GM1 SPA.HOFO.110(b)(3) Operating procedures

**ADDITIONAL PROCEDURES AND EQUIPMENT FOR OPERATIONS IN A HOSTILE ENVIRONMENT — FLIGHT CREW SURVIVAL SUITS**

(a) When the operator considers it appropriate, the flight crew may wear an immersion suit system with a lower level of insulation than passengers due to the imperative to maintain flight safety.

(b) A higher level or insulation is required for night operations due to the expectation that the rescue time is likely to be longer at night than by day.

(c) The operator may consider a daily surface sea temperature forecast or a recent water temperature observation at a location that is relevant for the expected flights on a given day.

***Rationale:*** *See Section 2.3.2.*

## AMC2 SPA.HOFO.120 Selection of aerodromes and operating sites

**OFFSHORE DESTINATION ALTERNATE AERODROME**

[...]

(c) Weather considerations

(1) Meteorological observations

[...]

(2) localised weather events

An offshore destination alternate helideck should be more than 30 NM from the offshore destination helideck to reduce the likelihood of a localised weather event precluding landings at both the destination and the alternate helideck.

(3~~2~~) Weather minima

[...]

(4~~3~~) Conditions of fog

[...]

***Rationale:*** *See Section 2.3.1.*

## AMC1 SPA.HOFO.160(c) Equipment requirements

**ACCEPTABLE STANDARD FOR OFFSHORE HTAWS**

The HTAWS should be granted with an ETSO-2C522 authorisation or alternatively should meet the standard defined in document ED-285.

***Rationale:*** *A reference to the new ETSO for offshore HTAWS is introduced. For existing helicopters with an initial CofA issued after 31.12.2018, a software update should be sufficient to meet the new standard.*

## AMC1 SPA.HOFO.160(j) Equipment requirements

**SITUATIONAL AWARENESS AT THE OFFSHORE LOCATION**

The device should be a forward-looking tail boom camera. The image should be presented in the pilots' field of view.

***Rationale:*** *See the rationale to point SPA.HOFO.160.*

## AMC1 SPA.HOFO.165(b) Additional procedures and equipment for operations in a hostile environment

**PASSENGER SURVIVAL SUITS**

(a) All passengers on board should wear an approved survival suit provided one or more of the following criteria are met:

(1) the weather report or forecasts available to the commander/pilot-in-command indicates/indicate that the water temperature will be below plus 15 °C during the flight;

(2) the estimated rescue time exceeds the calculated survival time;

(3) the flight is planned to be conducted at night and the weather report or forecasts available to the commander/pilot-in-command indicates/indicate that the water temperature will be below plus 25 °C during the flight.

(b) Survival suits should meet standard prEN 4863.

(c) The operator should ensure that survival suits provide appropriate insulation in relation to water temperature as per Table 1. The operator may use the average monthly temperature of the relevant month at a relevant location.

**Table 1: Survival suit insulation categories — passengers**

| Survival suit insulation category \ Water temperature | Category 1 insulation | Category 2 insulation | Category 3 insulation | Category 4 insulation |
|---|---|---|---|---|
| >25°C | Optional | | | |
| 15–25°C | Optional (day)<br>X (night) | | | |
| 12–15°C | X | X | | |
| 10–12°C | | X | | |
| 7–10°C | | X | X | |
| 5–7°C | | | X | |
| 2–5°C | | | X | X |
| < 2°C | | | | X |

*Note: The insulation categories are those defined in standard prEN 4863.*

***Rationale:*** *See Section 2.3.2.*

## AMC1 SPA.HOFO.165(c) Additional procedures and equipment for operations in a hostile environment

**EMERGENCY BREATHING SYSTEM (EBS)**

(a) The EBS of point SPA.HOFO.165(c) should be an EBS ~~system~~ capable of rapid underwater deployment.

(b) EBSs that meet CAP 1034 specifications are deemed compliant with point (a).

(c) EBSs that are manufactured after 1 January 2025 should meet ETSO-2C519 ‘EMERGENCY BREATHING SYSTEMS (EBSs)’.

***Rationale:*** *See point SPA.HOFO.165(c) Emergency breathing systems.*

## AMC1 SPA.HOFO.165(h) Additional procedures and equipment for operations in a hostile environment

**EMERGENCY EXITS AND ESCAPE HATCHES**

In order for all passengers to escape from the helicopter within the ~~an~~ expected underwater survival time of 60 seconds in the event of a capsize, the following provisions should be made:

(a) there should be an easily accessible emergency exit or suitable opening for each passenger;

(b) an opening in the passenger compartment should be considered suitable as an underwater escape facility if the following criteria are met:

(1) the opening means ~~of opening~~ should be rapid and obvious, and should not require any exceptional effort; the exit or opening should meet the opening effort limitations set for emergency exits by FAA AC 29-2C AC 29.809 initial issue of 30 September 1999 or any subsequent issue;

[...]

***Rationale:***

*The current regulations require that any emergency exit, escape hatch or window shall be operable in an emergency.*

*Aircraft certification ensures that emergency exits can be opened by any passenger by defining that opening them should require no exceptional effort. Certification specifications define 'no exceptional effort' in terms of kilogram force (kgf). They also define how tests should be conducted.*

*The proposed AMC only clarifies that the same criterion of 'no exceptional effort' and its definition in terms of kgf should also apply to other escape hatches or windows that are expected to be used in case of an emergency escape. The objective that the opening is operable in an emergency remains unchanged, as defined in the implementing rule.*

*RMT.0120 on ditching occupant survivability issued amendments to CS-27 and CS-29 to ensure that underwater emergency exits do not require exceptional effort to open. RMT.0120 also issued amendments to Part-26 Additional Airworthiness Specifications for Operations and CS-26 to retroactively apply this requirement to emergency exits and openings suitable for underwater escape for all CS-27 Category A and CS-29 rotorcraft that are required, in accordance with point CAT.IDE.H.320(a), to be designed for landing on water or certified for ditching.*

*This is in alignment with the existing implementing rule and proposed clarification in the AMC.*

*The operating rules ensure that the same criteria apply when flying offshore over hostile seas and ditching certification is not required.*

*The proposed AMC is expected to improve the level of compliance, with a great benefit in terms of level playing field.*

*One helicopter type that is commonly used offshore has pop-out windows that are likely not to meet the criteria in the proposed AMC. This should be seen as a non-compliance with the recently amended regulation.*

## AMC1 SPA.HOFO.165(j) Additional procedures and equipment for operations in a hostile environment

**UNDERSIDE PAINTING OR MARKING**

The bottom surface of the fuselage should be painted or marked with at least three chevrons. The chevron tips should be on the centre line of the fuselage and should point to the nose of the rotorcraft. Their overall width should not be less than half that of the fuselage. The thickness of the chevrons should be between a quarter and a third of their overall width. The colour of the chevrons should be

chosen to provide a good contrast to the sea during day and night (e.g. red, yellow with reflective material) and the fuselage bottom surface.

Alternatively, the whole fuselage bottom surface should be painted to provide a good contrast to the sea, and reflective painting or markings should be used.

***Rationale:*** *See the rationale for the proposed amendments to point SPA.HOFO.165(j).*

## AMC1 SPA.HOFO.170(a) Crew requirements

**FLIGHT CREW TRAINING AND CHECKING**

(a) All relevant elements of the flight crew training programme defined in Subpart ORO.FC, including helicopter/FSTD training, ~~Flight crew training programmes~~ should:

[...]

(b) Emergency and safety equipment training should focus on the equipment fitted/carried. Water entry and sea survival training, including operation of all associated safety equipment, should be an element of the recurrent training, as described in AMC1 ORO.FC.230(a)(2)(iii)(F). Emergency and safety equipment checking should be performed as described in AMC1 ORO.FC.230(b)(2).

(c) The training elements referred to ~~above~~ in point (a) should be assessed during~~:~~ operator proficiency checks and, for CAT operations, line checks~~, or, as applicable, emergency and safety equipment checks~~.

(d) Validity of HOFO recurrent checking

(1) Assessments conducted in accordance with point (c) as part of the operator's proficiency checks should have a validity period of 6 calendar months.

(2) Assessments conducted in accordance with point (c) as part of line checks should have a validity period of 12 calendar months.

(3) The validity period should be counted from the end of the month when the checking was taken.

(4) When the training or the check is completed within the last 3 months of the validity period, the new validity period should be counted from the original expiry date.

(~~d~~e) [...]

***Rationale:*** *See Section 2.3.2.*

## AMC2 SPA.EFB.100(b) Use of electronic flight bags (EFBs) — Operational approval

**CHANGES**

Modifications to an EFB system may have to be introduced either by the EFB system supplier, the EFB applications developer, or by the operator itself.

Those modifications that:

(a) do not result in a hardware change that would require a re-evaluation of the HMI and human factors aspects in accordance with AMC1 SPA.EFB.100(b)(2);

(b) do not bring any change to the calculation algorithms of a type B EFB application;

(c) do not bring any change to the HMI of a type B EFB application that requires a change to the flight crew training programme or operational procedures;

(d) introduce a new type A EFB application or modify an existing one (provided its software classification remains type A);

(e) do not introduce any additional functionality to an existing type B EFB application; or

(f) update an existing database necessary to use an existing type B EFB application,

may be introduced by the operator without the need to be approved by its competent authority~~.~~, using its approved change management procedure in accordance with point ARO.GEN.310(c).

These changes should, nevertheless, be controlled and properly tested prior to use during flights.

The modifications in the following non-exhaustive list are considered to meet these criteria:

(a) operating system updates;

(b) chart or airport database updates;

(c) updates to introduce fixes (i.e. patches); and

(d) installation and modification of a type A EFB application.

~~For all other types of modification, the operator should apply the change management procedure approved by the competent authority in accordance with ARO.GEN.310(c).~~

For all other types of modifications, a prior approval should be obtained from the competent authority before implementing them.

This includes the extension of the use of an EFB system, for which the operator already holds an approval, to another aircraft type of the operator's fleet~~.~~ and ~~In~~ the ~~specific case of a~~ complete change of the hardware hosting the EFB application, for which the operator should demonstrate to its competent authority that the new hardware is suitable for the intended use of the EFB application as per AMC1 SPA.EFB.100(b).

***Rationale:*** *AMC2 SPA.EFB.100(b) is proposed to be amended to clarify a possible confusion within the process for changes to EFB systems, and in particular for changes that require or not a prior approval.*

## AMC3 SPA.EFB.100(b) Use of electronic flight bags (EFBs)

**OPERATIONAL EVALUATION TEST**

(a) The operator should perform an operational evaluation test which should enable verification that the relevant requirements of Subpart SPA.EFB have been satisfied before a final decision is made on the operational use of the EFB.

An operational evaluation test should be performed by operators seeking an operational approval for the use of a type B EFB application. This does not apply to changes to a type B EFB application whose use has already been approved by the operator's competent authority, with the exception of the following cases, for which an operational evaluation test should nevertheless be performed, but with a reduced scope:

(1) Extension of the use of an EFB system to a new aircraft type. In this case, the operational evaluation test should focus only on the integration of the hardware in the related aircraft, and on the effect of the EFB systems on the aircraft systems.

(2) Change of the hardware that hosts the EFB application. In this case, the operational evaluation test should focus on the suitability of the new hardware, on its integration in the related aircraft, and on its effect on the aircraft systems.

The operator should notify its competent authority of its intention to perform an operational evaluation test by providing a plan, which should contain at least the following information:

(1) the starting date of the operational evaluation test;

(2) the duration of the operational evaluation test;

(3) the aircraft involved;

(4) the EFB hardware and type(s) of software including version details;

(5) the EFB policy and procedure manual;

(6) their EFB risk assessment; and

(7) for type B EFB applications that replace the paper documentation without initial retention of a paper backup, and type B EFB applications that do not replace the paper documentation:

(i) a simulator line-oriented flight training (LOFT) session programme to verify the use of the EFB under operational conditions including normal, abnormal, and emergency conditions; and

(ii) a proposed schedule to allow the competent authority to observe the EFB application use in actual flight operations.

The operator may start the operational evaluation test once the competent authority is satisfied with the notified plan.

The operational evaluation test should consist of an in-service proving period with a standard duration of 6 months. A reduced duration may be considered after taking into account the following criteria:

[...]

***Rationale:*** *The proposed amendment to AMC3 SPA.EFB.100(b) introduces criteria for an operational evaluation test conducted by operators already approved for the use of a specific EFB application when changing the hardware or extending the use to another aircraft type. In addition, to ensure consistency with new AMC5 ARO.OPS.200, it is proposed to add a statement specifying that the operator may only start the operational evaluation test once it has been formally notified by its competent authority to do so.*

## AMC6 SPA.EFB.100(b)(3) Use of electronic flight bags (EFBs) — Operational approval

**AIRPORT MOVING MAP DISPLAY (AMMD) APPLICATION WITH OWN-SHIP POSITION**

(a) [...]

(b) Minimum requirements

The AMMD software ~~that~~ should ~~complies~~ comply with the criteria of European Technical Standard Order ETSO-C165a ~~is considered to be acceptable~~.

[...]

***Rationale:*** *AMC6 SPA.EFB.100(b)(3) is proposed to be amended to clarify that, although an ETSO approval in accordance with ETSO-C165a is not necessary, the criteria of this ETSO should nevertheless be met.*

### 3.2.7. Annex VI (Part-NCC)

## AMC1 NCC.GEN.145(b) Handling of flight recorder recordings: preservation, production, protection and use

**INSPECTIONS AND CHECKS OF RECORDINGS**

[...]

~~(c) The operator should perform, at time intervals not exceeding 2 years, an inspection of the recording of flight recorders other than an FDR, which are installed on an aircraft in order to ensure compliance with CAT.IDE.A.191 or CAT.IDE.H.191;~~

(c~~d~~) When installed, the aural or visual means [...]

(d~~e~~) The operator should check every 5 years, [...]

***Rationale:*** *Point (c) is proposed to be deleted as it is an editorial error. It had been wrongly copied from the equivalent AMC to Part-CAT at the time of publication of ED Decision 2021/005/R; it does not apply to NCC operators.*

## AMC1 NCC.GEN.150(e) Transport of dangerous goods

**DANGEROUS GOODS ACCIDENT AND INCIDENT REPORTING**

~~(a) Any type of dangerous goods accident or incident, or the finding of:~~

~~(1) undeclared or misdeclared dangerous goods in cargo;~~

~~(2) forbidden dangerous goods in mail; or~~

~~(3) forbidden dangerous goods in passenger or crew baggage, or on the person of a passenger or a crew member~~

~~should be reported. For this purpose, the Technical Instructions consider that reporting of undeclared and misdeclared dangerous goods found in cargo also applies to items of operators' stores that are classified as dangerous goods.~~

(~~b~~a) The first report should be dispatched within 72 hours of the event. It may be sent by any means, including email~~e-mail~~, telephone or fax. This report should include the details that are known at that time, under the headings identified in point (c). If necessary, a subsequent report should be made as soon as possible giving all the details that were not known at the time the first report was sent. If a report has been made verbally, written confirmation should be sent as soon as possible.

(b~~c~~) [...]

(c~~d~~) [...]

(d~~e~~) [...]

(e~~f~~) [...]

## GM1 NCC.GEN.150(e) Transport of dangerous goods

**REPORTING OF DANGEROUS GOODS ACCIDENTS OR INCIDENTS**

The Technical Instructions consider that the reporting of undeclared and misdeclared dangerous goods discovered in cargo also applies to items of the operators' stores that are classified as dangerous goods.

## AMC1 NCC.POL.110(c) Mass and balance data and documentation

**SIGNATURE OR EQUIVALENT**

~~Where a signature by hand is impracticable or it is desirable to arrange the equivalent verification by electronic means, the following conditions should be applied in order to make an electronic signature the equivalent of a conventional hand-written signature:~~

~~(a) electronic 'signing' by entering a personal identification number (PIN) code with appropriate security, etc.;~~

~~(b) entering the PIN code generates a print-out of the individual's name and professional capacity on the relevant document(s) in such a way that it is evident, to anyone having a need for that information, who has signed the document;~~

~~(c) the computer system logs information to indicate when and where each PIN code has been entered;~~

(a) When an electronic means is used as an equivalent to a handwritten signature for the mass and balance documentation, the operator should ensure that such electronic means:

(1) uses a unique identification code or access protocol that enables easy identification of the person responsible for the supervision of the aircraft loading and distribution and of the commander. That unique identification code or access protocol may be used as an electronic signature;

(2) indicates, for each flight number and aircraft registration number, the assigned commander and the person responsible for the supervision of the aircraft loading and distribution;

(3) allows only authorised personnel to complete or modify the mass and balance documentation provided to the commander;

(3) logs information about the date and device identification for each log-in for mass and balance documentation purposes;

(4) complies with the security requirements applicable to the electronic communication of data and unique identification of individuals.

(b~~d~~) T~~t~~he use of the electronic signature ~~PIN code~~ is, from a legal ~~and responsibility~~ point of view, considered ~~to be~~ fully equivalent to a handwritten signature ~~by hand;~~.

(c~~e~~) T~~t~~he requirements for record-keeping remain unchanged~~; and.~~

(d~~f~~) A~~a~~ll personnel concerned are made aware of the conditions associated with electronic signatures and this is documented.

***Rationale:*** *See the rationale for the amendments proposed to AMC1 CAT.POL.MAB.105(c).*

## GM1 NCC.IDE.A.100~~(d)~~(e) Instruments and equipment — general

**POSITIONING OF INSTRUMENTS**

[...]

***Rationale:*** *Correction of the reference to the implementing rule. The content of this GM remains unchanged.*

## AMC1 NCC.IDE.A.190 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~ (FAK)**

[...]

(b) The following should be included in the FAK~~s~~:

[...]

(4) Additional equipment. The following additional equipment should be carried on board as part of a FAK. ~~each aircraft equipped with a first-aid kit, though not necessarily in the first-aid kit.~~ The additional equipment need not be located together with the other components of a FAK. A single piece of additional equipment should be sufficient to complement all required first-aid kits. When operating multi-deck aircraft, operators should assess whether~~if~~ the additional equipment is needed on each deck. The additional equipment should include, as a minimum:

[...]

(iii) suitable airway management devices (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways) on all aircraft required to carry at least one cabin crew;

[...]

***Rationale:*** *See Section 2.3.3.*

## AMC1 NCC.IDE.A.191 Universal precaution kit

**NUMBER OF UNIVERSAL PRECAUTION KITS (UPKs)**

When determining the number of UPKs required to equip the aircraft, the aircraft operator should consider the number of cabin crew on board, if any, and the risk of transmission of the specific pathogen as described by the public health authorities.

***Rationale:*** *See Section 2.3.4.*

## AMC2 NCC.IDE.A.191 Universal precaution kit

**CONTENT OF THE UPK**

(a) The basic content of the UPK should include the following items:

(1) dry powder that can convert small liquid spill into a sterile granulated gel;

(2) germicidal disinfectant for surface cleaning;

(3) skin wipes;

(4) face/eye mask (separate or combined);

(5) gloves (disposable);

(6) protective apron;

(7) a large absorbent towel;

(8) pick-up scoop with scraper;

(9) biohazardous waste disposal bag;

(10) instructions.

(c) The basic content of the UPK may be further enhanced by any other item of equipment that may be needed in accordance with the risk assessment performed by the operator considering the case definition made public by the public health authorities.

***Rationale:*** *See Section 2.3.4.*

## AMC1 NCC.IDE.A.245 & NCC.IDE.A.250 Radio communication and surveillance equipment & Navigation equipment

**PERFORMANCE-BASED COMMUNICATION AND SURVEILLANCE (PBCS) OPERATIONS**

[...]

***Rationale:*** *The title has been amended to include 'surveillance' for consistency with the corresponding point NCC.IDE.A.245 that addresses the same equipment. The content remains unchanged.*

## GM1 NCC.IDE.A.245 Radio communication and surveillance equipment

**APPLICABLE AIRSPACE REQUIREMENTS**

[...]

***Rationale:*** *The title has been amended to include 'surveillance' for consistency with the corresponding point NCC.IDE.A.245 that addresses the same equipment. The content remains unchanged.*

## GM1 NCC.IDE.A.245 & ~~CAT~~NCC.IDE.A.250 Radio communication and surveillance equipment & Navigation equipment

**PERFORMANCE-BASED COMMUNICATION (PBC) OPERATIONS**

[...]

***Rationale:*** *Editorial error: in the title, 'CAT' is replaced by 'NCC'. 'Surveillance' is added for consistency with the corresponding point NCC.IDE.A.245 that addresses the same equipment. The content remains unchanged.*

## GM1 NCC.IDE.H.100(e~~d~~) Instruments and equipment — general

**POSITIONING OF INSTRUMENTS**

[...]

***Rationale:*** *Correction of the reference to the implementing rule. The content of this GM remains unchanged.*

## AMC1 NCC.IDE.H.190 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~ (FAK)**

[...]

(b) The following should be included in the FAK~~first-aid kit~~:

[...]

(4) Additional equipment. The following additional equipment should be carried on board ~~each aircraft equipped with a first-aid kit, though not necessarily in the first-aid kit~~. The additional equipment need not be located together with the other components of the FAK. The additional equipment should include, as a minimum:

[...]

(iii) suitable airway management devices (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways) on all aircraft required to carry at least one cabin crew;

[...]

***Rationale:*** *See section 2.3.3*

## GM1 NCC.IDE.H.190 First-aid kit

**LOCATION AND USE**

The location of the first-aid kit is normally indicated using internationally recognisable signs.

~~The first-aid kit 'should be readily accessible for use' in helicopter operations should be understood as the first-aid kit being either accessible in flight or immediately after landing.~~

It is recommended to locate the first-aid kit in the passenger cabin.

In some operations, ~~it is not practicable to use the first-aid kit during flight. Therefore,~~ the first-aid kit may~~can~~ be carried in the cargo compartment, where it will be easily accessible for use as soon as the aircraft has landed, when one of the following conditions is~~are~~ met:

(a) precautionary landing sites are available;

(b) it is impractical for persons to move within the cabin ~~the lack of cabin space is such that movement~~ or the use of the first-aid kit is impaired; ~~and~~ or

(c) the ~~installation~~ carriage of the first-aid kit in the cabin is not practicable.

***Rationale:*** *See section 2.3.3.*

## GM4 NCC.IDE.H.190 First-aid kit

**LITHIUM BATTERIES**

The ~~R~~risks related to the presence of lithium batteries should be assessed. All equipment powered by lithium batteries and carried on a helicopter ~~an aeroplane~~ should comply with ~~the provisions of~~ AMC1 NCC.GEN.130(f), including applicable technical standards such as (E)TSO-C142 'NON-RECHARGEABLE LITHIUM CELLS AND BATTERIES'.

## AMC1 NCC.IDE.H.226 Crew survival suits

**RISK ASSESSMENT FOR THE INSULATION LEVEL OF CREW SURVIVAL SUITS**

The risk assessment should ensure that the level of insulation provided is sufficient for the prevailing conditions and not excessive. Table 1 of AMC1 SPA.HOFO.110(b)(3) should be considered.

***Rationale:*** *See section 2.3.2.*

### 3.2.8. Annex VII (Part-NCO)

## AMC1 NCO.GEN.155 Minimum equipment list

**CONTENT ~~AND APPROVAL~~ OF THE MINIMUM EQUIPMENT LIST (MEL)**

[...]

***Rationale:*** *Amendment of the subtitle as there is no requirement for NCO that the MEL must be approved. The content of the AMC remains unchanged.*

## GM4 NCO.GEN.155 Minimum equipment list

**OPERATIONAL AND MAINTENANCE PROCEDURES**

(a) Operational and maintenance procedures are an integral part of the compensating conditions needed to maintain an acceptable level of safety~~, enabling the competent authority to approve the MEL~~.

[...]

***Rationale:*** *This is an editorial change: the unintentional error regarding the approval of the MEL for NCO operators is proposed to be corrected.*

## GM1 NCO.IDE.H.145 First-aid kit

**LOCATION AND USE**

The location of the first-aid kit is normally indicated using internationally recognisable signs.

~~The first-aid kit 'should be readily accessible for use' in helicopter operations should be understood as the first-aid kit being either accessible in flight or immediately after landing.~~

It is recommended to locate the first-aid kit in the passenger cabin.

In some operations, ~~it is not practicable to use the first-aid kit during flight. Therefore,~~ the first-aid kit may~~can~~ be carried in the cargo compartment, where it will be easily accessible for use as soon as the aircraft has landed, when one of the following conditions is~~are~~ met:

(a) precautionary landing sites are available;

(b) it is impractical for persons to move within the cabin ~~the lack of cabin space is such that movement~~ or the use of the first-aid kit is impaired; ~~and~~ or

(c) the ~~installation~~carriage of the first-aid kit in the cabin is not practicable.

***Rationale:*** *See section 2.3.3.*

## GM1 NCO.SPEC.100 Scope

**LIST OF SPECIALISED OPERATIONS**

(a) Specialised operations include the following activities:

(1) helicopter external load~~s~~ operations, including external sling load operations;

(2) ~~helicopter survey operations;~~ maintenance check flights;

(3) human external cargo operations;

(4) parachute operations and skydiving;

(5) agricultural flights, including chemical spreading, crop heating;

(6) aerial photography flights;

(7) glider, banning or target towing;

(8) aerial advertising flights, including sky writing, sky typing, sky drawing, etc.;

(9) calibration flights, including procedure validation for, e.g., aerodrome equipment testing;

(10) construction work flights, including stringing power line operations, clearing saw operations;

(11) oil spill work;

(12) avalanche mining operations; other terms used (depending on the technology implied) are avalanche release operations, avalanche dispersing operations;

(13) survey operations, including aerial mapping operations, pollution control activity;

(14) news media flights, television and movie flights, including aerial shootings, radio relay;

(15) special events flights, including ~~such as~~ flying displays, competition flights;

(16) ~~aerobatic flights~~ dropping or spraying operations;

(17) flights related to animals, including for herding, ~~animal~~ rescue, marking, hunting, ~~flights~~ and veterinary purposes~~dropping flights~~;

(18) ~~maritime~~ funeral operations;

(19) scientific research flights (other than those under Annex ~~I~~ II to Regulation (EU) 2018/1139~~(EC) No 216/2008~~);

(20) cloud seeding; ~~and~~

(21) aerobatic flights and sensational flights: flights involving extreme aerobatic manoeuvres performed for the purpose of allowing the persons on board to experience zero gravity, high G forces or similar sensations; ~~maintenance check flights~~

(22) reconnaissance flights with the purpose of becoming familiar with an area of operation, or an operation performed ahead of the SPO flight proper.

***Rationale:***

*This list is non-exhaustive and further types of flights may be added.*

*The proposed amendments render the list more general; more examples are added, flights with similar purposes are grouped more logically, and new items are added following feedback from stakeholders.*

*In point (1), 'sling' is proposed to be added for consistency with the name of that operation (i.e. 'HESLO').*

*Point (2) is already included in point (13). A new entry is proposed here, for consistency with the scope expressed in the implementing rule and in Article 2(7).*

*Aerobatic flights are proposed to be deleted from point (16) and added in point (21). A new entry is proposed here, to keep the current numbering as much as possible.*

*Point (18) is proposed to be amended to include any funeral flights, not just maritime.*

*The list is consistent with that of similar GM1 SPO.GEN.005 Scope.*

*A new point '(23) manufacturer flights' will be added here and in GM1 SPO.GEN.005 through another NPA in the context of RMT.0392 on proposed draft requirements for flights conducted by design and production organisations.*

### 3.2.9. Annex VIII (Part-SPO)

## GM1 SPO.GEN.005 Scope

**LIST OF SPECIALISED OPERATIONS**

(a) Specialised operations include the following activities:

(1) helicopter external load~~s~~ operations, including external sling load operations;

(2) ~~helicopter survey operations;~~ maintenance check flights;

(3) human external cargo operations;

(4) parachute operations and skydiving;

(5) agricultural flights, including chemical spreading, crop heating;

(6) aerial photography flights;

(7) glider, banning or target towing;

(8) aerial advertising flights, including sky writing, sky typing, sky drawing, etc.;

(9) calibration flights, including procedure validation for, e.g., aerodrome equipment testing;

(10) construction work flights, including stringing power line operations, clearing saw operations;

(11) oil spill work;

(12) avalanche mining operations; other terms used (depending on the technology implied) are avalanche release operations, avalanche dispersing operations;

(13) survey operations, including aerial mapping operations, pollution control activity;

(14) news media flights, television and movie flights, including aerial shootings, radio relay;

(15) special events flights, including ~~such as~~ flying displays, competition flights;

(16) ~~aerobatic flights~~dropping or spraying operations;

(17) flights related to animals, including for herding, ~~animal~~ rescue, marking, hunting, ~~flights~~ and veterinary purposes~~dropping flights~~;

(18) ~~maritime~~ funeral operations;

(19) scientific research flights (other than those under Annex ~~I~~I to Regulation (EU) 2018/1139~~(EC) No 216/2008~~);

(20) cloud seeding; ~~and~~

(21) aerobatic flights and sensational flights: flights involving extreme aerobatic manoeuvres performed~~carried out~~ for the purpose of allowing the persons on board to experience zero gravity, high G forces~~G forces~~ or similar sensations~~.~~;

(22) reconnaissance flights, with the purpose of becoming familiar with an area of operation, or an operation performed ahead of the SPO flight proper.

***Rationale:*** *See the rationale for the amendments proposed to GM1 NCO.SPEC.100.*

## GM1 SPO.GEN.140(a)(3) Documents, manuals and information to be carried

**PERMIT TO FLY**

The scope of a permit to fly issued under Part 21 may include one or more specialised operations as in the examples provided in Table 1.

**Table 1**

| Scope of permit to fly as per Part 21 | Related specialised operation |
|---|---|
| Exhibition and air show | Special events flights, including flying display, competition flights |
| Record breaking, air racing or similar competition | |
| Flying an aircraft for troubleshooting purposes or to check the functioning of one or more systems, parts or appliances after maintenance | Maintenance check flights |

***Rationale:*** *The new GM is proposed to remind that a permit to fly should meet the requirements in Part-SPO that the aircraft has an airworthiness certificate. It also serves as a reminder that the scope of a permit to fly determines which specialised operations are allowed.*

*Such GM is deemed necessary following numerous questions on this issue.*

## GM2 SPO.OP.175 Ice and other contaminants — ground procedures

**DE-ICING/ANTI-ICING — PROCEDURES**

[...]

(b) Operator's procedures should ensure the following:

[...]

(8) The pilot-in-command~~commander~~ continually monitors the environmental situation after the performed treatment. Prior to take-off, they ~~he/she~~ perform~~s~~ 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.

(9) If any doubt exists as to whether a deposit may adversely affect the aircraft's performance and/or controllability characteristics, the pilot-in-command ~~commander~~ should arrange for a re-treatment or 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 should be applied.

[...]

## GM4 SPO.OP.210 Approach and landing conditions — aeroplanes

**REPORTING ON RUNWAY BRAKING ACTION — COMPLEX AEROPLANES**

[...]

If an aircraft-generated braking action report is available, it should be transmitted, identifying its origin accordingly. If the flight crew have a reason to modify the aircraft-generated braking action report based on their judgement, the pilot-in-command ~~commander~~ should be able to amend such report.

[...]

## AMC1 SPO.POL.~~115~~ 110 Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**GENERAL**

(a) The mass and balance documentation should:

(1) enable the pilot-in-command to determine that the load and its distribution are within the mass and balance limits of the aircraft; and

(2) include advic~~s~~e to the pilot-in-command whenever a non-standard method has been used for determining the mass of the load.

(b) The information above may be available in flight planning documents or mass and balance systems.

(c) Any last-minute change should be brought to the attention of the pilot-in-command and entered in the flight planning documents containing the mass and balance information and mass and balance systems.

(d) Where mass and balance documentation is generated by a computerised mass and balance system, the operator should verify the integrity of the output data at intervals not exceeding 6~~six~~ months.

(e) A copy of the final mass and balance documentation may be sent to aircraft via data link or may be made available to the pilot-in-~~-~~command by other means for its acceptance.

(f) The person supervising the loading of the aircraft should confirm by handwritten signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation given to the pilot-in-command. The pilot-in-command should indicate their~~his~~ acceptance by handwritten signature or equivalent, or for helicopter operations with rotors turning, by orally communicating it to ground personnel or task specialist.

In the case of acceptance communicated orally, the ground personnel or task specialist should indicate the acceptance on behalf of the pilot-in-command by handwritten signature or equivalent.

***Rationale:*** *The AMC and GM to point SPO.POL.115 are proposed to be renumbered and assigned to point SPO.POL.110, as the content of point SPO.POL.115 has been integrated into point SPO.POL.110 to ensure consistency with Part-CAT. The amendments proposed to the content of this AMC are linked to the requirements that already exist in point SPO.POL.110 on operator procedures.*

*The proposed new text transposes helicopter operations best practice, considering that the current framework does not foresee helicopter specifics such as operations with rotors turning.*

## GM1 SPO.POL.~~115~~110 Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**SIGNATURE OR EQUIVALENT**

~~Where a signature by hand is impracticable or it is desirable to arrange the equivalent verification by electronic means, as referred to in AMC1 SPO.POL.115(f), the following conditions should be applied in order to make an electronic signature the equivalent of a conventional hand-written signature:~~

~~(a) electronic 'signing' by entering a personal identification number (PIN) code with appropriate security, etc.;~~

~~(b) entering the PIN code generates a print-out of the individual's name and professional capacity on the relevant document(s) in such a way that it is evident, to anyone having a need for that information, who has signed the document;~~

~~(c) the computer system logs information to indicate when and where each PIN code has been entered;~~

(a) When an electronic means is used as an equivalent to a handwritten signature for the mass and balance documentation as per point (f) of AMC1 SPO.POL.110, the operator should ensure that such electronic means:

(1) uses a unique identification code or access protocol that enables easy identification of the person responsible for the supervision of the aircraft loading and distribution and of the commander. That unique identification code or access protocol may be used as an electronic signature;

(2) indicates, for each flight number and aircraft registration number, the assigned commander and the person responsible for the supervision of the aircraft loading and distribution;

(3) allows only authorised personnel to complete or modify the mass and balance documentation provided to the commander;

(3) logs information about the date and device identification for each log-in for mass and balance documentation purposes;

(4) complies with the security requirements applicable to the electronic communication of data and unique identification of individuals.

(b~~d~~) T~~t~~he use of the electronic signature ~~PIN code~~ is, from a legal ~~and responsibility~~ point of view, considered ~~to be~~ fully equivalent to a handwritten signature ~~by hand~~;

(c~~e~~) T~~t~~he requirements for record-keeping remain unchanged~~; and.~~

(d~~f~~) A~~a~~ll personnel concerned are made aware of the conditions associated with electronic signature and this is documented.

***Rationale:*** *See the rationale for the amendments proposed to AMC1 CAT.POL.MAB.105(c).*

## AMC1 SPO.POL.110(a)(1) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**DRY OPERATING MASS**

[...]

***Rationale:*** *The title of the AMC and GM to point SPO.POL.110 is amended for consistency with the amendment to the title of the implementing rule.*

## AMC1 SPO.POL.110(a)(2) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**SPECIAL STANDARD MASSES FOR TRAFFIC LOAD**

[...]

## GM1 SPO.POL.110(a)(2) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**TRAFFIC LOAD**

[...]

## AMC1 SPO.POL.110(a)(3) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**FUEL LOAD**

[...]

## GM1 SPO.POL.110(a)(3) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**FUEL DENSITY**

[...]

## AMC1 SPO.POL.110(a)(4) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**LOADING — STRUCTURAL LIMITS**

[...]

## GM1 SPO.POL.110(b) Mass and balance system ~~– commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**GENERAL**

[...]

## AMC1 SPO.POL.~~115(b)~~110(g) Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**INTEGRITY**

[...]

***Rationale:*** *The AMC and GM to point SPO.POL.115 are proposed to be renumbered as per the amendments to the implementing rules: the content of point SPO.POL.115 is integrated into new points (f) and (g) of point SPO.POL.110, for consistency with Part-CAT.*

## AMC2 SPO.POL.~~115(b)~~110(g) Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**MASS AND BALANCE DOCUMENTATION SENT VIA DATA LINK**

[...]

## GM1 SPO.POL.~~115(b)~~110(g) Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**ON-BOARD INTEGRATED MASS AND BALANCE COMPUTER SYSTEM**

[...]

## GM2 SPO.POL.~~115(b)~~110(g) Mass and balance system ~~data and documentation – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft~~

**STAND-ALONE COMPUTERISED MASS AND BALANCE SYSTEM**

[...]

## GM1 SPO.IDE.A.100~~(d)~~(e) Instruments and equipment — general

**POSITIONING OF INSTRUMENTS**

[...]

***Rationale:*** *Correction of the reference to the implementing rule. The content of this GM remains unchanged.*

## AMC1 SPO.IDE.A.165 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~ (FAK) — OTHER-THAN COMPLEX MOTOR-POWERED AEROPLANES**

(a) ~~First-aid kits (~~FAKs~~)~~ should be equipped with appropriate and sufficient medication~~s~~ and instrumentation. However, these kits should be amended by the operator according to the characteristics of the operation (scope of operation, flight duration, number and demographics of persons on board~~passengers~~, etc.).

[...]

***Rationale:*** *The amendment to point (a) is proposed for accuracy, as there are no passengers in SPO operations.*

## AMC2 SPO.IDE.A.165 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~ (FAK) — COMPLEX MOTOR-POWERED AEROPLANES**

(a) ~~First-aid kits (~~FAKs~~)~~ should be equipped with appropriate and sufficient medication~~s~~ and instrumentation. However, these kits should be amended by the operator according to the characteristics of the operation (scope of operation, flight duration, number and demographics of persons on board~~passengers~~, etc.).

(b) The following should be included in the FAK~~s~~:

[...]

(3) Other content. The operator should make the instructions readily available. If an electronic format is available, then all instructions should be kept on the same device. If a paper format is used, then the instructions should be kept in the same kit with the applicable equipment and medication. The instructions should include, as a minimum, the following:

[...]

(iii) ~~B~~basic life support instruction~~s~~ cards (summarising and depicting the current algorithm for basic life support); and

(iv) medical incident report form~~;~~.

~~(v) biohazard disposal bags; and~~

~~(vi) bag-valve masks for adults.~~

(4) Additional equipment. The operator~~s~~ should carry additional equipment based on a risk assessment that considers the specificities and the nature of its~~their~~ specialised operations:

(i) automated external defibrillator (AED);

(ii) suitable airway management device~~s~~ (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways); ~~and~~

(iii) eye irrigator~~.~~;

(iv) biohazardous waste disposal bag; and

(v) a bag-valve mask for adults or a disposable resuscitation aid.

***Rationale:*** *For the proposed amendments to point (a), see AMC1 SPO.IDE.A.165. For the other amendments, see Section 2.3.3.*

## AMC1 SPO.IDE.A.220 Navigation and surveillance equipment

**NAVIGATION WITH VISUAL REFERENCE TO LANDMARKS — OTHER-THAN COMPLEX AEROPLANES**

[...]

***Rationale:*** *The title has been amended to include 'surveillance' for consistency with the corresponding point SPO.IDE.A.220 that deals with the same equipment. The content remains unchanged.*

## GM1 SPO.IDE.A.220 Navigation and surveillance equipment

**AIRCRAFT ELIGIBILITY FOR PERFORMANCE-BASED NAVIGATION (PBN) SPECIFICATION NOT REQUIRING SPECIFIC APPROVAL**

[...]

***Rationale:*** *The title has been amended to include 'surveillance' for consistency with the corresponding point SPO.IDE.A.220 that deals with the same equipment. The content remains unchanged.*

## GM2 SPO.IDE.A.220 Navigation and surveillance equipment

**GENERAL**

[...]

***Rationale:*** *The title has been amended to include 'surveillance' for consistency with the corresponding point SPO.IDE.A.220 that deals with the same equipment. The content remains unchanged.*

## GM1 SPO.IDE.H.100(e~~d~~) Instruments and equipment — general

**POSITIONING OF INSTRUMENTS**

[...]

***Rationale:*** *Correction of the reference to the implementing rule. The content of this GM remains unchanged.*

## AMC2 SPO.IDE.H.165 First-aid kit

**CONTENT OF THE FIRST-AID KIT~~S~~ (FAK) — COMPLEX MOTOR-POWERED HELICOPTERS**

[...]

(b) The following should be included in the FAK~~s~~:

[...]

(3) Other content. The operator should make instructions available ~~instructions~~ either in a paper-based or an electronic format. If an electronic format is available, then all instructions should be kept on the same device. If a paper format is used, then the instructions should be kept in the same kit with the applicable equipment and medication. The instructions should include, as a minimum, the following:

[...]

(iii) ~~B~~basic life support instruction~~s~~ cards (summarising and depicting the current algorithm for basic life support); and

(iv) medical incident report form~~;~~.

~~(v) biohazard disposal bags; and~~

~~(vi) bag-valve masks for adults.~~

(4) Additional equipment. The operator~~s~~ should carry additional equipment based on a risk assessment that considers the specificities and the nature of its~~their~~ specialised operations:

(i) automated external defibrillator (AED);

(ii) suitable airway management device~~s~~ (e.g. supraglottic airway devices, oropharyngeal or nasopharyngeal airways); ~~and~~

(iii) eye irrigator~~.~~;

(iv) biohazardous waste disposal bag; and

(v) a bag-valve mask for adults or a disposable resuscitation aid.

***Rationale:*** *See Section 2.3.3.*

## GM1 SPO.IDE.H.165 First-aid kit

**LOCATION AND USE**

The location of the first-aid kit is normally indicated using internationally recognisable signs.

~~The first-aid kit 'should be readily accessible for use' in helicopter operations should be understood as the first-aid kit being either accessible in flight or immediately after landing.~~

It is recommended to locate the first-aid kit in the passenger cabin.

In some operations, ~~it is not practicable to use the first-aid kit during flight. Therefore,~~ the first-aid kit may~~can~~ be carried in the cargo compartment, where it will be easily accessible for use as soon as the aircraft has landed, when one of the following conditions is~~are~~ met:

(a) precautionary landing sites are available;

(b) it is impractical for persons to move within the cabin ~~the lack of cabin space is such that the movement~~ or the use of the first-aid kit is impaired; ~~and~~ or

(c) the ~~installation~~ carriage of the first-aid kit in the cabin is not practicable.

***Rationale:*** *See section 2.3.3.*

## GM4 SPO.IDE.H.165 First-aid kit

**LITHIUM BATTERIES**

The ~~R~~risks related to the presence of lithium batteries should be assessed. All equipment powered by lithium batteries and carried on a helicopter ~~an aeroplane~~ should comply with ~~the provisions of~~ AMC1 CAT.GEN.MPA.140(f), including applicable technical standards such as (E)TSO-C142 'NON-RECHARGEABLE LITHIUM CELLS AND BATTERIES'.

## AMC1 SPO.IDE.H.198 Survival suits — complex motor-powered helicopters

**RISK ASSESSMENT FOR THE INSULATION LEVEL OF CREW SURVIVAL SUITS**

(a) The risk assessment should ensure that, whenever possible, the level of insulation provided is sufficient for the prevailing conditions and not excessive.

(b) Table 1 of AMC1 SPA.HOFO.110(b)(3) should be taken into account for the flight crew.

(c) For task specialists, the risk assessment should take into account the compatibility of the task specialist's mission with the wearing of a survival suit and with the insulation levels provided in Table 1 of AMC1 SPA.HOFO.110(b)(3) and Table 1 of AMC1 SPA.HOFO.165(b).

***Rationale:*** *See section 2.3.2.*

## AMC1 SPO.SPEC.HESLO.100 Standard operating procedures

**STANDARD OPERATING PROCEDURES (SOPs)**

[...]

(d) Crew members

[...]

(3) Pilot experience

[...]

(iii) Before acting as unsupervised PIC:

(A) For ~~HELSO~~ HESLO 1, 300 hours of helicopter flight experience as PIC; and

[...]

## AMC1 SPO.SPEC.HESLO.101(b)

**STANDARD MASSES**

(a) The standard masses for flight crew members should be as defined in AMC2 CAT.POL.MAB.100(d).

(b) The standard masses for task specialists should be the sum of the following:

(1) the standard masses defined for flight crew members in AMC2 CAT.POL.MAB.100(d);

(2) an increment representative of any task specialist equipment or luggage planned to be carried.

***Rationale:*** *This proposed new AMC ensures that if standard masses are used, they will be realistic. For HESLO, task specialists are not expected to carry specific equipment or luggage, except in the context of Article 5(7) of the cover regulation.*

## GM1 SPO.SPEC.HESLO.105 Specific HESLO equipment

**MIRROR OR ALTERNATIVE**

The required mirror or alternative enables the crew or the task specialist to see the load, or the unloaded hook.

An additional device may also enable the crew or the task specialist to see the undercarriage and the belly hook.

***Rationale:*** *Clarification of the rule.*

## AMC1 SPO.SPEC.HEC.100 Standard operating procedures

**STANDARD OPERATING PROCEDURES (SOPs)**

(a) Before conducting any HEC operations, the operator should develop its SOPs taking into account the elements below.

(b) Nature and complexity of the activity

(1) Nature of the activity and exposure:

HEC operations are usually performed at a low height. In the case of airframe-mounted PCDSs, they may also be conducted very close to or even in contact with objects in the air or on the ground.

(2) Complexity of the activity:

(i) The complexity of the activity varies with the length of the rope and the characteristics of the pick-up and drop-off zones, etc.

(ii) In the case of airframe-mounted PCDSs, the complexity of the activity varies with the circumstances:

(A) The helicopter is flown very close to an object or any other surrounding obstacle (horizontal distance between the main or tail rotor tips is less than 2 m in a vertical window of 0,5D above and below the main rotor disc).

(B) During the activity, the helicopter is tethered to an object.

(C) Mobile tools or parts are handled outside the helicopter.

***Table 1: HEC levels***

| | |
|---|---|
| **HEC 1:** | Sling or cable length is less or equal to 25 m |
| **HEC 2:** | Sling or cable length is greater than 25 m |
| **HEC P** | Airframe-mounted PCDS without the use of hoist or cargo hook |

(3) Operational environment and geographical area:

HEC may be performed over any geographical area. Special attention should be given to:

(i) hostile congested and non-congested environment;

(ii) mountains;

(iii) sea;

(iv) jungle;

(v) desert;

(vi) artic;

(vii) lakes and river canyons; and

(viii) environmentally sensitive areas (e.g. national parks, noise sensitive areas).

(c) Equipment

(1) The helicopter may be equipped with:

(i) additional mirror(s) and/or video camera(s);

(ii) a bubble window;

(iii) supplementary hook(s) or multi-hook device(s); ~~and~~

(iv) load data recorder (lifts, weights, torques, power, forces, shocks and electrical activities);~~.~~

(v) external storage devices for tools and parts;

(v) means for potential equalisation; and/or

(vi) fender(s) or protective bracket(s).

(2) When conducting single-pilot vertical reference operations with no assistance of a task specialist or other crew member, additional engine monitoring in the pilot line of vision or an audio warning system is recommended.

(3) Adequate ~~radio~~ interphone communication equipment (e.g. VHF, UHF, FM) should be installed in the helicopter for coordination~~co-ordination~~ with the task specialist involved in the operation.

(4) Task specialists involved in ~~the~~ HEC 1 and 2 operations should be equipped with handheld~~hand-held~~ communication equipment, protective helmets with integrated earphones and microphones, as well as personal protective equipment.

(5) Task specialists involved in HEC P operations should be equipped with all personal protective equipment and communication equipment required for the intended operation.

~~(6) Task specialists involved in the operation should be secured with a restraint system that is fail-safe against accidental activation of the release mechanism.~~

(d) Crew members

(1) Crew composition:

(i) The minimum flight crew is stated in the approved AFM. For operational or training purposes, an additional qualified crew member may assist the PIC in a single-pilot operation. In such a case:

(A) for HEC 1 and 2 operations, procedures are in place for a member of the flight crew to monitor the flight, especially during the departure, approach and HEC operations, to ensure that a safe flight path is maintained; and

(B) when a task specialist is tasked with assisting the pilot, the procedures according to which this assistance is provided ~~taking place~~ should be clearly defined.

(ii) For safety and/or operational purposes, a task specialist may be required by the operator to fulfil the task (e.g. to establish vertical reference or to operate the release safety device for the belly rope).

(2) Pilot initial training for HEC 1 or HEC 2 operations:

Before acting as PIC, the pilot should demonstrate to the operator that ~~he/she has~~ they have the required skills and knowledge, as follows:

(i) Theoretical knowledge:

(A) load rigging techniques;

(B) external load procedures;

(C) site organisation and safety measures;

(D) short line, long line, construction, wire stringing or cable laying flying techniques, as required for the operation.

(ii) Pilot experience prior to commencing the HEC 1 or HEC 2 training:

(A) 10 hours of flight experience on the particular ~~the~~ helicopter type;

(B) type rating completed;

(C) HESLO type 1 or 2 completed;

(D) relevant experience in the field of operation;

(E) training in human factors principles; and

(F) ground instruction completed (marshaller syllabus).

(iii) Pilot experience prior to commencin~~d~~g unsupervised HEC 1 or 2 flights:

(A) HEC flight instruction completed;~~.~~

(B) 1 000 hours of helicopter flight experience as PIC;~~.~~

(C) for mountain operations, 500 hours of flight experience as PIC in mountain operations;~~.~~

(D) for HEC 2, HESLO type 2 completed.

(3) Pilot proficiency prior to commencing unsupervised HEC 1 or 2 flights:

Pilot proficiency has been assessed by a HEC instructor nominated by the operator as sufficient for the intended operations and environment under the relevant HEC level~~, by a HEC instructor nominated by the operator~~.

(4) Pilot recurrent training and checking at least every 2~~two~~ years for HEC 1 or 2 operations:

(i) review of the sling technique;

(ii) external load procedures;

(iii) training in human factors principles; and

(iv) review of the applicable flying techniques, which should take place during a training flight if the pilot has not performed HEC or HHO operations within the past 24 months.

(5) Conditions of HEC 1 and 2 instruction:

(i) Maximum sling length according to the applicable level ~~applicable~~:

(A) 1 task specialist (with radio) at the pick-up point;

(B) 1 task specialist (with radio) at the drop-off point/on the line;

(C) helicopter fitted with cargo mirror/bubble window or alternative means for the flight crew to see the unloaded hook or externally transported person;

(D) flight instruction with dual controls ~~DC/~~: ~~Cycles DC/~~minimum 10 cycles which of 5 ~~H~~human ~~C~~cargo ~~S~~sling; and

(E) flight instruction solo with on-site supervision/~~C~~cycles solo/minimum 10 cycles.

(ii) HEC instructor:

The HEC instructor should be assigned by the operator on the basis of the following:

(A) the HEC instructor for pilots should have:

— ~~have~~ a minimum experience of 100 cycles in HEC 1 or 2 operations at HEC levels equal to or greater than that at~~on~~ which instruction, supervision and proficiency assessment are to be provided; and

— ~~have~~ attended the 'teaching and learning' part of the flight instructor or type rating instructor training, or have prior experience as an aerial work instructor subject to national rules;

(B) the HEC instructor for task specialists should be suitably qualified as determined by the operator and have at least 2 years of experience in HEC operations as a task specialist.

(6) Sufficient prior experience relevant to HEC P. A pilot is considered to have sufficient prior experience relevant to HEC P if all the following experience criteria are met:

(i) 1 000 hours of flight experience in helicopters;

(ii) 50 hours of flight experience in the particular helicopter type; and

(iii) the pilot has experience as a HESLO instructor or experience in unsupervised HESLO 4, or 10 hours of experience in unsupervised HEC 1 or 2.

(7) Pilot initial training for HEC P:

(i) Before acting as PIC, the pilot should demonstrate to the operator that they have the required skills and knowledge, as follows:

(ii) Theoretical knowledge:

(A) tools and equipment requirements for the intended operation, and their limitations;

(B) additional operational limitations for the helicopter due to the special equipment or the kind of intended operation;

(C) additional or amended emergency procedures due to the special equipment or the kind of intended operation; and

(D) site organisation and safety measures.

(iii) Pilot experience before commencing the training:

(A) 10 hours of flight experience in the particular helicopter type;

(B) type rating completed;

(C) either the pilot has sufficient prior experience relevant to HEC P, or the following criteria should be met:

— 500 hours of helicopter flight experience; and

— the pilot demonstrates the ability to fly a stable hover flight with direct view on a close-by object in flight with a HEC P instructor;

(D) relevant experience in the field of operation; and

(E) training in human factors principles.

(iv) Pilot experience prior to commencing unsupervised HEC P flights: either the pilot has sufficient prior experience relevant to HEC P, or the following experience criterion should be met:

(A) at least 2 hours of applicable HEC P flight instruction completed with a HEC P instructor, including 20 approaches and stabilised hover flights simulating the time required for the intended operation.

(v) Pilot proficiency prior to commencing unsupervised HEC P flights:

(A) pilot proficiency has been assessed by a HEC P instructor nominated by the operator as sufficient for the intended operations and environment under the relevant operational HEC conditions;

(B) if the pilot has sufficient prior experience relevant to HEC P, the operator may replace the HEC P instructor with a pilot that has sufficient prior experience relevant to HEC P; this may result in a self-assessment, which should take place in flight in real conditions on a non-commercial flight.

(8) The pilot recurrent training and checking for HEC P should be as follows, at least every 2 years:

(i) review of the specific HEC equipment and procedures;

(ii) review of the applicable flying techniques including emergency procedures, which should take place in flight unless the pilot has performed 10 hours of HEC P operation within the last 12 months;

(iii) review of the human factors principles.

(9) HEC P instructor:

The HEC P instructor should be assigned by the operator on the basis of the following:

(i) 1 000 hours of flight experience in helicopters;

(ii) 50 hours of flight experience in the particular helicopter type;

(iii) for HEC P with close proximity to or contact with objects, 50 hours of experience in unsupervised HEC P with close proximity to or contact with objects (which can be reduced to 10 hours if the criteria in point (6)(iii) are met);

(iv) for HEC P with no close proximity to or contact with objects, 10 hours of experience in unsupervised HEC P, or the criteria of point (i)(3)(i)(B) of AMC1 ORO.FC.146(f) are met.

(e) Task specialists

Before acting as task specialists, they should demonstrate to the operator that they have been appropriately trained and have the required skills and knowledge including training on human factors principles. The initial and recurrent training and briefing of task specialists involved in HEC operations should meet point SPO.OP.230. In addition, for HEC 1 and 2 operations, the following should apply:

(1) Task specialists should receive training relevant to their tasks, including:

(i) fitting and removal of system; and

(ii) normal procedure.

For task specialists in charge of assisting the pilot, the relevant CRM training elements as specified in AMC1 ORO.FC.115.

(2) Briefings

Briefings on the organisation and coordination between flight crew and task specialist involved in the operation should take place prior to each operation. These briefings should include at least the following:

(i) location and size of pick-up and drop-off site, and operating altitude~~;~~;

(ii) location of refuelling site and procedures to be applied~~;~~, and

(iii) load sequence, danger areas, performance and limitations, and emergency procedures~~;~~.

(iv) for task specialists who have not received the relevant elements of the CRM training as specified in AMC1 ORO.FC.115, the operator's crew coordination concept, including the relevant CRM elements ~~of crew resource management~~.

(3) Recurrent training

(i) The annual recurrent training should include the items listed in the initial training as described in point (e)(1) ~~above~~.

(ii) The operator should establish a formal qualification list for each task specialist.

(iii) The operator should establish a system of record-keeping that allows for adequate storage and reliable traceability of:

(A) the initial and recurrent training; and

(B) the task specialists' qualifications (qualification list).

(f) Performance

HEC should be performed with the following power margins: the mass of the helicopter should not exceed the maximum mass specified in accordance with point SPO.POL.146(c)(1).

(g) Normal procedures

(1) Operating procedures:

HEC should be performed in accordance with the AFM. Operating procedures should include, for each type of operation:

(i) crew individual safety equipment (e.g. helmet, fire-retardant suits) and their use;

(ii) crew responsibilities;

(iii) crew coordination and communication;

(iv) selection and size of pick-up and drop-off sites;

(v) selection of flight routes;

(vi) fuel management in the air and on the ground;

(vii) task management; ~~and~~

(viii) third-party risk management; ~~.~~ and

(ix) for HEC P, handling of tools and parts during the flight, and tethering of the tools.

(2) Ground procedures:

The operator should specify appropriate procedures, including:

(i) use of ground equipment;

(ii) ~~F~~for HEC 1 and 2, load rigging;

(iii) size and weight assessment of loads;

(iv) attachment of suitably prepared loads to the helicopter;

(v) two-way radio communication procedures;

(vi) selection of suitable pick-up and drop-off sites;

(vii) safety instructions for ground task specialists or other persons required for the safe conduct of the operation;

(viii) helicopter performance~~s~~ information;

(ix) fuel management on the ground;

(x) responsibility and organisation of the personnel on the ground involved in the operation, including for HEC P operations the handling of tools and parts on the ground (e.g. loading and securing of tools and parts);

(xi) task management of personnel on the ground involved in the operation;

(xii) third-party risk management; and

(xiii) environmental protection.

(h) Emergency procedures

(1) Operating procedures:

In addition to the emergency procedures published in the AFM or OM, the operator should ensure that the flight crew:

(i) is familiar with the appropriate emergency procedures;

(ii) has appropriate knowledge of the emergency procedures for personnel on the ground involved in the operation; and

(iii) reports emergencies as specified in the AFM or OM.

(2) Ground procedures:

The operator should ensure that the task specialist on the ground involved in the operation:

(i) is familiar with the appropriate emergency procedures;

(ii) has appropriate knowledge of the emergency procedures for personnel on the ground involved in the operation;

(iii) reports emergencies as specified in the AFM or OM; and

(iv) prevents, as far as possible, environmental pollution.

***Rationale:*** *See section 2.3.2.*

## AMC1 SPO.SPEC.HEC.105 Specific HEC equipment

**HEC EQUIPMENT OTHER THAN SIMPLE PCDS - INTENDED USE**

The operator should use specific HEC equipment only in accordance with the intended function of its airworthiness approval.

**TETHERING EQUIPMENT**

If the operation requires specific equipment to tether the helicopter to an object (e.g. for potential equalisation), the connecting device should be considered part of the specific HEC equipment. This should ensure that it has an airworthiness approval appropriate to the intended use. This should include a safe self-disconnection if the helicopter shifts or has to suddenly fly away from the object (e.g. in an emergency).

***Rationale:*** *See section 2.3.2.*

## GM1 SPO.SPEC.HEC.105 Specific HEC equipment

**MIRROR OR ALTERNATIVE**

The required mirror or alternative enables the crew or the task specialist to see the externally transported person or the unloaded hook.

***Rationale:*** *See section 2.3.2.*

# 4. Impact assessment (IA)

As regards the safety recommendation related to the risk of poisoning with carbon monoxide on board small aircraft, EASA conducted a more detailed impact assessment. As this safety issue has not been assessed in any other prior EASA process to identify the best way to address the safety risk, such as for example a best intervention strategy (BIS), it was decided to conduct an impact assessment under this RMT to determine the best means to address the related safety recommendation.

## 4.1. What is the issue

### 4.1.1. Safety risk assessment for carbon monoxide poisoning in small aeroplanes and helicopters

**Related safety recommendation**

The following safety recommendation published in the UK AAIB's accident investigation report AAR 1/2020[41] has been considered during the development of this NPA:

> 'Safety Recommendation 2020-007: It is recommended that the European Union Aviation Safety Agency require piston engine aircraft which may have a risk of carbon monoxide poisoning to have a CO detector with an active warning to alert pilots to the presence of elevated levels of carbon monoxide.'

The scope of this impact assessment addresses rulemaking only.

**Risk of carbon monoxide poisoning**

Carbon monoxide (CO) is a colourless, odourless and tasteless gas, difficult to detect, which is produced by the incomplete combustion of carbon-containing materials. It is found in the exhaust gases of piston-engined aircraft.

CO particles combine with haemoglobin (the oxygen-carrying protein molecule contained in red blood cells) in the blood, resulting in the production of carboxyhaemoglobin (COHb), which decreases the carriage of oxygen through the body. CO inhalation can lead to damage to the brain, heart and nervous system, and this is known as CO poisoning. Even a low level of CO ingestion will cause a progressive reduction in blood oxygen levels, which will reduce pilot performance. The effects can take a long time to disperse, and continued exposure to elevated concentrations can lead to unconsciousness and death.

As described in the AAIB's report, 'piston engine aircraft produce high concentrations of CO that can potentially enter the cabin during flight because of cracks, holes or poorly fitted components in the exhaust system or intake ducting, or poor sealing of the firewall and critical areas of the fuselage / cabin.'

The aircraft most exposed to the risk of CO contamination in the cockpit and cabin are ageing piston-engined aeroplanes, but exhausts from turbine engines also contain CO. Although single-engined piston helicopters are less exposed to CO poisoning due to their structure and the nature of helicopter operations, they are not excluded from this assessment.

[41] https://www.gov.uk/aaib-reports/aircraft-accident-report-aar-1-2020-piper-pa-46-310p-malibu-n264db-21-january-2019.

The risk of CO poisoning increases in cold climatic conditions, as defective cabin heating systems, engine exhaust or combustion heaters can result in CO entering the cockpit and/or cabin.

There are two existing methods in the EU civil aviation regulations to mitigate the risk of CO poisoning: initial design and regular in-service inspections. EASA has published some specifications in CS-STAN to facilitate the installation and replacement of CO detectors through standard changes, and many manufacturers have elected to fit detectors to new aircraft. CS 23.831(a) requires manufacturers to show that the concentration of CO in the cabin will not exceed 1 part per 20 000 parts of air. To demonstrate compliance, the manufacturer usually installs a CO detector during the flight test programme. However, there is currently no initial design certification requirement for aircraft to be equipped with a CO detector.

Reported occurrences linked to CO exposure in small aeroplanes and helicopters reveal the following:

47 reports on 55 flights (one report containing references to 9 flights) citing CO exposure, which occurred between 9 July 2005 and 14 December 2020, were identified in the IORS (Internal Occurrence Reporting System) and ECCAIRS (European Co-ordination Centre for Aviation Incident Reporting Systems) databases.

— Types of aircraft involved in the 55 flights (other-than-complex motor-powered aircraft, i.e. small aeroplanes (CS-LSA, CS-VLA and CS-23) and light helicopters (CS-27)): Piper PA28; Piper PA34; Robinson R22; Scintex CP301; Partenavia P68; Cessna F150, F152, 172, 182, T41; Aquila AT01; Socata TB10; Columbia; Vulcanair P68; Reims Aviation F182Q; Pioneer 300; Diamond DA20; DV20; Mudry CAP10; Tecnam P2002; Robin; Cirrus SR22. In 7 reports, the type of aircraft was not specified.

— Types of operation: mostly non-commercial operations, some CAT operations and some SPO operations; however, the type of operation in some of the reported events could not be clearly established from the reports.

— More than 40 reports explicitly indicate the exposure of the aircraft occupants to CO during flight, while other reports mention the detection of CO in the aircraft during flight also in association with other events, or just a warning from the CO detector unit.

— 39 of 55 flights indicated the existence of a CO detector on board (either with active or passive warning). Of these, only 1 flight resulted in a fatal accident, while for the other 38, the consequences were diversion, immediate landing, and, on some flights, crew members with headaches, nausea, hypoxia, lightheaded feeling. 13 injuries were reported in the analysed occurrence data.

— In total, 5 flights resulted in fatal accidents; 2 of them had no CO detector on board; 1 did; on the other 2, it could not be established whether there was a CO detector on board the aircraft. Exposure to CO was considered the root cause of the accident in 2 of those flights. For 2 other flights, this was not considered to have been the root cause of the accidents, and for 1, this could not be confirmed.

— Existing mitigation

The following actions already taken by EASA were considered when assessing Option 0 ‘No rulemaking’:

1. June 2010: Safety Information Bulletin (SIB) 2010-19, which highlights the importance of properly inspecting and maintaining exhaust mufflers.

2. July 2015: Certification Standard (CS-STAN Issue 1) CS-SC107a, which allows, under certain conditions, the installation of CO detectors either as panel-mounted devices or by a semi-permanent installation of 'lifesaver' badges held in place by adhesives. EASA intends to issue an amendment to CS-SC107a to reflect the recommendation in SIB 2020-01R1 for active CO detectors.
3. March 2017: Issue of CS-STAN Issue 2.
4. March 2018: Safety promotion, through 'Sunny Swift' Issue #2/2018, on the use of CO detectors.
5. April 2019: Issue of CS-STAN Issue 3.
6. 27 January 2020: SIB 2020-01, Carbon Monoxide (CO) Risk in Small Aeroplanes and Helicopters. SIB 2020-01 describes the danger of poisoning with CO, details the various symptoms caused by exposure to CO, and provides instructions for the regular maintenance of the ventilation and heating systems as per the manufacturer's instructions. The SIB also recommends that pilots of aircraft with an internal combustion engine or combustion heaters, install in the aircraft, or equip the aircraft with, an active (by means of aural and/or visible warnings) CO detector. Steps to take in case of detection of possible CO exposure in flight are also included in the SIB.
7. Amendment to Part-ML through EASA ED Decision 2020/002/R published on 13 March 2020 and applicable from 24 March 2020 (see AMC1 ML.A.302(d) 'Aircraft maintenance programme'): 'MIP for aeroplanes of 2 730 kg MTOM and below, to be performed at every annual/100-h interval, whichever comes first: *Heating: Inspect cabin heating heat exchanger for improper condition and function. For exhaust heat exchanger, check CO (Carbon Monoxide) concentration*.'
8. 19 October 2021: SIB 2020-01R1, which revised SIB 2020-01 to add some recommendations on CO concentration checks to scheduled maintenance tasks, advise about 'carry-on' detectors, as well as a reference to a planned amendment to EASA CS-SC107a in CS-STAN to recommend the use of active CO detectors.
9. 17 December 2021: Publication of the Winter Flying article on the EASA Community Network section, which highlights, among other things, the risk of CO poisoning and recommends the use of electronic CO detectors. It also includes a CO alarm checklist leaflet.

Low-cost CO detectors are readily available on the open market, and their carriage is actively encouraged by regulators worldwide (EASA, FAA, CASA, UK CAA) through safety promotion publications.

Two types of CO warning devices are currently available: passive and active detectors.

Passive detectors (or chemical spot detectors) come in the form of badges with a stripe that changes colour when exposed to CO. They are light and easy to fit in the cockpit, with no professional help needed. The cost of passive detectors is very low — approximately €5–10. The main disadvantage is that they must be regularly monitored by the pilot, otherwise they fail to call the attention when they change colour. They can be affected by factors such as direct sunlight, cleaning chemicals and halogens, and should be replaced every 3 months to maintain effectiveness. Passive detectors are not the recommended choice, although it is true that a passive CO detector is better than no CO detector, on condition that it is placed in a visible location for the pilot(s) in the cockpit and is periodically verified.

Active detectors (or electronic CO detectors) provide audible, visible, and/or vibration warnings when predetermined CO levels are exceeded.

They can be of two types:

— portable CO detectors, which means they are 'carried on' to the aircraft. They have auditory and/or visible warning sensors. They are available on the market in a wide variety of forms, and their price ranges from € 15 to 100 or above, depending on the number of functions they have. Such detectors are built for home use (usually for kitchens), caravans or similar mobile-home vehicles. They last longer than passive detectors — with a sensor life of approximately 7 years, and a battery life of between 1 and 10 years. No airworthiness approval is required for such units; or

— permanently 'installed' CO detectors that can be installed in a suitable position on the aircraft. Aviation standard units are also available. They are compliant with ETSO-2C48a and do not need an airworthiness approval. Such units have additional functions but are more expensive (approximately €200–300). Their usual service life is between 5 and 7 years. Some of them have batteries.

Most of the installed active detectors can be installed by following the related CS-STAN specifications, so no direct EASA involvement is necessary. This saves operators the time and money otherwise required for an application for a formal aircraft modification.

EASA has published the following CS-STAN standard changes to facilitate the installation and exchange of CO detectors:

— CS-SC107a for the installation of CO detectors (for equipment which is compliant with ETSO-C48 or other recognised industry standard);

— CS-SC201b for the exchange of CO detectors.

**ICAO and third-country references relevant to the content of the CO detector topic**

Aviation authorities across the globe (FAA, CASA, UK CAA, TCCA) apply similar measures, such as publishing equivalent documents to the EASA SIBs that raise awareness on the risk of exposure to CO during flight, promote the on-board carriage of CO detectors, or provide guidance for the maintenance of the relevant parts on the aircraft where such risk is more frequent[42]. There is no such requirement in the ICAO annexes.

### 4.1.2. Who is affected?

— Operators and pilots of aircraft with internal combustion engines or combustion heaters

— Passengers

## 4.2. Options

The table below provides a description of the identified options for further mitigating the risk through rulemaking.

[42] See Safety Notice CAA SN 2020/003 issued by UK-CAA; Safety Advisory Notices AO-2017-118-SAN-001 addressed to maintainers of piston-engine aircraft and AO-2017-118-SAN-002 addressed to operators, owners and pilots, issued by ATSB Australia; FAA report DOT/FAA/AR-09/49 'Detection and Prevention of Carbon Monoxide Exposure in General Aviation Aircraft', 2009; Transport Canada Airworthiness Directive CS-90-02R2.

**Table 1: Selected policy options**

*Carbon monoxide (CO) detector*

The scope of all the options includes single-engined piston aeroplanes and helicopters used in NCO and SPO operations, and the options refer to a CO detector with an active (audio and visual) warning.

**Table 1: Selected policy options**

| ***Option No*** | ***Short title*** | **Description** |
|---|---|---|
| 0 | *No rulemaking* | No change to the rules, i.e. do not mandate the carriage or installation of a CO detector. See above for the non-regulatory measures already implemented.<br>This option is aligned with other international regulators in the USA, Australia, and Canada, where the carriage or installation of a CO detector is not mandated. |
| 1 | *Require the operator/owner/PIC to perform a risk assessment of the likelihood of exposure to CO with single-engined piston aeroplanes and helicopters* | — This option proposes to require the operator, the owner or the pilot-in-command to perform an assessment of the risk of exposure to CO during operations before deciding whether they need to have an active CO detector on board the aircraft, depending on the aircraft type and type of operation. This option does not mandate the carriage/installation of a CO detector on board. Moreover, it does not specify the type of CO detector to be used. The operator may decide to either equip the aircraft with a portable (carry-on) CO detector, or permanently install a CO detector, or do nothing. However, the operator must perform an assessment of the risk of CO poisoning during the flight. Details about the options (portable or installed CO detector) would be added at AMC and GM level. |
| 2 | *Mandate the equipment of active CO detectors, either portable or installed.*<br>*The choice of equipment type (portable or installed detector) remains at the discretion of the operator.* | — This option proposes to mandate the equipment of single-engined piston aeroplanes and helicopters with active CO detectors, compliant with a recognised industry standard — either through a portable (carry-on) CO detector or a unit permanently installed on board. The different possibilities (portable or installed CO detector) would be detailed in an AMC and the choice of equipment would remain with the operator. This option addresses both aircraft currently in use and future-built aircraft. However, it does not make it mandatory for a CO detector to be installed in future-built aircraft, only that the aircraft must be equipped with one. |
| 3 | *Mandate the equipment of portable or permanently* | — This option would mandate the equipment of single-engined piston aeroplanes and helicopters currently in |

| | | |
|---|---|---|
| | *installed active CO detectors for existing aircraft. Furthermore, mandate the installation of CO detectors for future-built aircraft.* | use with an active CO detector of the choice of the operator — either portable (carry-on) or permanently installed. Secondly, it would mandate the installation of a fixed CO detector for aircraft built as from a certain date in the future. This option would include a cut-off date for the application of the requirement for forward fitting, thus allowing for a gradual elimination of the old-age aircraft that do not have an installed CO detector. |

#### 4.2.1. Methodology applied

The multi-criteria analysis method has been applied to this impact assessment.

The following scoring convention has been used for the assessment of impacts:

| *Score* | *Positive impact* | *Score* | *Negative impact* |
|---|---|---|---|
| +5 | Very high positive impact | –5 | Very high negative impact |
| +4 | High positive impact | –4 | High negative impact |
| +3 | Medium positive impact | –3 | Medium negative impact |
| +2 | Low positive impact | –2 | Low negative impact |
| +1 | Very low positive impact | –1 | Very low negative impact |
| 0 | Neutral/insignificant | 0 | Neutral/insignificant |

The scores for each option consider Option 0 as the benchmark, e.g. if an option is low positive, it means low positive compared to Option 0.

#### 4.2.2. Data collection

The safety data has been extracted from ECCAIRS and IORS. The market data has been obtained from the verification of safety notices issued by competent authorities worldwide, internet searching, and information received via the EASA Certification Directorate.

### 4.3. What are the impacts?

#### 4.3.1. Safety impact

Option 0: No impact. EASA SIB 2020-01R1 is still valid, CS-STAN is also valid, and air operators may decide to what extent to apply the SIB recommendations. The safety-promotion activities and the SIB may be reviewed on a regular basis to maintain an increased awareness of owners, pilots and operators on the risk of CO exposure and it can, therefore, be considered that these actions suffice for the risk mitigation.

Option 1: With this option, the operator is required to assess in general the risk of exposure to CO during its operations. Additional elements to be used in the safety risk assessment could be provided in an AMC or GM. The choice of the operator could be adapted to the requirements of the intented operation and the aircraft used. The risk assessment would be based on a series of factors typical to the intended operation, such as the length of flight, the frequency of operation, the maintenance condition of the aircraft, the carriage of passengers or not, etc. This option does not impose that the operator must have a portable or an installed CO detector on board the aircraft; this, too, is the

operator's choice; however, the assessment of the risk could make them aware that such risk exists and could also help bring more arguments in favour or against equipping or installing a CO detector on board aircraft.

Considering that this option does not have a strong enforceability in the general aviation environment, since the full responsibility of the non-commercial operation remains with the pilot or the aircraft owner, in practice, the effect of such a requirement would be similar to that of Option 0. So, Option 1 is considered to bring no added value to safety over Option 0.

Option 2 would have a very low positive impact on safety as the operator would have an active CO detector unit on board the aircraft at all times, regardless of the aircraft's maintenance condition or its age, and regardless of the existence or the result of a risk assessment prior to the flight. This option lacks the flexibility provided by Option 1, but the operator would still be able to choose between a carry-on CO detector and a permanently installed one. This choice would be valid both for existing aircraft and for future-built aircraft.

Option 3 would also have a very low positive impact on safety. This option gives the operator the possibility to choose the CO detector unit for the existing aircraft between a permanently installed version and a portable version (for the difference between the two types, see Section 4.1.1). However, future-built aircraft would be required to have a CO detector installed on board.

In short, the safety impact considered for all the options would be as follows:

**Table 2: Safety impact**

| | ***Option 0 'No rulemaking'*** | ***Option 1 'Require the operator/owner/PIC to perform a risk assessment of the likelihood of exposure to CO'*** | ***Option 2 'Mandate the equipment of active CO detectors, either portable or installed'*** | ***Option 3 'Mandate the equipment of portable or installed active CO detectors for existing aircraft and the installation of fixed CO detectors for future-built aircraft'*** |
|---|---|---|---|---|
| Safety impact | 0 | 0 | +1 | +1 |

### 4.3.2. Environmental impact

No impact.

### 4.3.3. Social impact

No impact.

### 4.3.4. Economic impact

Option 0: No impact.

Option 1: This option would have a negligible economic impact compared to Option 0. It would require the pilot or the operator to perform a risk assessment for the risk of exposure to CO before the flight. This option offers enough flexibility for the operator to adapt its choice to the specifics of its operations and aircraft. If assessing the risk of exposure to CO during flight is part of the operator's or pilot's usual routine, then this option brings no impact. The time for performing such a risk assessment is considered negligible. The cost of a CO detector with active sensors is considered negligible.

Option 2: This option would have a low negative economic impact, as it would require the operator to purchase a CO detector. Considering the small costs of portable CO detectors available on the market, compliant with an industry standard, the negative impact would be very low. The installation of a fixed CO detector on board — which would incur higher costs — would still not be mandatory, but it may require higher costs for the operators that would choose to do this.

For this reason, the general economic impact of this option is considered low to very low negative.

Option 3: This option would imply higher costs than Option 2 for the installation of a CO detector, as this would increase the initial purchasing costs of new aircraft, although this cost might be negligible compared to the price of the new aircraft. It would also involve additional work during the aircraft certification process.

The economic impact of this option would be considered between low negative to medium negative.

In short, the economic impact considered for all the options would be as follows:

**Table 3: Economic impact**

| | ***Option 0 'Do nothing – no rulemaking'*** | ***Option 1 'Require the operator/owner/PIC to perform a risk assessment of the likelihood of exposure to CO'*** | ***Option 2 'Mandate the equipment of CO detectors, either portable or installed'*** | ***Option 3 'Mandate the equipment of portable (carry-on) CO detectors for existing aircraft and the installation of fixed CO detectors for future-built aircraft'*** |
|---|---|---|---|---|
| Economic impact | 0 | 0 | –2 / –1 | –3 / –2 |

### 4.3.5. General Aviation and proportionality issues

Option 0: no impact.

Option 1: Very low negative to negligible impact for pilots and operators that do not already perform a minimum risk assessment of their operations. For those that already do that, there is no impact.

Option 2: In terms of regulatory impact, this option adds a mandatory element to the GA operation. The new rule would mandate the carriage or installation of a CO detector for all single-engined piston aircraft, regardless of whether a portable detector or one that is installed on board the aircraft. Therefore, this option is estimated to have a very low negative impact.

Option 3 is considered to have a low negative impact, as it would mandate, on the one hand, the carriage of a CO detector on board the aircraft, and on the other hand, it will require the mandatory installation of a CO detector for future-built, single-engined piston aircraft.

In short, the impact on GA and proportionality is as follows:

**Table 4: GA and proportionality impact**

| | ***Option 0 'Do nothing — no rulemaking'*** | ***Option 1 'Require the operator/owner/PIC to perform a risk assessment of the likelihood of exposure to CO'*** | ***Option 2 'Mandate the equipment of CO detectors, either portable or installed'*** | ***Option 3 'Mandate the equipment of portable (carry-on) CO detectors for existing aircraft and the installation of fixed CO*** |
|---|---|---|---|---|

| | | | | ***detectors for future-built aircraft'*** |
|---|---|---|---|---|
| GA and proportionality impact | 0 | 0 | –1 | -2 |

## 4.4. Conclusion

### 4.4.1. Comparison of the options

**Table 5: Comparison of the options**

| ***Criteria*** | ***Option 0 'Do nothing — no rulemaking'*** | ***Option 1 'Require the operator/owner/PIC to perform a risk assessment of the likelihood of exposure to CO'*** | ***Option 2 'Mandate the equipment of CO detectors, either portable or installed'*** | ***Option 3 'Mandate the equipment of portable (carry-on) CO detectors for existing aircraft and the installation of fixed CO detectors for future-built aircraft'*** |
|---|---|---|---|---|
| Safety | 0 | 0 | +1 | +1 |
| Economic | 0 | 0 | –2 / –1 | –3 / –2 |
| GA and proportionality | 0 | 0 | –1 | –2 |
| **Total** | **0** | **0** | **–2 / –1** | **–4 / –3** |

In conclusion, if the impacts of both Option 0 and Option 1 are the same, then two significant aspects should be considered in choosing the preferred option:

1. Proportionate rulemaking for general aviation and enforceability of rules for NCO and SPO operators

   If an equivalent safety improvement can be achieved through safety promotion as through rulemaking, then the safety-promotion activity is the preferred means.

   Option 3 would imply additional costs for air operators in the future, which are not fully justified as long as equally effective mitigation can be achieved by carrying portable CO detectors with an active warning, which are cheaper and do not incur additional installation cost.

2. Alignment with the international regulations on the issue

   This aspect is also relevant for this impact assessment, as in principle the aim is to align the EASA approach with that of global regulators, including ICAO. There are currently no ICAO requirements on CO detectors to be installed on board general aviation aircraft.

   The conclusion of the impact assessment is that Option 0 'No rulemaking' is the recommended way to take in this respect, and that the safety issue could be more effectively addressed through other, non-regulatory means. EASA SIB 2020-01R1 aims to reduce the risk to an acceptable level.

   EASA will continue using safety-promotion channels to further highlight to the community members the dangers of CO poisoning and the safety benefit of carrying or installing CO detectors on board aircraft. EASA will continue monitoring the data on reported occurrences

related to CO poisoning and shall take further action if the data indicates that it is necessary to do so.

## 4.5. Monitoring and evaluation

The safety risks related to CO poisoning will continue to be monitored through the safety risk monitoring programme of EASA.

# 5. Proposed actions to support implementation

No specific monitoring or evaluation of the proposed amendments is foreseen, except the existing standardisation activities and exchange between EASA and the relevant stakeholders, which should identify any emerging issues.

# 6. References

## 6.1. Related regulations

— Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1)

## 6.2. Related decisions

— Decision N° 2012/015/Directorate R of the Executive Director of the Agency of 24th October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council — 'Guidance Material to Annex I — Definitions'

— Decision 2014/025/R of the Executive Director of the Agency of 28 July 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ARO of Regulation (EU) No 965/2012 and repealing Decision 2014/014/R of the Executive Director of the Agency of 24 April 2014 — 'AMC and GM to Part-ARO — Issue 3'

— Decision 2014/017/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ORO of Regulation (EU) No 965/2012 and repealing Decision 2012/017/R of the Executive Director of the Agency of 24 October 2012 — 'AMC and GM to Part-ORO — Issue 2'

— Decision 2014/015/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-CAT of Regulation (EU) No 965/2012 and repealing Decision 2012/018/R of the Executive Director of the Agency of 24 October 2012 — 'AMC and GM to Part-CAT — Issue 2'

— Decision No 2012/019/Directorate R of the Executive Director of the Agency of 24th October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council — 'AMC & GM to Part-SPA'

— Decision N° 2013/021/Directorate R of the Executive Director of the Agency of 23 August 2013 on adopting Acceptable Means of Compliance and Guidance Material for Non-commercial operations with complex motor-powered aircraft — 'AMC and GM to Part-NCC'

— Decision 2014/016/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-NCO of Regulation (EU) No 965/2012 and repealing Decision 2013/022/R of the Executive Director of the Agency of 23 August 2013 — 'AMC and GM to Part-NCO — Issue 2'

— Decision 2014/018/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-SPO of Regulation (EU) No 965/2012 — 'AMC and GM to Part-SPO'

## 6.3. Other reference documents

— Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91

— ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, 11th Edition, July 2018

— ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part II — International General Aviation — Aeroplanes, 10th Edition, July 2018

— ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part III — International Operations — Helicopters, 9th Edition, July 2018

— ICAO Doc 8168 Procedures for Air Navigation Services – Aircraft Operations, Volume III Aircraft Operating Procedures, First Edition, 2018

— ICAO Doc 8335 Manual of Procedures for Operations Inspection, Certification and Continued Surveillance, Fifth Edition – 2010

— ICAO Doc 10059 Manual on the implementation of Article 83 *bis* of the Convention on International Civil Aviation, First Edition – 2017

— ICAO Doc 10002 Cabin Crew Safety Training Manual

— ICAO Doc 10084 Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones, Second Edition, 2018

— ICAO Doc 10102 Guidance for Safe Operations Involving Aeroplane Cargo Compartments, First Edition, 2020

— ICAO State Letter AN 11/1.3.32-20/18 (EASA reference: 2020/ SL 018e) issued by ICAO on 7 April 2020

— ICAO State Letter AN 11/6.3.31-20/31 (EASA reference: 2020/ SL 031e) issued by ICAO on 8 April 2020

— ICAO State Letter AN 11/32.3.15-20/32 (EASA reference: 2020/ SL 032e) issued by ICAO on 7 April 2020

— ICAO State Letter AN 11/32.3.16-22/13 (EASA reference: SL 2022/013e) issued by ICAO on 31 March 2022

— U.S. Department of Transportation, FAA: Advisory Circular AC 120-121 Safety Risk Management Involving Items in Aircraft Cargo Compartments, 9/1/21

— Aircraft Accident Report AAR 1/2020 – Piper PA-46-310P Malibu, N264DB, 21 January 2019

— EASA SIB 2020-01R1: Carbon Monoxide Risk in Small Aeroplanes and Helicopters

— EASA CS-STAN Standard Changes and Standard Repairs

# 7. Quality of the document

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this NPA with regard to the following aspects:

## 7.1. The regulatory proposal is of technically good/high quality

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.*
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.2. The text is clear, readable and understandable

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.*
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.3. The regulatory proposal is well substantiated

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.*
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.4. The regulatory proposal is fit for purpose (capable of achieving the objectives set)

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.*
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.5. The impact assessment (IA), as well as its qualitative and quantitative data, is of high quality

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.*
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.6. The regulatory proposal applies the 'better regulation' principles[1]

*Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification*.
Fully agree / Agree / Neutral / Disagree / Strongly disagree

## 7.7. Any other comments on the quality of this NPA (please specify)

*Note:* Your comments on Chapter 8 will be considered for internal quality assurance and management purposes only and will not be published in the related CRD.

[1] For information and guidance, see:
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox/better-regulation-toolbox_en