International Civil Aviation Organization | Organisation de l'aviation civile internationale | Organización de Aviación Civil Internacional | Международная организация гражданской авиации | منظمة الطيران المدني الدولي | 国际民用航空组织

Tel.: +1 514-954-8219 ext. 5151

Ref.: AN 3/5.11-18/19 3 April 2018

Subject: Adoption of Amendment 106 to Annex 8

Action required: a) Notify any disapproval before 16 July 2018; b) Notify any differences and compliance before 8 October 2018[1]; c) Consider the use of the Electronic Filing of Differences (EFOD) System for notification of differences and compliance

Sir/Madam,

1. I have the honour to inform you that Amendment 106 to the *International Standards and Recommended Practices, Airworthiness of Aircraft* (Annex 8 to the Convention on International Civil Aviation) was adopted by the Council at the fifth meeting of its 213th Session on 7 March 2018. Copies of the Amendment and the Resolution of Adoption are available as attachments to the electronic version of this State letter on the ICAO-NET (http://portal.icao.int) where you can access all other relevant documentation.

2. When adopting the amendment, the Council prescribed 16 July 2018 as the date on which it will become effective, except for any part concerning which a majority of Contracting States have registered their disapproval before that date. In addition, the Council resolved that Amendment 106, to the extent it becomes effective, will become applicable on 8 November 2018 unless otherwise indicated.

3. Amendment 106 arises from:

a) a proposal from the 39th Session of the Assembly (Assembly Resolution A39-13 – *Halon replacement* refers) and developed by the Secretariat regarding the replacement of halogenated hydrocarbons (halon) in civil aircraft cargo compartment fire suppression systems; and

b) recommendations of the third and fourth meetings of the Airworthiness Panel (AIRP/3 and 4) regarding the approval and global recognition of approved

[1] 5 October 2020 for provisions indicating applicability as of 5 November 2020; 7 February 2021 for provisions indicating applicability as of 7 March 2021; and 28 October 2024 for provisions indicating applicability as of 28 November 2024.

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maintenance organizations (AMOs), design standards, continuing airworthiness provisions and provisions linked to the electronic aircraft maintenance records (EAMR) framework.

4. The amendment concerning halon replacement implements the Council mandate, pursuant to Assembly Resolution A39-13, to establish requirements and a timeframe for the replacement of the halogenated hydrocarbon (halon) agent in aircraft cargo compartment fire suppression systems with an agent that causes the least amount of impact to the environment while performing the specific fire protection applications for which the equipment was designed.

5. The amendment concerning approval and global recognition of AMOs was developed in two phases. Phase I involved the transfer of AMO Standards and Recommended Practices (SARPs) from Annex 6 — *Operation of Aircraft*, Part I — *International Commercial Air Transport — Aeroplanes*, 8.7 to new Chapter 6 in Part II of Annex 8. The AMO requirements currently contained in Annex 6, Part I create the erroneous impression that the AMO approval is linked to the State of the Operator. Additionally, the current industry practice of stand-alone maintenance organizations (including those maintaining components) in all aircraft categories and types of operations should be recognized. Transferring the AMO approval requirements to Annex 8 will allow all aircraft operated under Annex 6, Parts I, II — *International General Aviation — Aeroplanes* and Part III — *International Operations — Helicopters* to refer to a single location for the AMO approval Standards.

6. Phase II included further amendments to SARPs to support the provisions introduced in this amendment and addresses the responsibilities of AMOs and operators including revised definitions to ensure that they are consistent and up to date. These amendments enhance the promotion of the mutual recognition of AMOs and provide a clear allocation of responsibilities to the State of Registry.

7. The amendment concerning design Standards offers an opportunity for efficient management of resources. The elimination of 750 kg limit in Annex 8 for small aeroplanes with the application of the new Annex 8, Part VB is not obligating Member States to type certify all aeroplanes below 750 kg MTOM. The amendment provides the appropriate opportunity to States to proceed in accordance with the approach of balancing risks and rigor in applying requirements for Type Certificate/production approvals. The amendment also provides clarity regarding the applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg for which application for certification was submitted on or after 2 March 2004 by restoring an established safety requirement that is consistent with existing SARPs. The stall warning provisions in Annex 8, Part IIIB and Part V were clarified to remove any suggestion that a warning is not required for a stall with one or more engines inoperative. Additionally, the applicability criteria for cargo compartment fire suppression systems for all aeroplanes with a certificated passenger seating capacity of more than 60 persons or a maximum take-off mass (MTOM) of over 45 000 kg were introduced. The criteria provide for a proportional level of safety and are consistent with existing certification Standards.

8. The amendment concerning continuing airworthiness provisions clarifies the continuing airworthiness responsibilities of a State of Design towards States of Registry and States of Manufacture in the event the original Type Certificate is suspended or revoked by the State of Design. It also provides clarity that the Mandatory Continuing Airworthiness Information (MCAI) system should not be used to mandate changes to a type design that reduces the overall level of safety of an aircraft. Introducing the requirement for States of Design to notify affected States of Registry of a transfer of a Type Certificate ensures that all continuing airworthiness information is directed to the correct Type Certificate holder and State of Design. Additionally, the amendment provides definitive interpretation that a Certificate of

Airworthiness issued under Annex 8 can no longer be rendered valid under Article 33 of the Chicago Convention when the Type Certificate issued by the State of Design is revoked.

9. The current ICAO provisions for aircraft maintenance records do not specifically describe the format in which the records should be issued. The amendment concerning EAMR will support States in issuing national legislation to address the existence and use of EAMR, digital and other paperless forms of maintenance records. The amendment also facilitates the development of a globally harmonized approach to the regulations governing EAMR which will improve aircraft interoperability.

10. The subjects are given in the amendment to the Foreword of Annex 8, a copy of which is in Attachment A.

11. In conformity with the Resolution of Adoption, may I request:

a) that before 16 July 2018 you inform me if there is any part of the adopted Standards and Recommended Practices (SARPs) amendments in Amendment 106 concerning which your Government wishes to register disapproval, using the form in Attachment B for this purpose. Please note that only statements of disapproval need be registered and if you do not reply it will be assumed that you do not disapprove of the amendment; and

b) that before 8 October 2018[2] you inform me of the following, using the Electronic Filing of Differences (EFOD) System or the form in Attachment C for this purpose:

1) any differences that will exist on 8 November 2018 between the national regulations or practices of your Government and the provisions of the whole of Annex 8, as amended by all amendments up to and including Amendment 106, and thereafter of any further differences that may arise; and

2) the date or dates by which your Government will have complied with the provisions of the whole of Annex 8 as amended by all amendments up to and including Amendment 106.

12. With reference to the request in paragraph 11 a) above, it should be noted that a registration of disapproval of Amendment 106 or any part of it in accordance with Article 90 of the Convention does not constitute a notification of differences under Article 38 of the Convention. To comply with the latter provision, a separate statement is necessary if any differences do exist, as requested in paragraph 11 b) 1). It is recalled in this respect that international Standards in Annexes have a conditional binding force, to the extent that the State or States concerned have not notified any difference thereto under Article 38 of the Convention.

13. With reference to the request in paragraph 11 b) above, it should be also noted that the ICAO Assembly, at its 38th Session (24 September to 4 October 2013), resolved that Member States should be encouraged to use the EFOD System when notifying differences (Resolution A38-11 refers). The EFOD System is currently available on the Universal Safety Oversight Audit Programme (USOAP) restricted website (http://www.icao.int/usoap) which is accessible by all Member States. You are invited to consider using this for notification of compliance and differences.

[2] 5 October 2020 for provisions indicating applicability as of 5 November 2020; 7 February 2021 for provisions indicating applicability as of 7 March 2021; and 28 October 2024 for provisions indicating applicability as of 28 November 2024.

14. Guidance on the determination and reporting of differences is given in the Note on the Notification of Differences in Attachment D. Please note that a detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

15. I would appreciate it if you would also send a copy of your notifications, referred to in paragraph 11 b) above, to the ICAO Regional Office accredited to your Government.

16. At the fifth meeting of its 204th Session, the Council requested that States, when being advised of the adoption of an Annex amendment, be provided with information on implementation and available guidance material, as well as an impact assessment. This is presented for your information in Attachments E and F, respectively.

Editorial adjustment and comprehensive new edition of Annex 8

17. In order to maintain a comprehensive edition of Annex 8, provisions with delayed applicability dates as a result of Amendment 106 are identified with an italicized paragraph number and feature the date at the beginning of each provision. Definitions with amendments applicable at a future date are identified by a footnote indicating the date of applicability.

18. In addition, adopted Amendment 105-B (adopted by the Council on 2 March 2016 and applicable 5 November 2020) will be consolidated with Amendment 106 in a new edition of the Annex and will feature the 2020 applicability date at the beginning of each affected provision. Further information relating to the new editorial adjustment is available at https://www.icao.int/2018-amendments. As soon as practicable after the amendment becomes effective, on 16 July 2018, a new edition of Annex 8 incorporating Amendment 106 as well as the adopted amendment mentioned above will be forwarded to you.

Accept, Sir/Madam, the assurances of my highest consideration.

Fang Liu
Secretary General

Enclosures:

A — Amendment to the Foreword of Annex 8
B — Form on notification of disapproval of all or part of Amendment 106 to Annex 8
C — Form on notification of compliance with or differences from Annex 8
D — Note on the Notification of Differences
E — Implementation task list and outline of guidance material in relation to Amendment 106 to Annex 8
F — Impact assessment in relation to Amendment 106 to Annex 8

ATTACHMENT A to State letter AN 3/5.11-18/19

AMENDMENT TO THE FOREWORD OF ANNEX 8

Add the following elements at the end of Table A:

Amendment	***Source(s)***	***Subject***	***Adopted/Approved Effective Applicable***
106	Third and fourth meetings of the Airworthiness Panel (AIRP/3 and 4); 39th Session of the Assembly, Assembly Resolution A39-13 — *Halon replacement*	a) Approval and global recognition of approved maintenance organizations; b) design Standards; c) continuing airworthiness provisions; d) halon replacement in cargo compartment fire suppression systems; and e) electronic aircraft maintenance records.	7 March 2018 16 July 2018 8 November 2018

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ATTACHMENT B to State letter AN 3/5.11-18/19

NOTIFICATION OF DISAPPROVAL OF ALL OR PART OF AMENDMENT 106 TO ANNEX 8

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Quebec
Canada H3C 5H7

(State) _____ hereby wishes to disapprove the following parts of Amendment 106 to Annex 8:

Signature _____ Date _____

NOTES

1) If you wish to disapprove all or part of Amendment 106 to Annex 8, please dispatch this notification of disapproval to reach ICAO Headquarters by 16 July 2018. If it has not been received by that date it will be assumed that you do not disapprove of the amendment. **If you approve of all parts of Amendment 106, it is not necessary to return this notification of disapproval.**

2) This notification should not be considered a notification of compliance with or differences from Annex 8. Separate notifications on this are necessary. (See Attachment C.)

3) Please use extra sheets as required.

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ATTACHMENT C to State letter AN 3/5.11-18/19

NOTIFICATION OF COMPLIANCE WITH OR DIFFERENCES FROM ANNEX 8
(including all amendments up to and including Amendment 106)

To: The Secretary General
International Civil Aviation Organization
999 Robert-Bourassa Boulevard
Montréal, Quebec
Canada H3C 5H7

1. No differences will exist on _____ between the national regulations and/or practices of **(State)** _____ and the provisions of Annex 8, including all amendments up to and including Amendment 106.

2. The following differences will exist on _____ between the regulations and/or practices of **(State)** _____ and the provisions of Annex 8, including Amendment 106 (Please see Note 2) below.)

a) **Annex Provision** (Please give exact paragraph reference)	b) **Details of Difference** (Please describe the difference clearly and concisely)	c) **Remarks** (Please indicate reasons for the difference)

(Please use extra sheets as required)

3. By the dates indicated below, **(State)** _____ will have complied with the provisions of Annex 8, including all amendments up to and including Amendment 106 for which differences have been notified in 2 above.

a) **Annex Provision** (Please give exact paragraph reference)	b) **Date**	c) **Comments**

(Please use extra sheets as required)

Signature _____ Date _____

NOTES

1) If paragraph 1 above is applicable to your State, please complete paragraph 1 and return this form to ICAO Headquarters. If paragraph 2 is applicable to you, please complete paragraphs 2 and 3 and return the form to ICAO Headquarters.

2) A detailed repetition of previously notified differences, if they continue to apply, may be avoided by stating the current validity of such differences.

3) Guidance on the notification of differences is provided in the Note on the Notification of Differences and in the *Manual on Notification and Publication of Differences* (Doc 10055).

4) Please send a copy of this notification to the ICAO Regional Office accredited to your Government.

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ATTACHMENT D to State letter AN 3/5.11-18/19

NOTE ON THE NOTIFICATION OF DIFFERENCES

(*Prepared and issued in accordance with instructions of the Council)*

1. *Introduction*

1.1 Article 38 of the Convention on International Civil Aviation ("Convention") requires that a Contracting State notify ICAO any time it does not comply with a Standard in all respects, it does not bring its regulations or practices into full accord with any Standard, or it adopts regulations or practices differing in any particular respect from the Standard.

1.2 The Assembly and the Council, when reviewing the notification of differences by Contracting States in compliance with Article 38 of the Convention, have repeatedly noted that the timeliness and currency of such notifications is not entirely satisfactory. Therefore, this note is issued to reiterate the primary purpose of Article 38 of the Convention and to facilitate the determination and notification of differences.

1.3 The primary purpose of the notification of differences is to promote safety, regularity and efficiency in air navigation by ensuring that governmental and other agencies, including operators and service providers, concerned with international civil aviation are made aware of all national regulations and practices in so far as they differ from those prescribed in the Standards contained in Annexes to the Convention.

1.4 Contracting States are, therefore, requested to give particular attention to the notification of differences with respect to Standards in all Annexes, as described in paragraph 4 b) 1) of the Resolution of Adoption.

1.5 Although differences from Recommended Practices are not notifiable under Article 38 of the Convention, the Assembly has urged Contracting States to extend the above considerations to Recommended Practices contained in Annexes to the Convention, as well.

2. *Notification of differences from Standards and Recommended Practices (SARPs)*

2.1 Guidance to Contracting States in the notification of differences to Standards and Recommended Practices (SARPs) can only be given in very general terms. Contracting States are further reminded that compliance with SARPs generally extends beyond the issuance of national regulations and requires establishment of practical arrangements for implementation, such as the provision of facilities, personnel and equipment and effective enforcement mechanisms. Contracting States should take those elements into account when determining their compliance and differences. The following categories of differences are provided as a guide in determining whether a notifiable difference exists:

a) ***A Contracting State's requirement is more exacting or exceeds a SARP (Category A)***. This category applies when the national regulation and practices are more demanding than the corresponding SARP, or impose an obligation within the scope of the Annex which is not covered by the SARP. This is of particular importance where a Contracting State requires a higher standard which affects the operation of aircraft of other Contracting States in and above its territory;

b) ***A Contracting State's requirement is different in character or the Contracting State has established other means of compliance (Category B)***[*]. This category applies, in particular, when the national regulation and practices are different in character from the corresponding SARP, or when the national regulation and practices differ in principle, type or system from the corresponding SARP, without necessarily imposing an additional obligation; and

c) ***A Contracting State's requirement is less protective, partially implemented or not implemented (Category C)***. This category applies when the national regulation and practices are less protective than the corresponding SARP; when no national regulation has been promulgated to address the corresponding SARP, in whole or in part; or when the Contracting State has not brought its practices into full accord with the corresponding SARP.

These categories do not apply to Not Applicable SARP. Please see the paragraph below.

2.2 **Not Applicable SARP.** When a Contracting State deems a SARP concerning aircraft, operations, equipment, personnel, or air navigation facilities or services to be not applicable to the existing aviation activities of the State, notification of a difference is not required. For example, a Contracting State that is not a State of Design or Manufacture and that does not have any national regulations on the subject, would not be required to notify differences from Annex 8 provisions related to the design and construction of an aircraft.

2.3 **Differences from appendices, tables and figures.** The material comprising a SARP includes not only the SARP itself, but also the appendices, tables and figures associated with the SARP. Therefore, differences from appendices, tables and figures are notifiable under Article 38. In order to file a difference against an appendix, table or figure, States should file a difference against the SARP that makes reference to the appendix, table or figure.

2.4 **Differences from definitions.** Contracting States should notify differences from definitions. The definition of a term used in a SARP does not have independent status but is an essential part of each SARP in which the term is used. Therefore, a difference from the definition of the term may result in there being a difference from any SARP in which the term is used. To this end, Contracting States should take into consideration differences from definitions when determining compliance or differences to SARPs in which the terms are used.

2.5 The notification of differences should be not only to the latest amendment but to the whole Annex, including the amendment. In other words, Contracting States that have already notified differences are requested to provide regular updates of the differences previously notified until the difference no longer exists.

2.6 Further guidance on the identification and notification of differences, examples of well-defined differences and examples of model processes and procedures for management of the notification of differences can be found in the *Manual on Notification and Publication of Differences* (Doc 10055).

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[*] The expression "different in character or other means of compliance" in b) would be applied to a national regulation and practice which achieve, by other means, the same objective as that of the corresponding SARPs or for other substantive reasons so cannot be classified under a) or c).

3. *Form of notification of differences*

3.1 Differences can be notified:

a) by sending to ICAO Headquarters a form on notification of compliance or differences; or

b) through the Electronic Filing of Differences (EFOD) System at www.icao.int/usoap.

3.2 When notifying differences, the following information should be provided:

a) the number of the paragraph or subparagraph which contains the SARP to which the difference relates*;

b) the reasons why the State does not comply with the SARP, or considers it necessary to adopt different regulations or practices;

c) a clear and concise description of the difference; and

d) intentions for future compliance and any date by which your Government plans to confirm compliance with and remove its difference from the SARP for which the difference has been notified.

3.3 The differences notified will be made available to other Contracting States, normally in the terms used by the Contracting State when making the notification. In the interest of making the information as useful as possible, Contracting States are requested to ensure that:

a) statements be as clear and concise as possible and be confined to essential points;

b) the provision of extracts from national regulations not be considered as sufficient to satisfy the obligation to notify differences; and

c) general comments, unclear acronyms and references be avoided.

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*This applies only when the notification is made under 3.1 a).

ATTACHMENT E to State letter AN 3/5.11-18/19

IMPLEMENTATION TASK LIST AND OUTLINE OF GUIDANCE MATERIAL IN RELATION TO AMENDMENT 106 TO ANNEX 8

1. IMPLEMENTATION TASK LIST

1.1 Essential steps to be followed by a State to implement the amendment to Annex 8:

a) identification of the rule-making process necessary to transpose the new ICAO provisions into national regulations taking into consideration the applicability date;

b) establishment of a national implementation plan that takes into account the new ICAO provisions;

c) drafting of the modification(s) to the national regulations and means of compliance;

d) official adoption of the national regulations and means of compliance;

e) amendment of approved maintenance organization certification if applicable and/or surveillance programmes to include new requirements;

f) revision of guidance material(s) and checklist(s) for applicable inspectors that support air operator and approved maintenance organization certification, surveillance and the resolution of any issues identified;

g) filing of States differences with ICAO, if necessary;

h) publication of significant differences in the AIP;

i) States of Registry will have to act accordingly when notified by the State of Design that the original Type Certificate has been revoked. Aircraft affected by this action would have their Certificate of Airworthiness revoked and would have to be issued a different approval to fly;

j) introduction by States of new or amended regulations to implement this proposal;

k) training to oversight personnel to fully understand the changes introduced especially in relation to the responsibilities of AMOs and operators regarding records and with regard to any new rating system and AMOs recognition procedures introduced as a result of the new guidance in the *Airworthiness Manual* (Doc 9760);

l) operational acceptance of policy and procedures of operator(s) and approved maintenance organizations to comply with applicable requirements and amendment of approval certificates to ensure compliance with 6.3.3 by 5 November 2022;

m) acceptance of maintenance organizations approved by other Contracting States when the State of Registry elects to recognize those maintenance organizations; and

n) amendment of Article 83 *bis* agreements, when necessary, to adapt those agreements with the new provisions.

2. STANDARDIZATION PROCESS

2.1 Effective date: 16 July 2018

2.2 Applicability date: 8 November 2018

2.3 Embedded applicability date: 5 November 2020 for those parts of the amendment concerning approval and global recognition of approved maintenance organizations, electronic aircraft maintenance records; 7 March 2021 for the element concerning design Standards for light aircraft under 750 kg, applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg, stall warning and applicability of weight limitations for all aircraft for cargo compartment protection; and 28 November 2024 for the element concerning halon replacement in cargo compartment fire suppression systems.

3. SUPPORTING DOCUMENTATION

3.1 ICAO documentation

Title	Type (PANS/TI/Manual/Circ)	Planned publication date
Airworthiness Manual (Doc 9760)	Manual (update)	2018
Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335)	Manual (update)	2018
Manual of Procedures for Establishment and Management of a State's Personnel Licensing (Doc 9379)	Manual (update)	2018
*Human Factors Guidelines for Safety Audits Manual (*Doc 9806)	Manual (update)	2018
Human Factors Guidelines for Aircraft Maintenance Manual (Doc 9824)	Manual (update)	2018
Safety Management Manual (SMM) (Doc 9859)	Manual (update)	2018
Manual on the implementation of Article 83 bis *of the Convention on International Civil Aviation* (Doc 10059)	Manual	2017

3.2 External documentation

Title	External Organization	Publication date
None		

4. IMPLEMENTATION ASSISTANCE TASKS

Type	Global	Regional
Increased awareness		By RASGs, RSOOs, and COSCAPs regarding amendments to Annex 8 and guidance material.
Workshop/Seminar		By regional offices regarding amendments to Annex 8 and guidance material on the AMO, EAMR, continuing airworthiness provisions and design Standards.

5. UNIVERSAL SAFETY OVERSIGHT AUDIT PROGRAMME (USOAP)

5.1 The amendment to Annex 8 may require an amendment of the USOAP CMA protocol questions (PQs) in the areas of AMOs and continuing airworthiness to assess effective implementation by States. Existing PQs may need amendment or new PQs may be required. This will be assessed during the next amendment cycle of the PQs.

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ATTACHMENT F to State letter AN 3/5.11-18/19

IMPACT ASSESSMENT IN RELATION TO AMENDMENT 106 TO ANNEX 8

1. INTRODUCTION

1.1 Amendment 106 to Annex 8 is intended to:

a) promote the mutual recognition of AMOs and ensure a clear allocation of responsibilities to the State of Registry;

b) eliminate the 750 kg weight limit barrier in Annex 8, Part V and introduce a new Part VB;

c) clarify the applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg for which application for certification was submitted on or after 2 March 2004. Also, this amendment allows for a defined limit on the number of engines for these aircraft, which is also reflected currently in Part IIIA, Chapter 1, paragraph 1.2;

d) clarify the inconsistency in the current requirements for stall warning in Annex 8, Part IIIB and Part V by introducing text currently used in Part IIIB and Part V, Chapter 2, paragraph 2.4.2.1;

e) introduce applicability criteria for cargo compartment fire suppression systems for all aeroplanes with a certificated passenger seating capacity of more than 60 persons or a MTOW of over 100 000 pounds (45 500 kg);

f) clarify how Contracting States should deal with orphaned aircraft and prescribe eligibility requirements for the issuance of a Certificate of Airworthiness. It is envisaged that this proposal will provide definitive interpretation that a Certificate of Airworthiness issued under Annex 8 can no longer be rendered valid under Article 33 of the Chicago Convention when the Type Certificate issued by the State of Design is revoked;

g) introduce Standards that clarify the importance of not using the Airworthiness Directive system to mandate corrective actions that would reduce the overall safety level of an aircraft;

h) introduce two new provisions. The first provision addresses what a State of Design should do when it suspends a Type Certificate of an aircraft to bring significant safety benefit by ensuring that the State of Design continues to fulfil its obligation under Annex 8 during the period of suspension. The second provision addresses what measures a State of Design should take before it finally revokes a Type Certificate. These new provisions will ensure that the State of Design applies a process to take into account the impact of the revocation of a Type Certificate on States of Registry;

i) include a Standard that will ensure that the reporting requirements for continuing airworthiness are properly directed to the appropriate State of Design and/or new

holder. The Standard includes all aircraft Type Certificates issued prior to Amendment 98 to Annex 8 (March 2004);

j) introduces an amendment to establish requirements and a timeframe for the replacement of the halon agent in aircraft cargo compartment fire suppression systems as required in Assembly Resolution A39-13 – *Halon replacement* adopted in 2016; and

k) introduce provisions linked to the EAMR framework.

2. IMPACT ASSESSMENT

2.1 Amendment concerning AMOs

2.1.1 *Safety impact*: Positive safety impact with the implementation of this amendment. The amendment clarifies the responsibilities of operators and maintenance organizations, in particular in relation to which records must be retained, and it supports the option for the State of Registry to recognize an AMO approval issued by another Contracting State, promoting the exchange of information between such States.

2.1.2 *Financial impact*: Decrease in overall costs to States and industry.

2.1.3 *Security impact*: No security impact is envisaged with the implementation of this amendment.

2.1.4 *Environmental impact*: No environmental impact is envisaged with the implementation of this amendment.

2.1.5 *Efficiency impact*: There will be a positive change in the efficiency of the air transportation system. The amendment supports the option for the State of Registry to recognize an AMO approval issued by another Contracting State and also promotes the exchange of information between such States.

2.1.6 *Expected implementation time*: For States, the changes introduced in Annexes 1, 6 and 8 consist of the uniform application of the terms “repairs”, “modifications” and “maintenance release”, the appropriate use of the terms “maintenance records” and “continuing airworthiness records” and the transfer of the AMO approval provisions from Annex 6 to Annex 8.

2.1.7 This may require certain changes of definitions, terms and cross references in the procedures of the competent authorities and the national legislation. In addition, certain changes may be needed to the references contained in existing 83*bis* agreements between States. However, it is not expected that the changes to the Annexes affect the substance of the procedures and national legislation. Moreover, the procedures and national legislation of certain States may be affected by the introduction of provisions in line with the guidance to be introduced in the *Airworthiness Manual* (Doc 9760) to facilitate the standardization of the approval and recognition process of AMOs regulations foreseen with the implementation of this proposal. This may take two to five years.

2.1.8 For industry, the changes introduced in Annexes 1, 6 and 8 are only expected to affect some definitions, terms and cross references contained in the maintenance organization’s procedures

manual (AMO) and the maintenance control manual (operator). This can be performed within one to two years. Additional changes may be needed if the State of Registry decides to introduce changes to its legislation related to the guidance to be provided in Doc 9760.

2.2 **Amendment concerning design Standards**

2.2.1 *Safety impact*: The overall safety impact is positive. The amendment, if implemented, would ensure that limited State Authorities' resources are best invested where risks are higher; the new approach proposed for the type certification of aircraft weighing less than 750 kg would benefit flight safety overall at reduced expenses for industry, particularly small entities. Additionally, there will be room for new technology advancement implementation on small aeroplanes in favour of flight safety at affordable costs when adhering to a proportionality concept. Definition and application of airworthiness requirements proportionate to the differentiated product/operational risks is key. The amendment will also eliminate inconsistencies between Parts IIIB and V in the requirements for stall warning; and ensure the applicability of a weight limitation for all aircraft for cargo compartment protection is consistent with States' existing certification standards, and therefore provides for the maintenance of a proportional level of safety.

2.2.2 *Financial impact*: Generally a decrease in overall costs to States if the design standard for Annex 8, Part VB is implemented. The amendment related to the applicability of weight limit (45 500 kg / 60 passengers) has a negligible financial impact. No financial impact to the stall warning and the applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg.

2.2.3 *Security impact*: No security impact is envisaged with the implementation of this amendment.

2.2.4 *Environmental impact*: Lighter certified aircraft, as well as new propulsion technology implementation advantages, would likely contribute to reduced fuel consumption.

2.2.5 *Efficiency impact*: Light new generation small aeroplanes recognized internationally would provide benefit to the civil aviation community in many domains: lower acquisition and operating product costs; more opportunity to fly and acquire a pilot license; improved familiarity with up-to-date technologies at affordable costs; and reduced maintenance costs. State Authority burden for type certification and production approval for light aeroplanes would also be reduced on the basis of efficient safety management which is encouraged. Type certification of light aircraft will facilitate the operation of these aircraft in international aviation. The original proposal appeared to limit the applicability of Part IIIB to aeroplanes with two or more engines, leaving open the possibility of single-engine aeroplanes over 5 700 kg although this is inconsistent with other SARPs. Introducing the requirement in the appropriate place in Part IIIB removes the inconsistency and clarifies the requirements promoting a better understanding of the SARP.

2.2.6 *Expected implementation time*: None. The revised SARP is believed to be consistent with existing State requirements.

2.3 **Amendment concerning continuing airworthiness provisions**

2.3.1 *Safety impact*: Clarification on how Contracting States should deal with orphaned aircraft and prescribed requirements for the issuance of a Certificate of Airworthiness under Articles 31 and 33 of the Convention. Clarification that the MCAI system should not be used to mandate changes to a type design that reduces the overall level of safety of an aircraft. Introduction of the requirement for States of Design to notify affected States of Registry of a transfer of a Type Certificate that will ensure that all continuing airworthiness information will be directed to the right Type Certificate holder and State of Design.

2.3.2 *Financial impact*: For a situation involving suspension of a Type Certificate, the impact on resources is deemed to be negligible as the responsibilities remain the same. However, for a situation involving a revocation of a Type Certificate and relinquishing the formal status as a State of Design, the impact may come in the release or availability of resources previously dedicated to the fulfilment of assigned responsibilities under Annex 8 (i.e. the State no longer has an obligation to act).

2.3.3 *Security impact*: No security impact is envisaged with the implementation of this amendment.

2.3.4 *Environmental impact*: No environmental impact is envisaged with the implementation of this amendment.

2.3.5 *Efficiency impact*: Increased efficiency impact is envisaged with the implementation of this amendment. All States of Registry will be bound by the same interpretation and therefore held to the same international standard when rendering the validity of their Certificate of Airworthiness under Article 33 of the Convention.

2.3.6 *Expected implementation time*: Two to five years.

2.4 **Amendment concerning halon replacement**

2.4.1 *Safety impact*: The halon replacement must provide equivalent fire protection performance. The new agent/system will reduce future risks linked to Halon 1301 quality.

2.4.2 *Financial impact*: There will be an initial financial and human resource cost associated with updating relevant regulations/policies to include this new requirement. For industry and OEMs, the revised Annex 8 Standard will be realized in future new aircraft types only, i.e. an aircraft type with an application for a new Type Certificate after the deadline 31 December 2024. As long as aircraft of previously certified types remain in service, OEM may have additional costs to provide continuous airworthiness activities and fleet support for both Halon 1301 and alternative systems. There will also be significant research and development costs to ensure any feasible/viable technology(ies) can meet all performance and safety requirements.

2.4.3 *Security impact*: No security impact is envisaged with the implementation of this amendment.

2.4.4 *Environmental impact*: Introduces means for implementing halon replacement and as such supports the Montreal Protocol reduction for ozone-depleting substances (ODS). New aircraft types will significantly reduce the future amount of Halon 1301 needed for safety-critical applications in

aviation. However, halon replacement systems may weigh more than current systems increasing fuel burn resulting in additional CO_2 emissions, a potential negative impact.

2.4.5 *Efficiency impact*: Will force aircraft manufacturing nations/States of Design to implement a harmonized approach.

2.4.6 *Expected implementation time*: Two to five years.

2.5 **Amendment concerning EAMR**

2.5.1 *Safety impact*: More accurate recording and real-time accessibility of continuing airworthiness aircraft maintenance status and aircraft maintenance related work completion.

2.5.2 *Financial impact*: The cost impact to States depends on the degree of implementation a State wishes to adopt, ranging from minimal to low. To a great extent, costs are under the control of the State and implementation may be staged.

2.5.3 *Security impact*: Physical security requirements are still applicable. Cybersecurity should be addressed as part of the overall aviation organization structure. The EAMR specific cybersecurity requirements will represent a very limited set of the overall cybersecurity mechanism required to be implemented by aviation stakeholders.

2.5.4 *Environmental impact*: The EAMR is a paperless aircraft technical operations component which lowers the environmental footprint of aviation entities. The significant reduction of demand for the use of paper will put less stress on the supporting natural resources and reduce waste.

2.5.5 *Efficiency impact*: Rapid and accurate search, sort and monitoring capabilities will drastically reduce the time required compared to paper records processing. Maintenance records transfer required to take place between aviation entities will be facilitated at significantly reduced time and cost.

2.5.6 *Expected implementation time*: One to two years.

— END —

AMENDMENT No. 106

TO THE

INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES

AIRWORTHINESS OF AIRCRAFT

ANNEX 8

TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

The amendment to Annex 8, contained in this document was adopted by the Council of ICAO on **7 March 2018**. Such parts of this amendment as have not been disapproved by more than half of the total number of Contracting States on or before **16 July 2018** will become effective on that date and will become applicable on **8 November 2018** as specified in the Resolution of Adoption. (State letter AN 3/5.11-18/19 refers.)

MARCH 2018

INTERNATIONAL CIVIL AVIATION ORGANIZATION

AMENDMENT 106 TO THE INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

ANNEX 8 — *AIRWORTHINESS OF AIRCRAFT*

RESOLUTION OF ADOPTION

The Council

Acting in accordance with the Convention on International Civil Aviation, and particularly with the provisions of Articles 37, 54 and 90 thereof,

1. *Hereby adopts* on 7 March 2018 Amendment 106 to the International Standards and Recommended Practices contained in the document entitled *International Standards and Recommended Practices, Airworthiness of Aircraft* which for convenience is designated Annex 8 to the Convention;

2. *Prescribes* 16 July 2018 as the date upon which the said amendment shall become effective, except for any part thereof in respect of which a majority of the Contracting States have registered their disapproval with the Council before that date;

3. *Resolves* that the said amendment or such parts thereof as have become effective shall become applicable on 8 November 2018;

4. *Requests the Secretary General*:

a) to notify each Contracting State immediately of the above action and immediately after 16 July 2018 of those parts of the amendment which have become effective;

b) to request each Contracting State:

1) to notify the Organization (in accordance with the obligation imposed by Article 38 of the Convention) of the differences that will exist on 8 November 2018 between its national regulations or practices and the provisions of the Standards in the Annex as hereby amended, such notification to be made before 8 October 2018[1], and thereafter to notify the Organization of any further differences that arise;

2) to notify the Organization before 8 October 2018 of the date or dates by which it will have complied with the provisions of the Standards in the Annex as hereby amended;

c) to invite each Contracting State to notify additionally any differences between its own practices and those established by the Recommended Practices, when the notification of such differences is important for the safety of air navigation, following the procedure specified in subparagraph b) above with respect to differences from Standards.

— — — — — — — —

[1] 5 October 2020 for provisions indicting applicability as of 5 November 2020; 7 February 2021 for provisions indicating applicability as of 7 March 2021; and 28 October 2024 for provisions indicating applicability as of 28 November 2024.

NOTES ON THE PRESENTATION OF THE AMENDMENT TO ANNEX 8

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

1.	~~Text to be deleted is shown with a line through it.~~	text to be deleted
2.	New text to be inserted is highlighted with grey shading.	new text to be inserted
3.	~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading.	new text to replace existing text

TEXT OF AMENDMENT 106

TO THE

INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES

AIRWORTHINESS OF AIRCRAFT

ANNEX 8
TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

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Editorial Note.— Renumber the remaining chapters of current Part V as Part VA accordingly.

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Editorial Note.— The chapters for new Part VB are a replica of current Part V of Annex 8 and will be numbered accordingly.

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FOREWORD

Historical background

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On 7 October 2003, the Air Navigation Commission reviewed the recommendations of the Airworthiness Panel and in light of the observation that small aircraft of a maximum certificated take-off mass greater than 750 kg but not exceeding 5 700 kg are more engaged in international air navigation, it agreed to include in the Annex, for the first time, airworthiness Standards for small aeroplanes, making the text of Annex 8 consistent with its international use.

On 21 November 2013, the Air Navigation Commission reviewed the recommendations of the Airworthiness Panel and in light of the observation that small aircraft of a maximum certificated take-off mass below 750 kg are more engaged in international air navigation, agreed to amend, with an applicability date of

7 March 2021, the Annex airworthiness Standards for small aeroplanes, removing the lower take-off mass limit of Annex 8 consistent with its international use.

Applicability

The applicability of the Standards is indicated in 1.1, 2.1, 3.1 and 4.1 of Part II, in 1.1 of Parts IIIA and IVA, and in 1.1 of Parts IIIB, IVB, VA, VB, VI and VII. The dates were established so as to take account of the provisions of Article 41 of the Convention. However, the Council has recommended that, as far as practicable, earlier dates be applied.

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The Council has urged Contracting States not to impose on visiting aeroplanes operational requirements other than those established by the State of Registry, provided those requirements are not lower than the Standards of Chapter 5 of Annex 6, Part I, as amended by Amendment 2, 2.2 of Part IIIA and 2.2 of Parts IIIB, IVB, ~~and~~ VA and VB of this edition of Annex 8.

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PART I. DEFINITIONS

Appropriate airworthiness requirements. The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration ~~(see 3.2.2 of Part II of this Annex).~~

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Maintenance.[†] The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

Maintenance.[††] The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

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Maintenance organization's procedures manual.[††] A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

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Maintenance records.[††] Records that set out the details of the maintenance carried out on an aircraft, engine, propeller or associated part.

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[†] Applicable until 4 November 2020.
[††] Applicable as of 5 November 2020.

***Maintenance release*.**[††] A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.

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***Modification*.** A change to the type design of an aircraft, engine or propeller.

Note.— A modification may also include the embodiment of the modification which is a maintenance task subject to a maintenance release. Further guidance on aircraft maintenance – modification and repair is contained in the Airworthiness Manual *(Doc 9760).*

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Orphan aircraft type.— An aircraft which has its Type Certificate revoked by the State of Design, and no longer has a designated State of Design in accordance with Annex 8. These aircraft do not meet the Standards of Annex 8.

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Repair.[†] The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements.

***Repair*.**[††] The restoration of an ~~aeronautical product~~ aircraft, engine, propeller or associated part to an airworthy condition ~~as defined by~~ in accordance with the appropriate airworthiness requirements after it has been damaged or subjected to wear.

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PART II. PROCEDURES FOR CERTIFICATION AND CONTINUING AIRWORTHINESS

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CHAPTER 1. TYPE CERTIFICATION

1.1 Applicability

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The Standards of this chapter shall be applicable to all aircraft, and to engines and propellers if type certificated separately, for which the application for certification was submitted to a Contracting State on or after 13 June 1960, except that:

a) the provisions of 1.4 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate is submitted to the State of Design on or after 2 March 2004;

b) the provisions of 1.4 of this part shall only be applicable to an engine or propeller type for which an application for a Type Certificate is submitted to the State of Design on or after 10 November 2016; ~~and~~

[†] Applicable until 4 November 2020.
[††] Applicable as of 5 November 2020.

c) the provisions of 1.2.5 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate is submitted to the State of Design on or after 31 December 2014.; and

d) the provisions of 1.2.7 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate is submitted to the State of Design on or after 28 November 2024.

Note 1.— Normally, a request for a Type Certificate is submitted by the manufacturer when the aircraft, engine or propeller is intended for serial production.

Note 2.— For Part VB aeroplanes, guidance material concerning the appropriate airworthiness safety levels commensurate to acceptable risk levels, is contained in the Airworthiness Manual *(Doc 9760).*

1.2 Design aspects of the appropriate airworthiness requirements

. . .

1.2.2 **Recommendation.—** *As of 7 March 2021, when establishing the appropriate airworthiness requirements a risk-based proportionality approach should be applied.*

Note.— For Part VB aeroplanes, guidance material concerning the appropriate airworthiness safety levels commensurate to acceptable risk levels, is contained in the Airworthiness Manual *(Doc 9760).*

Editorial Note.— Renumber subsequent paragraphs.

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1.2.56 The approved design of an aircraft under Parts IIIB, IVB, VA and VB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Eighth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, Annex A, Group II, in the aircraft fire suppression or extinguishing systems in the lavatories, engines and auxiliary power unit.

1.2.7 The approved design of an aircraft under Part IIIB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Tenth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, Annex A, Group II, in the aircraft fire suppression or extinguishing systems for the cargo compartment.

Note.— Information concerning acceptable agents is contained in the report of the UNEP Halons Technical Options Committee Technical Note No. 1 — New Technology Halon Alternatives *and* FAA Report No. DOT/FAA/AR-11-31, Options to the Use of Halons for Aircraft Fire Suppression Systems.

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1.3 Proof of compliance with the appropriate airworthiness requirements

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1.3.2 **Recommendation.—** *As of 7 March 2021, Contracting States should balance risks and rigor in the determination of compliance based on the acceptable level of risk determined for the product.*

Note.— For the Type Certification of Part VB aeroplanes, the Airworthiness Manual *(Doc 9760) contains guidance material addressing how States may balance risks and rigor in the determination of compliance.*

Editorial Note.— Renumber subsequent paragraphs.

. . .

1.4 Issuance of Type Certificate

1.4.1 The State of Design, upon receipt of satisfactory evidence that the aircraft, engine or propeller type if certificated separately is in compliance with the design aspects of the appropriate airworthiness requirements, shall issue a Type Certificate to define the design and to signify its approval of the design of the aircraft type.

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1.5 Suspension of Type Certificate

1.5.1 When the State of Design takes action in accordance with its established procedures to suspend in whole or in part a Type Certificate for an aircraft, engine or propeller type, it shall immediately:

a) notify Contracting States of the suspension; the time period, if known, that the suspension is in force; the cause of the suspension; and any recommended action to be undertaken if the nature of the suspension affects the airworthiness of the affected aircraft, engine or propeller type; and

b) establish with the State of Manufacture, if other than the State of Design, any actions necessary to address their respective airworthiness responsibilities under the agreement or arrangement established in accordance with 2.4.4 of this part.

1.5.2 A Contracting State that issued a Type Certificate for an aircraft, engine or propeller type under 1.4.2 of this part, on the basis of the Type Certificate issued by the State of Design, shall immediately notify the State of Design of a suspension originated in respect of its equivalent Type Certificate.

1.5.3 During the period of suspension notified in 1.5.1 and 1.5.2, the State of Design shall continue to fulfil its assigned obligations on continuing airworthiness under Chapter 4.

1.5.4 The State of Design shall notify Contracting States and the State of Manufacture, if other than the State of Design, on a regular basis the status of the suspension and reinstatement of the suspended Type Certificate.

1.6 Revocation of Type Certificate

1.6.1 The State of Design shall establish procedures for the revocation of a Type Certificate when the organization responsible for the type design surrenders or abandons the Type Certificate, or ceases to exist, and as a result the continuing airworthiness responsibilities established under Chapter 4 of this part can no longer be fulfilled for the affected aircraft type in service. The procedures, at a minimum, shall include:

a) notification to all Contracting States of an intent to revoke a Type Certificate and the proposed termination of the production approval under 2.4 of this part; and

b) consultation with States of Registry for the collection, identification and establishment of supplemental airworthiness requirements considered necessary for the continued airworthiness of the candidate orphan aircraft type.

1.6.2 Except for reasons concerning the immediate safety of an aircraft type, the State of Design shall not unduly revoke a Type Certificate without providing ample notice and guidance to States of Registry that will be assuming ultimate responsibility for the continued airworthiness of orphaned aircraft in their civil register.

1.6.3 The State of Design shall notify Contracting States, including the State of Manufacture if other than the State of Design, of the revocation of a Type Certificate and the effective date on which it ceases to be the designated State of Design under Annex 8.

1.7 Transfer of Type Certificate

1.7.1 The State of Design shall establish procedures for the transfer of a Type Certificate that ensures continued compliance of the approved design of the aircraft, engine or propeller type with the appropriate airworthiness requirements:

a) for a transfer in which the State of Design remains the same; and

b) for a transfer in which the State of Design changes to another Contracting State.

1.7.2 The State of Design shall, upon completion of the transfer, issue or reissue its Type Certificate in accordance with 1.4.1 of this part.

1.7.3 Where the State of Manufacture of an aircraft, engine or propeller is not the State of Design, there shall be an agreement or arrangement in accordance with 2.4.4 and 4.2.2 of this part.

1.7.4 The State of Design shall notify all Contracting States of the transfer and the organization responsible for the type design for purposes of the continuing airworthiness reporting requirements under Chapter 4.

Note.— Guidance on the process for transfer of a Type Certificate is contained in the Airworthiness Manual *(Doc 9760).*

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CHAPTER 2. PRODUCTION

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2.4 Production approval

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2.4.2 **Recommendation.—** *As of 7 March 2021, a Contracting State should balance risks and rigor when approving production of aircraft or aircraft parts based on the acceptable level of risk determined for the product as specified by the State of Design.*

Note.— For the production approval of Part VB aeroplanes and their parts, the Airworthiness Manual *(Doc 9760) contains guidance material addressing how States may balance risks and rigor.*

Editorial Note.— Renumber subsequent paragraphs.

. . .

2.4.4~~5~~ Where the State of Manufacture is other than the State of Design, there shall be an agreement or arrangement acceptable to both States to:

a) ensure that the manufacturing organization has the right of access to the approved design data relevant for production purposes; ~~and~~

b) address the responsibilities of each State with regard to design, manufacture and continuing airworthiness of the aircraft~~.~~, engine or propeller during the period of the agreement or arrangement, including such period when the State of Design takes action to suspend in whole or in part the Type Certificate of the affected aircraft type; and

c) terminate the production approval under this part when the State of Design revokes the Type Certificate corresponding to that aircraft type.

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CHAPTER 3. CERTIFICATE OF AIRWORTHINESS

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3.2 Eligibility, ~~I~~issuance and continued validity of a Certificate of Airworthiness

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3.2.2 A Contracting State shall ~~not~~ issue or render valid a Certificate of Airworthiness for which it intends to claim recognition pursuant to Article 33 of the Convention on International Civil Aviation ~~unless it~~ when it has satisfactory evidence that the aircraft complies with the applicable Standards of this Annex through compliance with appropriate airworthiness requirements.

Note.— Some Contracting States facilitate the issuance of a "Special Certificate of Airworthiness" or similar to denote that an aircraft does not meet the Standards of Annex 8. While not valid for the purpose of international flight, such a document provides conditions and limitations that may be required by other Contracting States for the purpose of granting approvals to fly within or through their jurisdiction.

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CHAPTER 4. CONTINUING AIRWORTHINESS OF AIRCRAFT

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4.2 Responsibilities of Contracting States in respect of continuing airworthiness

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4.2.1 State of Design

4.2.1.1 The State of Design of an aircraft shall:

a) transmit to every Contracting State which has in accordance with 4.2.3 a) advised the State of Design of the aircraft that it has entered the aircraft on its register, and to any other Contracting State upon request,

any generally applicable information which it has found necessary for the continuing airworthiness and safe operation of the aircraft, including any engines and propellers, (hereinafter called mandatory continuing airworthiness information) ~~and notification of the suspension or revocation of a Type Certificate~~;

. . .

4.2.1.5 The State of Design shall ensure that sensitive aviation security information is not transmitted when distributing mandatory continuing airworthiness information.

4.2.1.6 The State of Design shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the States of Registry in accordance with Annex 17.

Note.— The Airworthiness Manual *(Doc 9760) contains guidance on the secure transmission of sensitive aviation security information.*

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4.2.3 State of Registry

4.2.3.1 The State of Registry shall:

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Note.— Guidance on interpretation of "the organization responsible for the type design" is contained in the Airworthiness Manual *(Doc 9760).*

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4.2.3.2 As of 5 November 2020, when approving a maintenance organization or accepting the approval of a maintenance organization issued by another Contracting State, the State of Registry shall ensure compliance with the Standards of Chapter 6 of this part.

Note.— Chapter 6 provides requirements for accepting the approval of a maintenance organization issued by another Contracting State.

4.2.3.3 The State of Registry shall ensure that sensitive aviation security information is not transmitted when distributing mandatory continuing airworthiness information.

4.2.3.4 The State of Registry shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the State of Design in accordance with Annex 17.

Note.— Guidance on the transmission of sensitive aviation security information is contained in the Airworthiness Manual *(Doc 9760).*

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CHAPTER 5. SAFETY MANAGEMENT

Note 1.— Until 4 November 2020, ~~S~~safety management provisions for organizations responsible for the type design or manufacture of aircraft are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) *(Doc 9859).*

Note 2.— As of 5 November 2020, ~~S~~safety management provisions for organizations responsible for the type design or manufacture of aircraft and for approved maintenance organizations are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) *(Doc 9859).*

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Editorial Note.— Chapter 6 is a new chapter in Annex 8, Part II.

CHAPTER 6. MAINTENANCE ORGANIZATION APPROVAL

Applicable 5 November 2020

6.1 Applicability

The Standards of this chapter are applicable to the approval of organizations involved in the maintenance of aircraft, engine, propeller and associated parts. Approval certificates issued before 5 November 2020 shall be amended before 5 November 2022 to ensure compliance with the requirements in 6.2.3.

6.2 Maintenance organization approval

6.2.1 The Contracting State concerned shall define appropriate requirements for the approval of a maintenance organization in accordance with the Standards of this chapter.

Note.— Guidance on the approval of an approved maintenance organization is contained in the Airworthiness Manual *(Doc 9760).*

6.2.2 The issuance of a maintenance organization approval by a Contracting State shall be dependent upon the applicant demonstrating compliance with the applicable Standards of this chapter through compliance with appropriate requirements defined in accordance with 6.2.1 and relevant provisions contained in Annex 19 for such organizations.

6.2.3 The approval certificate shall contain at least the following information:

a) the issuing authority and the name, title and signature of the person issuing the certificate;

b) the maintenance organization name and registered address;

c) the maintenance organization approval reference number;

d) the date of current issue;

e) in the case of certificates of limited duration, the expiration date;

f) the scope of approval, in relation to aircraft, component and/or specialized maintenance, and to the type of aircraft and components covered by the approval; and

g) the locations of the maintenance facilities, unless the information is included in a separate document referred to in the Certificate.

Note.— Guidance on the content of the approval certificate is contained in the Airworthiness Manual *(Doc 9760).*

6.2.3.1 **Recommendation.—** *The approval certificate should follow the template in Part II, Appendix 1 and contain the date of original issue if different from the date of current issue.*

6.2.4 The continued validity of the approval shall depend upon the organization remaining in compliance with the appropriate requirements of 6.2.1 and 6.2.2.

Note.— Guidance on a standardized approval certificate is contained in the Airworthiness Manual *(Doc 9760).*

6.2.5 The maintenance organization shall notify the Contracting State which issued the maintenance organization approval of any changes to the organization's scope of work, location or personnel nominated in accordance with this chapter.

6.2.6 Where a Contracting State accepts, in whole or in part, a maintenance organization approval issued by another Contracting State, it shall establish a process for the recognition of such approval and successive changes. In such a case, the recognizing Contracting State shall build an adequate liaison with the Contracting State that initially issued the maintenance organization approval.

6.3 Maintenance organization's procedures manual

6.3.1 The maintenance organization shall provide for the use and guidance of maintenance personnel concerned a procedures manual which may be issued in separate parts containing the following information:

a) a general description of the scope of work authorized under the organization's terms of approval;

b) a description of the organization's procedures and quality or inspection system in accordance with 6.4;

c) a general description of the organization's facilities;

d) names and duties of the person or persons required by 6.6.1 and 6.6.2;

e) a description of the procedures used to establish the competence of the maintenance personnel required by 6.6.4;

f) a description of the method used for the completion and retention of the maintenance records required by 6.7;

g) a description of the procedures for preparing the maintenance release and the circumstances under which the release is to be signed;

h) the personnel authorized to sign the maintenance release and the scope of their authorization;

i) a description, when applicable, of contracted activities;

j) a description, when applicable, of the additional procedures for complying with an operator's maintenance procedures and requirements;

k) a description of the procedures for complying with the information reporting requirements of Annex 8, Part II, 4.2.3 f) and 4.2.4;

l) a description of the procedure for receiving, assessing, amending and distributing within the maintenance organization all necessary airworthiness data from the organization responsible for the type design; and

m) a description of the procedures for implementing changes affecting the approval of the maintenance organization.

6.3.2 The maintenance organization shall ensure that the procedures manual is amended as necessary to keep the information contained therein up to date.

6.3.3 The maintenance organization shall furnish copies of all amendments to the procedures manual promptly to all organizations or persons to whom the manual has been issued.

Note.— Guidance on the content of a maintenance organization's procedures manual is contained in the Airworthiness Manual (*Doc 9760).*

6.4 Maintenance procedures and quality assurance system

6.4.1 The maintenance organization shall establish procedures, acceptable to the Contracting State granting the approval, which ensure good maintenance practices and compliance with all relevant Standards prescribed in 6.2.1 and 6.2.2.

6.4.2 The maintenance organization shall ensure compliance with 6.4.1 by either establishing an independent quality assurance system to monitor compliance with, and adequacy of, the procedures, or by providing a system of inspection to ensure that all maintenance is properly performed.

6.5 Facilities

6.5.1 The maintenance organization shall provide appropriate facility(s) and working environment for the task to be performed.

Note.— Guidance on requirements for approved maintenance organization facilities is contained in the Airworthiness Manual *(Doc 9760).*

6.5.2 The maintenance organization shall have the necessary technical data, equipment, tools and material to perform the work for which it is approved.

6.5.3 The maintenance organization shall ensure that storage conditions provide adequate security and prevent deterioration of, and damage to, stored items such as parts, equipment, tools and material.

6.6 Personnel

6.6.1 The maintenance organization shall nominate an accountable executive who, irrespective of other functions, is accountable on behalf of the organization.

Note.— Guidance on the responsibilities of an accountable executive is contained in the Airworthiness Manual (*Doc 9760) and the* Safety Management Manual (SMM) (*Doc 9859).*

6.6.2 The maintenance organization's accountable executive shall nominate a person or group of persons whose responsibilities include ensuring that the maintenance organization is in compliance with the requirements of 6.2.1 and 6.2.2.

6.6.3 The maintenance organization shall employ the necessary personnel to plan, perform, supervise, inspect and release the maintenance work to be performed.

6.6.4 The maintenance organization shall establish the competence of maintenance personnel in accordance with procedures and to a level acceptable to the Contracting State granting the approval. If the person signing the maintenance release is a non-licensed person, the person shall meet the qualification requirements specified in Annex 1 to sign a maintenance release.

6.6.5 The maintenance organization shall ensure that all maintenance personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training programme established by the maintenance organization shall include training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew.

Note.— Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual *(Doc 9683).*

6.7 Records

6.7.1 The maintenance organization shall retain detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.

6.7.2 The records required by 6.7.1 shall be kept for a minimum period of one year after the signing of the maintenance release.

6.7.3 Records kept in accordance with 6.7 shall be maintained in a form and format that ensures readability, security and integrity of the records at all times.

Note 1.— The form and format of the records may include, for example, paper records, film records, electronic records or any combination thereof.

Note 2.— Guidance regarding electronic aircraft maintenance records is included in the Airworthiness Manual *(Doc 9760).*

6.8 Maintenance release

6.8.1 A maintenance release shall be completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and the procedure described in the maintenance organization's procedures manual.

6.8.2 A maintenance release shall be signed and include the following:

a) basic details of the maintenance carried out including detailed reference of the data used;

b) the date such maintenance was completed;

c) the identity of the approved maintenance organization; and

d) the identity of the person or persons signing the release.

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PART IIIB. AEROPLANES OVER 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 2 MARCH 2004

CHAPTER 1. GENERAL

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1.2 Number of engines

1.2.1 As of 7 March 2021, the aeroplane shall have not less than two engines.

Editorial Note.— Renumber existing paragraphs 1.2 to 1.4.

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CHAPTER 2. FLIGHT

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2.4 Stability and control

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2.4.2 Stalling

2.4.2.1 *Stall warning*. Until 7 March 2021, w~~W~~hen the aeroplane approaches a stall both in straight and turning flight with all engines operating, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations and powers or thrusts, except those which are not considered to be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.

2.4.2.1 Stall warning. As of 7 March 2021, w~~W~~hen the aeroplane approaches a stall both in straight and turning flight ~~with all engines operating~~, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations and powers or thrusts, except those which are not considered to be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.

. . .

CHAPTER 4. DESIGN AND CONSTRUCTION

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4.2 Systems design features

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g) *Cargo compartment protection*.

. . .

3) until 7 March 2021, cargo compartment fire suppression systems, including their extinguishing agents, shall be designed so as to take into account a sudden and extensive fire such as could be caused by an explosive or incendiary device or dangerous goods.

3) as of 7 March 2021, for aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60, cargo compartment fire suppression systems, including their extinguishing agents, shall be designed so as to take into account a sudden and extensive fire such as could be caused by an explosive or incendiary device or dangerous goods.

. . .

PART V. SMALL AEROPLANES — PART VA. AEROPLANES OVER 750 KG BUT NOT EXCEEDING 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 13 DECEMBER 2007 BUT BEFORE 7 MARCH 2021

CHAPTER 1. GENERAL

1.1 Applicability

1.1.1 The Standards of this part are applicable in respect of all aeroplanes designated in 1.1.2 for which an application for the issue of a Type Certificate is submitted to the appropriate national authorities on or after 13 December 2007 but before 7 March 2021.

. . .

CHAPTER 2. FLIGHT

. . .

2.4 Stability and control

. . .

2.4.2 Stalling

2.4.2.1 *Stall warning.* Until 7 March 2021, w~~W~~hen the aeroplane approaches a stall both in straight and turning flight, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations, except those which are not considered to be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development

of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.

2.4.2.1 Stall warning. As of 7 March 2021, w~~W~~hen the aeroplane approaches a stall both in straight and turning flight, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations and powers or thrusts, except those which are not considered to be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.

. . .

Editorial Note.— The text of new Part VB is a replica of current Part V of Annex 8.

PART VB. AEROPLANES ~~OVER 750 KG BUT~~ NOT EXCEEDING 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER ~~13 DECEMBER 2007~~ 7 MARCH 2021

Applicable 7 March 2021

CHAPTER 1. GENERAL

1.1 Applicability

1.1.1 The Standards of this part are applicable in respect of all aeroplanes designated in 1.1.2 for which an application for the issue of a Type Certificate is submitted to the appropriate national authorities on or after ~~13 December 2007~~ 7 March 2021.

1.1.2 Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to all aeroplanes having a maximum certificated take-off mass ~~greater than 750 kg but~~ not exceeding 5 700 kg intended for the carriage of passengers or cargo or mail in international air navigation.

Note 1.— ~~The aeroplanes described in 1.1.2 are known in some States as normal, utility and aerobatic category aeroplanes.~~ Guidance material concerning the appropriate airworthiness safety levels commensurate to acceptable risk levels is contained in the Airworthiness Manual *(Doc 9760).*

. . .

1.4 Proof of compliance

The means by which compliance with the appropriate airworthiness requirements is demonstrated shall ensure that in each case the accuracy achieved will be such as to provide reasonable assurance that the aeroplane, its components and equipment comply with the requirements and are reliable and function correctly under the anticipated operating conditions.

Note.— Guidance on the proportionality approach in respect of reasonable assurance for compliance with appropriate airworthiness requirements is contained in the Airworthiness Manual *(Doc 9760).*

. . .

CHAPTER 2. FLIGHT

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2.2 Performance

2.2.1 Sufficient data on the performance of the aeroplane shall be determined and ~~scheduled~~ furnished in the flight manual to provide operators with the necessary information for the purpose of determining the maximum total mass of the aeroplane ~~on the basis of the values, peculiar to the proposed flight, of the relevant operational parameters, in order~~ at the time of take-off that would allow the flight ~~may~~ to be made with reasonable assurance that a safe minimum performance for that flight will be achieved considering the values of the operational parameters peculiar to the proposed flight.

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CHAPTER 4. DESIGN AND CONSTRUCTION

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4.5 Electrical bonding and protection against lightning and static electricity

4.5.1 Electrical bonding ~~and~~, protection against ~~lightning and~~ static electricity and lightning protection when appropriate for the type of approved operation shall be such as to:

a) protect the aeroplane, its systems, its occupants and those who come in contact with the aeroplane on the ground or water from the dangerous effects of lightning discharge and electrical shock; and

b) prevent dangerous accumulation of electrostatic charge.

4.5.2 When appropriate for the type of approved operation, ~~T~~the aeroplane shall also be protected against catastrophic effects of lightning. Due account shall be taken of the material used in the construction of the aeroplane.

. . .

CHAPTER 7. OPERATING LIMITATIONS AND INFORMATION

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7.4 Performance information

The performance of the aeroplane shall be ~~scheduled~~ furnished in accordance with 2.2. There shall be included information regarding the various aeroplane configurations and powers or thrusts involved and the relevant speeds, together with information that would assist the flight crew in attaining the performance as ~~scheduled~~ furnished.

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CHAPTER 8. CRASHWORTHINESS AND CABIN SAFETY

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8.2 Design emergency landing loads

~~8.2.1 For aeroplanes for which application for certification was submitted before 24 February 2013, emergency landing (crash) loads shall be determined for all categories of aeroplanes so that the interiors, furnishings, support structure and safety equipment can be designed to maximize survivability for the occupants. Items to be considered shall include:~~

~~a) dynamic effects;~~

~~b) restraint criteria for items that could cause a hazard;~~

~~c) distortion of the fuselage in the areas of emergency exits;~~

~~d) fuel cell integrity and position; and~~

~~e) integrity of electrical systems to avoid sources of ignition.~~

8.2.1.~~2 For aeroplanes for which application for certification was submitted on or after 24 February 2013, e~~Emergency landing (crash) loads shall be determined so that the interiors, furnishings, support structure and safety equipment can be designed to protect the occupants under emergency landing conditions. Items to be considered shall include:

. . .

PART VII. PROPELLERS

. . .

CHAPTER 2. DESIGN AND CONSTRUCTION

2.1 Functioning

The propeller assembly shall be designed and constructed so as to function reliably within its operating limitations under its anticipated operating conditions when installed in accordance with Parts IIIB or VA and VB of this Annex and shown to be not hazardous.

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Editorial Note.— Insert new Appendix in Part II as shown below:

APPENDIX 1. APPROVED MAINTENANCE ORGANIZATION CERTIFICATE (AMO)

(Note. — See Part II. Chapter 6, 6.2.3 and 6.2.3.1)

Applicable 5 November 2020

1. Purpose and scope

1.1 **Recommendation.—** *The AMO certificate should contain the minimum information required in paragraph 2.*

1.2 **Recommendation.—** *The AMO certificate should define the scope of approval for which a maintenance organization is authorized.*

Note.— Detailed guidance and examples for the completion of the AMO template in paragraph 2 is contained in the Airworthiness Manual *(Doc 9760).*

2. AMO template

APPROVED MAINTENANCE ORGANIZATION CERTIFICATE		
ISSUING AUTHORITY[1]:		
Approval reference No[2]:	**Organization Name[3]:** Registered Address: Telephone: Email:	**Expiration date (if applicable)[4]:**
CLASS(ES) AND RATING(S) AUTHORIZED		
CLASS[5]	**RATING[6]**	**LIMITATIONS[7]**
Aircraft maintenance		
Engine maintenance		
Component maintenance		
Specialized maintenance		

Terms of Approval

This certificate certifies that [8]_____ is authorized to engage in activities specified in the Terms of Approval annexed hereto, subject to the compliance with the [9]_____ and the latest maintenance organization's procedures manual.

Locations of maintenance facilities: As per[10]_____ of the latest Maintenance organization's procedure manual.

This Certificate shall remain valid during the period of validity specified above unless it is surrendered, superseded, suspended or revoked.

Name[11]: Date of original issue[12]:_____

Title[13]:

Signature[14]:_____ Date of current issue[15]:_____

Notes.—

1. *Insert name of the Authority issuing the approval.*
2. *Replace with unique approval reference number as issued by the State of Registry.*
3. *Insert registered address, telephone and email.*
4. *Insert expiry date (dd-mm-yyyy) if applicable, if not applicable, insert N/A*
5. *Insert the scope of approval using the classes as follows: aircraft, engine, component or specialized maintenance.*
6. *Insert the scope of approval using the ratings as follows:*
   a) *Aircraft maintenance — Large aeroplane, small aeroplane, helicopter, other kind of aircraft (such as glider, balloon, airship, light sport aircraft, etc.).*

b) Engine maintenance — Insert categories of engine (such as reciprocating, turbine and electric).

c) Components maintenance — insert the standard numbering system (SNS) code derived from ASD/ATA S1000D specification for identifying the aircraft system applicable to the rating. (Refer to Chapter 10, Attachment F of the Airworthiness Manual (Doc 9760) for guidance.)

d) Specialized maintenance — insert the class of approval necessary for the specialized maintenance using the following ratings: composite material maintenance, surface treatment such as peening, plating, painting, non-destructive testing, welding, other - unique processes accepted/approved by the State. (Refer to Chapter 10, Attachment F of the Airworthiness Manual *(Doc 9760) for guidance.)*

7. Insert the limitation in the scope of approval if required for aircraft, components or specialized maintenance. If the limitations are described in the approved maintenance organization's procedures manual a reference to the manual should be included in the certificate.

8. Insert the name of organization authorized to perform maintenance. In the case where a State does not annex terms of approval to the AMO certificate, the State should amend item[8] as follows:

This certificate certifies that [8]_____ is authorized to engage in activities listed in this certificate, subject to compliance with the [9]_____ and the latest maintenance organization's procedures manual.

9. Insert reference to relevant State regulations.

10. Insert reference to the appropriate section / chapter and paragraph of the maintenance organization's procedures manual in which the approved locations of the organization's facilities are listed. For example Section/Chapter 1, paragraph 1.1.

11. Insert the name of the authority representative signing the certificate.

12. Insert the date of original issue (if different from the date of current issue), if not, insert N/A.

13. Insert the title of the authority representative signing the certificate.

14. Insert signature of the authority representative. In addition, an official stamp may be applied on the AMO certificate.

15. Insert issuance date of the AMO certificate (dd-mm-yyyy).

— END —