Acceptable Means of Compliance and Guidance Material to Annex I (Part 21) to Regulation (EU) No 748/2012, Issue 2, Amendment X

Annex XXX to ED Decision 202X/XXX/R

'AMC and GM to Part 21 — Issue 2, Amendment X'

The amendments are presented as follows:

— deleted text is ~~struck through~~;

— new text is highlighted;

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

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Disclaimer

This document is provided for information purposes only.

No quality control has been performed.

Note to the reader

In amended, and in particular in existing (that is, unchanged) text, 'Agency' *is used interchangeably with* 'EASA'*. The interchangeable use of these two terms is more apparent in the consolidated versions. Therefore, please note that both terms refer to the* 'European Union Aviation Safety Agency (EASA)'*.*

[…]

SECTION A

[…]

SUBPART D — CHANGES TO TYPE-CERTIFICATES AND RESTRICTED TYPE-CERTIFICATES

[…]

GM 21.A.91 Classification of changes to a type certificate

[…]

3. ASSESSMENT OF A CHANGE FOR CLASSIFICATION

[…]

3.7 Complementary guidance ~~for~~ on the classification of changes to certified noise and emissions levels

Volumes I and III of ICAO Doc 9501 'Environmental Technical Manual' (ETM) and Volume II of ICAO Annex 16 lay down the criteria of a 'no-acoustical change', 'no-CO_2 change' and 'no emissions change'.

Changes that exceed the criteria for a 'no-acoustical change', ~~a 'no emissions change' or~~ a 'no-CO_2 change' or a 'no emissions change'~~, which are defined in Volumes I, II and III of ICAO Doc 9501 'Environmental Technical Manual', modify the~~ result in new certified noise or emissions levels and as such are classified as major changes.

~~The applicant is encouraged to seek the support of EASA for the determination of a 'no-acoustical change', a 'no emissions change' or a 'no CO_2 change' in case the determination methods differ from those in ICAO Doc 9501, and for the classification of the change in case this classification is uncertain.~~

Examples of changes that might have an appreciable effect on the certified noise and emissions levels are provided in Section 8 of Appendix A to GM 21.A.91.

To determine whether a change listed in Section 8 of Appendix A to GM 21.A.91 results in a 'no-acoustical change', a 'no-CO_2 change' or a 'no emissions change', the applicant proposes to the Agency the use of procedures from Annex 16, the ETM, or equivalent procedures.

[…]

SUBPART F — PRODUCTION WITHOUT PRODUCTION ORGANISATION APPROVAL

[…]

AMC No 1 to 21.A.130(b) Statement of conformity for complete aircraft

[…]

3. COMPLETION OF THE AIRCRAFT STATEMENT OF CONFORMITY BY THE ORIGINATOR

[…]

Block 14 Remarks: Any statement, information, particular data or limitation which may affect the airworthiness of the aircraft. If there is no such information or data, state: 'NONE'. If the competent authority has ~~endorsed~~ granted an exemption from the applicable CO_2 emissions production cut-off ~~exemption~~ requirements of Annex 16, Volume III, make the following record: 'Aeroplane exempted from the applicability of ~~paragraph 2.1.1 [x] as referenced in the 1st Edition of~~ [Reference to the production cut-off requirement paragraph of Annex 16, Volume III]~~, Part II, Chapter 2 (July 2017)~~.'

[…]

AMC1 21.A.130(b)(4)(ii) Statement of conformity

APPLICABLE AEROPLANE CO_2 EMISSIONS REQUIREMENTS

This determination is made according to the data provided by the aeroplane type-certificate holder. This data should allow the determination of whether the aeroplane complies with the CO_2 emissions applicability requirements in Chapter 2, paragraph 2.1.1, and Chapter 3, paragraph 3.1.1, of Part II of Volume III of Annex 16 to the Chicago Convention.

It should be noted that the competent authority has the possibility to grant exemptions as noted in ~~Chapter 1, paragraph 1.11 and~~ Chapter 2, paragraph 2.1.3, and Chapter 3, paragraph 3.1.3, of Part II of Volume III of Annex 16 to the Chicago Convention~~,~~.

[…]

AMC1 21.A.165(c)(3)(ii) Obligations of the holder

APPLICABLE AEROPLANE CO_2 EMISSIONS REQUIREMENTS

This determination is made according to the data provided by the aeroplane type-certificate holder. This data should allow the determination of whether the aeroplane complies with the CO_2 emissions applicability requirements in Chapter 2, paragraph 2.1.1, and Chapter 3, paragraph 3.1.1, of Part II of Volume III of Annex 16 to the Chicago Convention.

It should be noted that the competent authority has the possibility to grant exemptions as noted in ~~Chapter 1, paragraph 1.11 and~~ Chapter 2, paragraph 2.1.3, and Chapter 3, paragraph 3.1.3, of Part II of Volume III of Annex 16 to the Chicago Convention.

[…]

SECTION B

[…]

SUBPART B — TYPE-CERTIFICATES AND RESTRICTED TYPE-CERTIFICATES

[…]

GM2 21.B.85 Applicable environmental protection requirements for a type certificate or restricted type certificate

APPLICABLE ENVIRONMENTAL PROTECTION REQUIREMENTS

[…]

2. 21.B.85(a) — ICAO Annex 16, Volumes I, II and III

The applicable environmental protection requirements are the Standards and Recommended Practices (SARPs) in Volume I, Volume II and Volume III of Annex 16 to the Chicago Convention ('ICAO Annex 16') for aircraft and engines for which the first subparagraph of Article 9(2) of Regulation (EU) 2018/1139 applies. The applicable SARPs are those contained in Volume I, Volume II and Volume III of ICAO Annex 16 including all amendments up to the latest amendment referred to in the first subparagraph of Article 9(2) of Regulation (EU) 2018/1139. These requirements apply to products which fall within the scope of those volumes and ensure compliance with the essential requirements for environmental compatibility as laid down in Annex III to Regulation (EU) 2018/1139.

Table 1 below provides the correspondence between the amendment levels ~~of amendment~~ of Volume I, Volume II and Volume III of ICAO Annex 16 and the related EU regulations that have implemented these amendment levels ~~of amendment~~ since 2003, as well as the respective applicability dates.

Table 1: ICAO Annex 16 Volumes I, II and III levels of amendment and the related EU regulations

ICAO Annex 16		**EU regulations**	
Volumes Amendment levels	**Applicability dates**	**Regulations**	**Applicability dates**
Volume I			
Amendment 15	01/01/2027	Regulation (EU) 20XX/XXXX	DD/MM/YYYY
Amendment 14	01/01/2024	Regulation (EU) 2025/870*	25/05/2025
Amendment 13	01/01/2021	Regulation (EU) 2021/1087*	25/07/2021
Amendment 12	01/01/2018	Regulation (EU) 2018/1139 (Art.9)	11/09/2018
Amendment 11-B	01/01/2015	Regulation (EU) 2016/4*	26/01/2016
Amendment 10	17/11/2011	Regulation (EU) No 6/2013*	29/01/2013
Amendment 9	20/11/2008	Regulation (EC) No 690/2009*	20/08/2009
Amendment 8	24/11/2005	Regulation (EC) No 216/2008 (Art.6)	29/03/2007
		Regulation (EC) No 334/2007*	29/03/2007
Amendment 7	21/03/2002	Regulation (EC) No 1701/2003*	28/09/2003
Amendment 6	04/11/1999	Regulation (EC) No 1592/2002 (Art.6)	28/09/2003
Volume II			
Amendment 12	01/01/2027	Regulation (EU) 20XX/XXXX	DD/MM/YYYY
Amendment 11	01/01/2024	Regulation (EU) 2025/870*	25/05/2025
Amendment 10	01/01/2021	Regulation (EU) 2021/1087*	25/07/2021
Amendment 9	01/01/2018	Regulation (EU) 2018/1139 (Art.9)	11/09/2018
Amendment 8	01/01/2015	Regulation (EU) 2016/4*	26/01/2016
Amendment 7	17/11/2011	Regulation (EU) No 6/2013*	29/01/2013
Amendment 6	20/11/2008	Regulation (EC) No 690/2009*	20/08/2009

Amendment 5	24/11/2005	Regulation (EC) No 216/2008 (Art.6)	29/03/2007
		Regulation (EC) No 334/2007*	29/03/2007
Amendment 4	04/11/1999	Regulation (EC) No 1701/2003*	28/09/2003
		Regulation (EC) No 1592/2002 (Art.6)	28/09/2003
Volume III			
Amendment 3	01/01/2027	Regulation (EU) 20XX/XXXX	DD/MM/YYYY
Amendment 2	01/01/2024	Regulation (EU) 2025/870*	25/05/2025
Amendment 1	01/01/2021	Regulation (EU) 2021/1087*	25/07/2021
1st Edition	01/01/2018	Regulation (EU) 2018/1139 (Art.9)	11/09/2018

*: Regulations that amend Article 6 of Regulations (EC) No 1592/2002 and (EC) No 216/2008, and Article 9 of Regulation (EU) 2018/1139

GM1 21.B.85(a) Applicable environmental protection requirements for a type certificate or restricted type certificate

CONTENT OF ICAO ANNEX 16 (VOLUMES I, II AND III)

1. VOLUME I OF ICAO ANNEX 16 — AIRCRAFT NOISE

1.1. SARPs

[…]

1.1.2. Part II

Chapter 1 of Part II of that volume on administration includes the overall applicability of that part.

Each other chapter of that part applies to a specific aircraft ~~type~~ category for a given date of application for a type certificate or for the certification of ~~their~~ its derived versions. These chapters contain the noise level limits that shall not be exceeded, and some reference criteria.

[…]

2. VOLUME II OF ICAO ANNEX 16 — AIRCRAFT ENGINE EMISSIONS

2.1. SARPs

[…]

2.1.3. Part III

[…]

The information below summarises the applicability categories. The detailed criteria provided in Part III are essential to determine the related applicable emissions regulatory levels.

Standards for new type and model designs and their derivative versions

These standards apply to aircraft engines of a type or model (and their derivative versions) for which an application for a type certificate was submitted on or after a given date.

Standards for first individual production models

These standards apply to aircraft engines of a type or model (and their derivative versions) for which the date of manufacture of the first individual production model was on or after a given date. The emissions regulatory levels that are ~~shall~~ not to be exceeded for these aircraft engines are different from those for new type design aircraft engines.

These standards are minimum requirements for continued production of an aircraft engine (production cut-off standards).

Standards for changes

These standards (in Chapters 2 and 4) address a change to an engine type resulting in a new derivative version and a change to an existing derivative version. They relate to the 'no emissions change' criterion that is considered for the classification of a change (as per point 21.A.91).

2.1.4. Part IV

[…]

3. VOLUME III OF ICAO ANNEX 16 — AEROPLANE CO_2 EMISSIONS

3.1. SARPs

[…]

3.1.2. Part II

Chapter 1 of Part II of that volume on administration includes the overall applicability of that part.

The other ~~C~~chapters ~~2~~ of that part define~~s~~ the applicability to specific aeroplane types and their related maximum permitted CO_2 emissions evaluation metric value. ~~It~~They also contain~~s~~ some reference criteria.

The information below summarises the applicability categories. The detailed criteria provided in the ~~C~~chapters ~~2~~ are essential to determine the related applicable maximum permitted CO_2 emissions evaluation metric values. The applicability provisions ~~in Chapter 2 shall~~ are to be applied in conjunction with the definitions of a 'derived version of a non-CO_2-certified aeroplane' and a 'derived version of a CO_2-certified aeroplane', as contained in Part I, Chapter 1. These definitions include additional criteria for the determination of the applicable CO_2 standard for such aeroplanes.

Standards for new type designs and their derived versions

These standards apply to aeroplanes and their derived versions for which the application for a type certificate was submitted on or after a given date (and in some cases before a given date)(~~1 January 2020 and 1 January 2023 in~~ e.g. Sections 2.1.1(a) to (c) and 3.1.1(a) and (b)).

Standards for individual ~~non-CO_2-certified~~ aeroplanes

These standards apply to aeroplanes ~~for which a type certificate was issued but that were not certified for CO_2 emissions in accordance with Volume III of ICAO Annex 16, and~~ for which the individual certificate of airworthiness (CofA) was first issued on or after a given date (and in some cases before a given date) ~~(1 January 2028 in~~ e.g. Sections 2.1.1~~.~~(f) and (g) and 3.1.1(c) and (d)).

These standards are production cut-off standards.

Standards for derived versions of non-CO_2-certified aeroplanes

These standards apply to individual aeroplanes for which a type certificate was issued but ~~that~~ were not certified for CO_2 emissions in accordance with Volume III of ICAO Annex 16, and for which:

the application for approval of a change to the type certificate was submitted on or after a given date and before a given date (~~1 January 2023~~ ~~in~~ e.g. Sections 2.1.1(d) and (e)); and

the change in the type design is made (i.e. applied to the individual aeroplane) prior to the issuance of the first CofA.

3.1.3. Appendices

[…]