



European Union Aviation Safety Agency

# Comment-Response Document (CRD) 2023-09

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RELATED TO NPA 2023-09 — RMT.0514 (SUBTASK 2)

24.5.2024

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## 1. Summary of the outcome of the consultation

34 comments were received from 11 stakeholders. Table 1 provides the number of comments received from each commentator.

**Table 1**

COMMENTATORS	# OF COMMENTS
<b><u>National competent authorities</u></b>	
CAA-Norway TFH	1
Civil Aviation Authority the Netherlands	8
FOCA Switzerland	1
DE-LBA	1
Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)	2
<b><u>Industry</u></b>	
Airbus	10
Airbus Helicopters	3
ATR	2
Embraer S.A.	3
Europe Air Sports	1
Kopter / Leonardo	2
<b>Total 34</b>	

Table 2 provides the number of comments received per topic.

**Table 2**

NPA 2023-09 TOPICS	# OF COMMENTS
General comments and other sections	6
21.B.70 CS-34, CS-36, CS-CO <sub>2</sub>	3
21.B.85	2
GM 21.A.20(d)	1
GM 21.A.91	4
GM1 21.A.174	7
GM1 21.B.85(a)	4
Appendix VII – EASA Form 45	1
Quality of the NPA*	6

\*Not published with the CRD

Table 3 provides the share of EASA's position.

**Table 3**

	ACCEPTED	PARTIALLY ACCEPTED	NOTED	NOT ACCEPTED	Total
# of occurrences	4	7	15	8	34
percentage	12 %	20 %	44 %	24 %	100 %

## 2. Individual comments and responses

In responding to the comments, the following terminology is applied to attest EASA's position:

- (a) **Accepted** — EASA agrees with the comment and any proposed change is incorporated into the text.
- (b) **Partially accepted** — EASA either partially agrees with the comment or agrees with it but the proposed change is partially incorporated into the text.
- (c) **Noted** — EASA acknowledges the comment, but no change to the text is considered necessary.
- (d) **Not accepted** — EASA does not agree with the comment or proposed change.

### (General Comments)

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comment	1	comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i>
		Thank you for the opportunity to comment on NPA 2023-09 (A). Please be advised that there are no comments on this part (A) from the Swedish Transport Agency.
response		<b>Noted</b>
comment	10	comment by: <i>Civil Aviation Authority the Netherlands</i>
		The Netherlands civil aviation authorities support the update of the applicable environmental protection requirements. There are no comments on NPA 2023-09, part A.
response		<b>Noted</b>
comment	13	comment by: <i>FOCA Switzerland</i>
		The Federal Office of Civil Aviation (FOCA) in Switzerland would like to thank the EASA for giving the opportunity to comment this NPA. Our experts do not see any issues with this NPA 2023-09 and do not have any comments.
response		<b>Noted</b>

### d. Rationale for the proposed regulatory material

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comment	2	comment by: <i>LHD</i>
		Kopter / Leonardo supports the proposed amendment to 21.B.85, which finally provides clear traceability of the determination of the Environmental Protection requirements back to the applicable amendments of ICAO Annex 16 Volumes specified in the Basic Regulation.
response		<b>Noted</b>



comment	<p>11 <span style="float: right;">comment by: ATR</span></p> <p><b>21.B.70 - Certification Specifications</b> Proposed NPA states that [QUOTE] <i>As such, 21.B.70 is amended to delete the reference to environmental protection.</i> [UNQUOTE]</p> <p>Could the EASA thus clarified what would be the impact of such amendment on CS-34, CS-36 and CS-CO<sub>2</sub> ?</p>
response	<p><b>Noted</b></p> <p>(See also Section 2.3(d) of NPA 2023-09(A))</p> <p>CS-34, CS-36 and CS-CO<sub>2</sub> were issued to clarify which Appendices to Annex 16 should be used as acceptable means to demonstrate compliance to the applicable environmental requirements, since these Appendices were excluded from the essential requirements in Article 6 of the former Basic Regulations. These CSs were not the applicable environmental protection requirements designated by EASA for the certification of products and as such were not relevant for the certification basis of the product. The relevant basis for the certification of the product is the level of amendment of Vol. I, II and III of Annex 16 as specified in Article 9 of the current Basic Regulation. Therefore, the proposed amendment to 21.B.70 has no implication on the compliance demonstration for the applicants.</p> <p>EASA will consider removing the content from CS-34, CS-36 and CS-CO<sub>2</sub>.</p>
comment	<p>12 <span style="float: right;">comment by: ATR</span></p> <p><b>21.B.85 Applicable environmental protection requirements</b> The NPA states [QUOTE] <i>21.B.85 is amended to include the reference to the essential requirements in the first subparagraph of Article 9(2) of the Basic Regulation.</i> [UNQUOTE]</p> <p>Could the EASA thus clarified what would be the impact of such amendment on CS-34, CS-36 and CS-CO<sub>2</sub> ?</p>
response	<p><b>Noted</b></p> <p>(See also the response to Comment #11.)</p> <p>There is no impact on CS-34, CS-36 and CS-CO<sub>2</sub> since 21.B.85 relates to the applicable environmental protection requirements.</p> <p>While the Basic regulation always applies, the change in 21.B.85 is to clarify the applicable environmental protection requirements referring to the latest adopted SARPs in Annex 16, Vol. I, II and III, as provided for in Article 9 of the Basic Regulation.</p>
comment	<p>14 <span style="float: right;">comment by: AIRBUS HELICOPTERS</span></p> <p>On page 9, with regard to the Notice of Proposed Amendment 2023-09 (A) : d. Rationale for the proposed regulatory material</p>

	<p>Table 2: Proposed amendments to Annex I to Regulation (EU) No 748/2012 and its related AMC and GM                  Last sentence of the point 21.B.70 :                  " [...] As such, CS-34, CS-36 and CS-CO2 are not relevant anymore and were amended with ED Decision 2021/011/R to simply point to the applicable environmental protection in Part 21."</p> <p><b>Airbus Helicopters Comment :</b>                  Airbus Helicopters TCDS are currently referring to CS-34 for fuel venting and CS-36 for noise.                  Airbus Helicopters suggests that a GM be created to explain which fuel venting and noise information and which ICAO volumes and applicable amendments are expected in the TCDS for the following cases :                  a) current TCDS with no change to TC impacting noise or emissions before and after the Part-21 update in accordance with RMT.0514 (in other words, can we keep the TCDS unchanged referring to CS-34 and CS-36 ?)                  b) new TCDS with no change to TC impacting noise or emissions before and after the Part-21 update                  c) new TCDS with a change to TC impacting noise or emissions before and after the Part-21 update</p>
<p>response</p>	<p><b>Not accepted</b></p> <p>(See also the responses to Comments #11 and #12)</p> <p>The TCDS/TCDSN refer to the level of amendment of the Volumes of Annex 16 applicable to the product (not only to CS-34, CS-36 and CS-CO<sub>2</sub>). CS-34, CS-36 and CS-CO<sub>2</sub> do not contain the applicable environmental protection requirements.</p> <p>The applicable environmental protection requirements for a change are the latest adopted SARPs in the Volumes of Annex 16 as provided for in Article 9 of the Basic Regulation. How to consider a change is determined by Annex 16 and the related ICAO Doc 9501.</p> <p>The amendment to 21.B.70 does not have an impact on the existing CS-34, CS-36 and CS-CO<sub>2</sub> (see the response to Comment #11) and has no impact on the environmental protection requirements applicable for a change.</p> <p>Future TCDS may no longer refer to CS-34, CS-36 and CS-CO<sub>2</sub>. For existing TCDS, those references may be removed if a new revision of the TCDS is released.</p>

<b>(General Comments)</b>	-
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comment	4	comment by: DE-LBA
	LBA has no comments.	

response	<b>Noted</b>
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comment	7	comment by: Civil Aviation Authority the Netherlands
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response	The Netherlands civil aviation authorities has no comments on NPA 2023-09 Part B. <b>Noted</b>
comment	21 <span style="float: right;">comment by: <i>Europe Air Sports</i></span> <b>Europe Air Sports (EAS)</b> , the organisation representing sports and recreational aviation in Europe, thanks EASA for the possibility to place comments on this NPA. Overall, EAS regards the NPA a useful document and supports the objectives of the NPA.  <b>General Comment:</b> In the text the wording Environmental Characteristics or Protection has been replaced by Environmental Compatibility. The terminology is not in the definitions part. A clarification might be helpful.
response	<b>Partially accepted</b> The new term ‘environmental compatibility’ is introduced and used in the Basic Regulation. The definitions in Article 1 of Regulation (EU) No 748/2012 are for terms used for the purpose of that regulation. The definitions in ‘GM1 Annex I Definitions’ are for terms used in the AMC & GM to Part 21. For that reason, EASA believes that GM is appropriate to explain the meaning of ‘environmental compatibility’. The NPA proposed such an explanation in Section 5 of GM1 21.B.85(a). For more visibility, the explanation has been moved to dedicated GM to 21.B.85.

**GM 21.A.20(d) Final statement**

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comment	5 <span style="float: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></span> <b>GM 21.A.20(d), page 6</b> Why delete the wording: “or to the environment”?
response	<b>Noted</b> ‘Or to the environment’ is deleted for consistency with the requirement in 21.A.20(d)(2), which relates to safety only. The declaration of compliance with the applicable environmental protection requirements is covered under 21.A.20(d)(1).

**GM 21.A.91 Classification of changes to a type certificate (TC)**

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comment	8 <span style="float: right;">comment by: <i>AIRBUS HELICOPTERS</i></span>
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	<p>On page 7, with regard to the GM 21.A.91 Classification of changes to a type certificate :</p> <p>3. ASSESSMENT OF A CHANGE FOR CLASSIFICATION</p> <p>3.4 Complementary guidance for classification of changes</p> <p>[...]</p> <p><i>(h) when the applicable environmental protection requirements introduce a new production cut-off requirement.</i></p> <p><b><u>Airbus Helicopters comment :</u></b></p> <p>AH suggests that EASA clarifies that the new production cut-off requirement applies only to the airplane CO2 emissions as explained in the explanatory note, otherwise please clarify to what this new production cut-off requirement will apply.</p>
response	<p><b>Not accepted</b></p> <p>Paragraph 3.4 of GM 21.A.91 provides examples of conditions for which a change should be classified as major. Production cut-off requirements exist in both Volumes II and III of Annex 16.</p> <p>The proposed point 3.4(h) is replaced by a note in Appendix A to GM 21.A.91 to clarify that projects that demonstrate compliance with an applicable production cut-off requirement (e.g. for engine emissions and aeroplane CO<sub>2</sub> emissions) are considered major changes since they trigger a change to the TCDS.</p>
comment	<p>10 <span style="float: right;">comment by: AIRBUS HELICOPTERS</span></p> <p>On page 7, with regard to the GM 21.A.91 Classification of changes to a type certificate</p> <p>3. ASSESSMENT OF A CHANGE FOR CLASSIFICATION</p> <p>3.4 Complementary guidance for classification of changes</p> <p>[...]</p> <p><i>(h) when the applicable environmental protection requirements introduce a new production cut-off requirement.</i></p> <p><b><u>Airbus Helicopters comment :</u></b></p> <p>If the new production cut-off requirement applies to any emissions or noise in addition to airplane CO2 emissions, this new requirement is interpreted as creating a precedence, ie. any change to TC (even not significant and even not emissions/noise related) can require an update of the aircraft certification basis for introducing new environmental protection requirements, provided that this change occurs after the production cut-off date of 2028.</p> <p>Up to now, a change of the certification basis was driven by the point 21.A.121.</p> <p>Is the Airbus Helicopters interpretation correct ?</p> <p>Aibus Helicopters suggests that the aircraft certification basis for emissions and noise be driven only by Part 21.A.101 or by a change to the TC having an appreciable effect on emissions or noise (as relevant) and with a consideration about the production cut-off requirement limited to airplanes and aircraft engines. In this case, a change to the TC, having an appreciable effect on emissions or noise, means a change other than 'no-acoustical changes' or 'no-emissions changes' as defined in Volumes I, II and III of ICAO Doc 9501.</p> <p>Therefore, Airbus Helicopters suggests clarifying GM 21.A.91 §3.4 (h) as follows :</p>

response	<p>"(h) where the design change introduces an appreciable effect on noise or emissions levels defined by the applicable environmental protection requirements including [for airplanes and aircraft engines] those introduced by a new production cut-off requirement."</p> <p><b>Partially accepted</b></p> <p>See the response to Comment #8.</p>
comment	<p>23 <span style="float: right;">comment by: <i>Embraer S.A.</i></span></p> <p>Embraer is pleased to offer the comments on NPA 2023-09, about Implementation of the latest CAEP amendments to ICAO Annex 16 Volumes I, II and III.</p> <p><b><u>GM 21.A.91</u></b></p> <p><b><u>3. ASSESSMENT OF A CHANGE FOR CLASSIFICATION</u></b></p> <p><b><u>3.4 - Complementary guidance for classification of changes</u></b></p> <p><b><u>Major Change vs. CO2 Derived Version</u></b></p> <p>The item 3.4 of the document states that a change to the TC which is judged to have an appreciable effect on emission level must be classified as a "major change", in particular if the "applicable environmental protection requirements introduce a new production cut-off requirement".</p> <p>Section 21.B.85 and GM 21.B.85(a), in other hand, define that the applicable requirement to the aeroplane CO<sub>2</sub> emissions are that ones defined in Volume III of ICAO Annex 16, with the Chapter 2 of this document defining the applicability to specific aeroplane types and their related maximum permitted CO<sub>2</sub> emissions evaluation metric value.</p> <p>However, in the scenario of a change to a TC, the Chapter 2 applies only to derived version, which, by definitions present in Volume III of Annex 16 adopted by EASA, includes only changes that increase the CO<sub>2</sub> emissions levels.</p> <p>Section 3.7, however, defines the no-CO<sub>2</sub> change as a change that would result in very small changes in the certified levels and provide criteria for their determination. This definition seems to include changes that reduce the certified levels, which could result in a scenario where the change is classified as major due the reduction of CO<sub>2</sub> emission level, while no CO<sub>2</sub> emission requirement is applicable to the change, since it is not a derived version. We understand that a definition harmonized with ICAO would be more adequate, since EASA adopted ICAO environmental requirements.</p>
response	<p><b>Not accepted</b></p> <p>For CO<sub>2</sub> emissions, the complementary guidance for classification of changes is relevant for derived versions of CO<sub>2</sub>-certified aeroplanes, derived versions of non-CO<sub>2</sub> certified aeroplanes, and projects demonstrating initial compliance with the CO<sub>2</sub> standard of in-production aeroplane types.</p>



The complementary guidance points at ICAO Doc 9501 and Annex 16 for details on non-CO<sub>2</sub> changes, using the terminology from ICAO Doc 9501 for consistency. The quantitative detailed criteria are described in ICAO Doc 9501 and Annex 16, and no deviation from these criteria is introduced here.

comment

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comment by: *Embraer S.A.***GM 21.A.91****3. ASSESSMENT OF A CHANGE FOR CLASSIFICATION****Item 3.7 - Complementary guidance for classification of changes****Acoustical and Emissions Changes**

Section 21.B.85 and GM 21.B.85(a) define that the applicable requirement to the aircraft noise are that ones defined in Volume I of ICAO Annex 16, with the Chapter 1 of this document defining the applicability to specific aircraft type and for their derived versions.

By the aforementioned regulations, in a scenario of a change to a TC, the Annex 16 requirements apply only to derived versions, which, by definitions present in the same requirement, includes only changes that increase the noise levels.

Section 3.7, however, defines the no-acoustical change as a change that would result in very small changes in the certified levels and provide criteria for their determination. This section defines changes that reduces the certified levels as a major change if it decrease the noise level beyond the threshold defined in the ETM, which could result in a scenario where the change is classified as major due the reduction of noise level, while no noise requirement is applicable to the change, since it is not a derived version. We understand that a definition harmonized with ICAO would be more adequate, since EASA adopted ICAO environmental requirements.

response

**Not accepted**

It is correct that EASA applies the ETM definition of 'no-acoustical change' whereby both an increase and a decrease in noise levels can lead to an acoustical change. The proposed amendment does not modify this practice. It should be noted that Annex 16 Vol. I does not provide a definition of 'no-acoustical change' or of 'major change', therefore the text in GM 21.A.91 does not introduce a deviation from the ICAO environmental protection requirements.

**GM1 21.A.174 Application**

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comment

11

comment by: *AIRBUS*

GM1 21.A.174, subtitle

**Proposed text / Comments**

	<p>The subtitle of this guidance gives the impression that contents apply only when the applicant wants to obtain a CofA, i.e. excluding Restricted CofA. Is there anything justifying why RCofA would be excluded?</p> <p><b>Rationale for comments</b> Point 21.A.174 applies to airworthiness certificates (i.e. CofA or RCofA).</p>
response	<p><b>Accepted</b></p> <p>The guidance material is redrafted to specifically provide guidance on point 21.A.174(b)(3)(ii) and is amended to include the application for a restricted certificate of airworthiness.</p>
comment	<p>12 <span style="float: right;">comment by: AIRBUS</span></p> <p>GM1 21.A.174</p> <p><b>Proposed text / Comments</b> The requirement asking applicants to provide the CO<sub>2</sub> metric value data creates an unnecessary administrative burden on applicants for an airworthiness certificate.</p> <p><b>Rationale for comments</b> Applicants should be required to provide only the data necessary to verify that the aeroplane configuration (initially delivered from production, and possibly modified afterwards) is compliant. The current configuration data (data about embodiment of modifications &amp; repairs) is required by point M.A.305(c)(2). However, the applicant should not be required to provide the CO<sub>2</sub> metric value data as they are published by the “certificating” authority in the public domain (as required in Chapter 1 of Part II of Volume III of Annex 16 to the Chicago Convention), and therefore competent authorities of the Member State can access these data without the involvement of the applicant for a CofA/RCofA.</p> <p>For new aircraft, point 21.A.174 requires a statement signed by the exporting authority that the aircraft conforms to a design approved by the Agency. The Agency should ensure that such a statement includes the confirmation that the aeroplane configuration delivered is below the corresponding limit line specified in Annex 16 Volume III.</p> <p>With regard to used aircraft, point M.A.904 requires that an airworthiness review is carried out in accordance with point M.A.901 when importing an aircraft onto a Member State register from a third country or from a regulatory system where Regulation (EU) 2018/1139 does not apply. Point M.A.901(k) provides that the airworthiness review of the aircraft shall include a full documented review of the aircraft records establishing that all modifications and repairs applied to the aircraft have been recorded and are in compliance with point M.A.304. Point M.A.304 provides that modifications and repairs shall be carried out using, as appropriate, data approved by the Agency or approved by a design organisation complying with Annex I (Part-21) to Regulation (EU) No 748/2012. AMC M.A.901(d) indicates that the recommendation sent by a CAMO to the competent authority of the Member State of registry should contain a statement confirming that the aircraft in its current configuration complies with Part-21 for all</p>

modifications and repairs. This statement should clearly state the exact reference of the data used in establishing compliance and should confirm that all of this is properly entered and certified in the aircraft continuing airworthiness record system and/or in the operator's technical log (ref. points M.A.305 and M.A.306). Further, AMC M.A.901(o) indicates that a copy of the document review compliance report stated above should be sent to the competent authority together with any recommendation issued.

Therefore, the competent authority of the State of Registry already has all the means to check and confirm by itself, i.e. without asking the applicant to perform additional investigations/statements, that the aeroplane configuration is certified and below a limit line established in a public document.

response

**Not accepted**

The requirement for applicants to provide the CO<sub>2</sub> metric value data for used aircraft originating from a non-Member State in 21.A.174(b)(3)(ii) was introduced with Regulation (EU) 2019/897 due to production cut-off requirements contained in ICAO Annex 16 Vol. III and related to the first issue of the CofA. NPA 2023-09 does not propose any amendment to 21.A.174.

The additional guidance material on 21.A.174 is redrafted to specifically provide guidance and background information on point 21.A.174(b)(3)(ii).

comment

13

comment by: AIRBUS

GM1 21.A.174, point 1

**Proposed text / Comments**

The content of this point is found misleading.

Further, it does not provide useful information to applicants for a CofA or RCofA in obtaining such a certificate. It is therefore proposed to amend point 1. to read:

“The requirement to provide some CO<sub>2</sub> emissions related information at the time of an application for a certificate of airworthiness or restricted certificate of airworthiness applies only in the case of individual subsonic jet aeroplanes of greater than 5 700 kg maximum certificated take-off mass or individual propeller-driven aeroplanes of greater than 8 618 kg maximum certificated take-off mass. For these aeroplanes, an applicant filing an application on or after 1 January 2028 has to provide:

- the date on which the first certificate of airworthiness or restricted certificate of airworthiness, as applicable, was issued; and
- the aeroplane configuration (i.e. the embodiment status of modifications and repairs) that will enable the competent authority to determine if the aeroplane complies with the international CO<sub>2</sub> emission standard defined in ICAO Annex 16.

**Rationale for comments**

The proposal intends to eliminate an unnecessary administrative burden, in particular on certain applicants: there are a huge number of applicants whose aircraft are not affected by the subject SARPs of Annex 16 to the Chicago Convention.

Point 1. currently indicates that the documentation required in point 21.A.174 “permits to support the demonstration of compliance with the applicable environmental protection requirements as referred to in 21.B.85”. Point 21.B.85 relates to requirements relevant in the context of an application for a type certificate



(TC) or restricted type certificate (RTC), i.e. a design activity, not an application for a CofA or RCofA, i.e. an activity directly linked with the in-service operations.

In other words:

- the documentation required in point 21.A.174 is provided by the applicant (end-users of aircraft, i.e. any natural or legal person under whose name an aircraft is registered or will be registered in a Member State, or its representative) defined in point 21.A.172 to support the demonstration of compliance with the applicable requirements in order to obtain a CofA or RCofA.
- the documentation to support the demonstration of compliance with the applicable environmental protection requirements referred to in point 21.B.85 is provided by the applicant (an Approved Design Organisation) defined in point 21.A.13 in accordance with point 21.A.20.

response

**Partially accepted**

(See also the response to Comment #12.)

The requirement for applicants to provide the date on which the first CofA was issued and the CO<sub>2</sub> metric value data for used aircraft originating from a non-Member State is already contained in 21.A.174(b)(3)(ii). The additional guidance material on 21.A.174 is redrafted to specifically provide guidance and background information on point 21.A.174(b)(3)(ii). A clarification on the relevant MTOM range and on the production cut-off applicability date is added.

comment

14

comment by: AIRBUS

GM1 21.A.174, point 2

**Proposed text / Comments**

This point is found misleading;

- 1 - Where to find the information to confirm whether a CO<sub>2</sub> emissions production cut-off requirement applies or not? (e.g. directly or by reference to a document specified in the R/TCDS issued by EASA to validate the TC or RTC in the EU?)
- 2 - Where to find the information to confirm the date when the first CofA/RCofA was issued for the aeroplane for which an EU CofA/RCofA is sought, in particular for older aircraft?
- 3 - Why does this paragraph refer only to “aeroplanes”, and not “aircraft”? This should be explained in the GM (refer to a previous comment).

It does not provide useful information to applicants for a CofA or RCofA in obtaining the necessary information for such a certificate. It is therefore proposed to delete it.

**Rationale for comments**

Point 21.A.172 describes the population eligible for an airworthiness certificate (CofA or RCofA). This population includes for example aircraft owners, aircraft operators, or CAMO. This guidance material should provide this population with meaningful and useful information to ensure they will be successful in obtaining quickly an EU CofA or RCofA.

response

**Partially accepted**



(See also the response to Comments #12 and #13.)

The production cut-off requirements for CO<sub>2</sub> emissions apply to aeroplanes only. The guidance material is redrafted to specifically provide guidance and background information on point 21.A.174(b)(3)(ii). A clarification on the relevant MTOM range and on the production cut-off applicability date is added.

comment

15

comment by: AIRBUS

GM1 21.A.174, point 2

#### Proposed text / Comments

This point provides that “As required in Chapter 1 of Part II of that volume, the certifying authority shall publish the certified CO<sub>2</sub> emissions evaluation metric value. The Agency publishes these values in the EASA Aeroplane CO<sub>2</sub> Emissions Database.”

Reference is made to the “certifying authority”. Is reference made to the authority relevant for the TC/RTC/STC/change to TC/RTC/STC and for the repair designs, the production organisation of the aeroplane or engine, the authority that issued the first CofA/RCofA, or any other authority?

#### Rationale for comments

Point 21.A.172 describes the population eligible for an airworthiness certificate (CofA or RCofA). This population includes for example aircraft owners, aircraft operators, or CAMO. The term ‘certifying authority’ may be interpreted as referring to the competent authority that will issue the CofA/RCofA. This guidance material should provide this population with meaningful and useful information to ensure they will be successful in obtaining quickly an EU CofA or RCofA.

response

#### Partially accepted

The statement that ‘the certifying authority shall publish the certified CO<sub>2</sub> emissions evaluation metric value’ is a quote from ICAO Annex 16 Vol. III. The guidance material is redrafted to specifically provide guidance on point 21.A.174(b)(3)(ii) and does no longer use this quote. For the European Union, GM1 21.A.174(b)(3)(ii) explains that the Agency publishes the CO<sub>2</sub> metric values in the EASA Aeroplane CO<sub>2</sub> Emissions Database.

comment

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comment by: AIRBUS

GM1 21.A.174, point 2

#### Proposed text / Comments

This point provides a note: “For used aircraft originating from a Member State, the compliance with applicable environmental protection requirements was already assessed for the issuance of the previous CofA.”

It is not precise enough for applicants for a CofA or RCofA in obtaining the necessary information for such a certificate; the following cases should be considered:



- import onto a Member State register of a used aeroplane from a third country when this aeroplane was produced in a Member State,  
 - import onto a Member State register of a used aeroplane from a third country when this aeroplane was produced in a third country,  
 - import onto a Member State register of a used aeroplane from a regulatory system where Regulation (EU) 2018/1139 does not apply (e.g. a State aeroplane of an EU Member State), when this aeroplane was produced in a Member State,  
 - import onto a Member State register of a used aeroplane from a regulatory system where Regulation (EU) 2018/1139 does not apply, when this aeroplane was produced in a third country, and  
 - transfer of a used aeroplane from a Member State register to another one (whatever the State where it was produced).

#### Rationale for comments

Point 21.A.172 describes the population eligible for an airworthiness certificate (CofA or RCoFA). This population includes for example aircraft owners, aircraft operators, or CAMO. This guidance material should provide this population with meaningful and useful information to ensure they will be successful in obtaining quickly an EU CofA or RCoFA.

response

#### Not accepted

The guidance material is redrafted to specifically provide guidance on point 21.A.174(b)(3)(ii), such that the proposed note related to a used aircraft originating from a Member State is deleted. A more comprehensive assessment of other cases will be considered by EASA as part of other rulemaking activities.

comment

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comment by: *Embraer S.A.*

#### **GM1 21.A.174 Application (Airworthiness Certificate)**

For the issuance of the airworthiness certificate, EASA is requesting CO<sub>2</sub> emissions metric. However it is not clear if the metric would be required for an aircraft already validated by EASA, or if the simple submission of the metric is sufficient to issue the airworthiness certificate. Embraer understands that a clarification for this scenario is necessary.

response

#### Accepted

The guidance material is redrafted to specifically provide guidance on point 21.A.174(b)(3)(ii). The guidance material is amended to clarify that EASA approval of the CO<sub>2</sub> metric value is required, and this is typically part of the Agency's approval of the type design.

### 21.B.70 Certification specifications

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comment

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comment by: *AIRBUS*

Section B - Subpart B - 21.B.70 Certification specifications

#### Proposed text / Comments



This requirement removes the obligation for the Agency to issue Certification Specifications for environmental protection. This raises questions regarding the status of CS-34, CS-36 and CS-CO<sub>2</sub>.

Shouldn't this NPA also remove these Certification Specifications that appear to be useless?

#### Rationale for comments

Status of CS-34, CS-36 and CS-CO<sub>2</sub> is now unclear with the change implemented in 21.B.70, as they do not represent the environmental protection requirements and should not be quoted in the aircraft TCDS, aircraft NTCDS or engine TCDS.

response

**Partially accepted**

EASA will consider removing the content from CS-34, CS-36 and CS-CO<sub>2</sub>.

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

p. 29

comment

6

comment by: *LHD*

The ICAO Document 9501 Volumes I, II and III (Environmental Technical Manual) are indicated as guidance material. But unlike the Annex 16 Volumes, no revision is indicated, neither in the Basic Regulation nor in the Part 21. On which basis shall the Agency define the applicable revision of the ETM Volumes?

Suggested Resolution:

Propose a procedure for the determination of the applicable Revision of the Guidance Material (ICAO Doc. 9501 - ETM Volumes).

response

**Not accepted**

EASA considers that it is not necessary to specify the level of amendment of the ETM in GM1 21.B.85(a) since the ETM contains guidance material and as such is not binding. In general, EASA expects that the applicant refers to the amendment level of the ETM being in force at the date of application at EASA, or a more recent amendment.

comment

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comment by: *AIRBUS*

Section B - Subpart B - GM1 21.B.85(a)(4.1.2)

#### Proposed text / Comments

Replace the following text:

*Standards for derived versions of non-CO<sub>2</sub>-certified aeroplanes*

*These standard apply to individual aeroplanes for which a type certificate was issued but that were not certified for CO<sub>2</sub> 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 (1 January 2023 in section 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 CoA.

By:

*Standards for derived versions of non-CO2-certified aeroplanes*

*These standards apply to individual aeroplanes for which a type certificate was issued but that were not certified for CO<sub>2</sub> 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 (1 January 2023 in section 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 CoA.

#### Rationale for comments

The sentence is not correct if not modified as proposed. There are indeed two different conditions mentioned for the triggering of the CO<sub>2</sub> emissions certification of the changed-product: the first one is related to the application date for the change and the second one is related to the implementation of the change on an individual aeroplane before it receives its first CoA.

response

**Accepted**

GM1 21.B.85(a)(4.1.2) is amended as suggested.

comment

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comment by: AIRBUS

Section B - Subpart B - GM1 21.B.85(a)(4.1.2)

#### Proposed text / Comments

Add a new condition to the text proposed in the previous comment as follows:

*Standards for derived versions of non-CO2-certified aeroplanes*

*These standard apply to individual aeroplanes for which a type certificate was issued but that were not certified for CO<sub>2</sub> 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 (1 January 2023 in section 2.1.1(d) and (e)); and
- **the change modifies the CO<sub>2</sub> emissions Metric Value beyond a threshold; and**
- the change in the type design is made (i.e. applied to the individual aeroplane) prior to the issuance of the first CoA.

#### Rationale for comments

The changed-product also needs to be certified from 2023 onwards if the change increases the CO<sub>2</sub> emissions Metric Value by more than 1.5% or if it is significant from a CO<sub>2</sub> perspective (definition of a derived version of a non-CO<sub>2</sub>-certified aeroplane in Annex 16 Volume III, Part 1, Chapter 1). This condition is missing.

response

**Partially accepted**

Paragraph 4.1.2 is amended to cover the full set of criteria without the need to list them in detail.

comment

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comment by: AIRBUS





Section B - Subpart B - GM1 21.B.85(a)(4.1.3)

**Proposed text / Comments**

Replace the following text:

*4.1.3 Appendices*

*The methods for the evaluation of **noise levels** are provided in the appendices to that volume.*

By

*4.1.3 Appendices*

*The methods for the evaluation of **CO2 emissions levels** are provided in the appendices to that volume.*

**Rationale for comments**

Typo error: noise levels should be replaced by CO2 emissions levels.

response

**Accepted**

GM1 21.B.85(a)(4.1.3) is amended as suggested.

**Appendix VII - EASA Form 45 - Noise Certificate**

p. 41

comment

1

comment by: CAA-Norway TFH

CAA-NO Tom-inge Fygle Hansen

Please consider a complete update of the EASA Form 45 to include CO<sub>2</sub> emissions block. The original issue of Form 45 has not been revised now.

For CAA-Norway and other EMPIC users it is a timeconsuming effort to update required template. Hence the known additional change should be included in Issue 2.

The current proposed changes are not material and should not warrant an Issue 2 of the Form 45 unless CO<sub>2</sub> emission block is included.

response

**Not accepted**

EASA Form 45 is intended for the issue of the noise certificate and should thus only contain noise information.

The reference to Regulation (EU) 2018/1139 must be updated in the Form, as it is outdated. EASA took the opportunity to clarify and update other elements in the Form.

