



OPINION No 06/2011

OF THE EUROPEAN AVIATION SAFETY AGENCY

of 2nd December 2011

for a Commission Regulation amending Regulation (EC) No 216/2008 of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC

AND

for a Commission Regulation amending Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations

'CAEP/8 Implementation'

EXECUTIVE SUMMARY

In its Article 6 Regulation (EC) No 216/2008 (the 'Basic Regulation') defines the essential requirements for environmental protection by referring to ICAO Annex 16.

With this Opinion the European Aviation Safety Agency suggests to the Commissions to amend Commission Regulation (EC) No 1702/2003 and Regulation (EC) No 216/2008.

The purpose of these amendments is to implement the amendments of Annex 16 Vol. I and Vol. II recommended by ICAO 8th Committee on Aviation Environmental Protection and adopted by the ICAO Council on 4 March 2011.

The purpose of Amendment 10 of ICAO Annex 16 Volume I is to address technical issues arising from the application of demonstration schemes and related guidance for aircraft noise certification. All proposals for changes are considered stringency neutral (i.e. no change in the noise limit).

The purpose of the Amendment 7 of ICAO Annex 16 Volume II is to update the provisions regarding the stringency of emissions (i.e. increase in stringency of NO_x limits) and to address technical issues arising from the application of demonstration schemes and related guidance for aircraft engine emissions certification. The changes include an update to the production cut-off provision for engines which do not fulfil the CAEP/6 NO_x standard with an effective date as of 1 January 2013 accompanied by an exemption process.

The major issue is the adoption of a new NO_x standard and the update of the production cut-off provision for engines according to the CAEP/6 NO_x standard. Although it is not possible to make a quantified evaluation of the volume of business and the number of persons affected, it can be assumed that the amendments to the Basic Regulation and to Commission Regulation (EC) No 1702/2003 (Part-21) do not lead to a major change of today's situation.

I. Process, scope and consultation

1. With this Opinion the European Aviation Safety Agency (hereafter referred to as the 'Agency') suggests to the Commission to amend paragraphs 21A.4 (a), 21A.130 (b) and 21A.165 (c) of Section A to Commission Regulation (EC) No 1702/2003¹ (hereafter referred to as 'Part-21') and Article 6 paragraph 1 of Regulation (EC) No 216/2008² (hereafter referred to as the 'Basic Regulation').
2. This Opinion is the result of the following rulemaking task:

Rulemaking Task No	Title	Terms of Reference	NPA (No and date)	CRD No (No and date)
RMT.BR.008	Implementation of CAEP 8 amendments	08/07/2010	2011-08 (16/05/11)	2011-08 (17/10/11)

3. The scope of this rulemaking activity was outlined in the Terms of Reference (ToR) RMT.BR.008. Based on these ToRs the Agency developed the Notice of Proposed Amendment (NPA) 2011-08.
4. The Notice of Proposed Amendment (NPA) 2011-08³ that contained the draft Opinion for a Commission Regulation amending Commission Regulations (EC) No 216/2008 and (EC) No 1702/2003 or Part-21 was published on the Agency's website on 16 May 2011.
5. By the closing date of 16 August 2011, the Agency had received 38 comments from national authorities, professional organisations and private companies.
6. All comments received have been acknowledged and incorporated into a Comment Response Document (CRD) 2011-08, which was published on the Agency's website on 17 October 2011⁴. This CRD contains a list of all persons and/or organisations who provided comments as well as the answers of the Agency. In response to the CRD two reactions were received. These reactions supported the CRD thus no changes were required as a result.
7. This Opinion has been adopted following the procedure specified by the Agency's Management Board⁵, in accordance with the provisions of Article 19 and 52 of the Basic Regulation.
8. The proposed rule has taken into account the development of the European Union and international law (ICAO), and the harmonisation with the rules of authorities of the

¹ Commission Regulation (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 243, 27.9.2003, p. 6). Regulation as last amended by Commission Regulation (EC) No 1194/2009 of 30 November 2009 (OJ L 321, 8.12.2009, p. 5).

² Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1). Regulation as last amended by Regulation (EC) No 1108/2009 of the European Parliament and of the Council of 21 October 2009 (OJ L 309, 24.11.2009, p. 51).

³ See Rulemaking Archives at <http://easa.europa.eu/rulemaking/r-archives.php#npa>.

⁴ See Rulemaking Archives at <http://www.easa.europa.eu/rulemaking/r-archives.php>.

⁵ Decision of the Management Board concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure). EASA MB 08-2007, 13.6.2007.

European Union's main partners as set out in the objectives of Article 2 of the Basic Regulation. The proposed rule takes into account the current status of the relevant European Union legislation.

II. Overview of the changes proposed by the Agency

9. The Basic Regulation defines the essential requirements for environmental protection by referring to ICAO Annex 16. Article 6(2) specifies that when ICAO Annex 16 has been amended, adaptation may be carried out in accordance with the regulatory procedure with scrutiny referred to in Article 65(5) of the same Regulation, to align as appropriate the essential requirements for environmental protection with the related ICAO standards.

Amendment 10 to ICAO Annex 16, Volume I

10. The purpose of Amendment 10 of ICAO Annex 16 Volume I is to address technical issues arising from the application of demonstration schemes and related guidance for aircraft noise certification. The proposals include:
 - a. Amendments to the applicability provisions in order to remove unnecessary complexity, repetition and redundancy in the text while improving clarity and harmonisation amongst different chapters;
 - b. An update in the Annex to the references to ICAO Doc 9501 — Environmental Technical Manual, Volume I — Procedures for the Noise Certification of Aircraft;
 - c. New text in Chapter 3 of Annex 16, Volume I to clarify noise certification take-off reference speed for cases where airworthiness certification take-off speed is not specified;
 - d. Improvements to the readability and clarification of previously vague or incomplete guidance including the calculation of effective perceived noise level (EPNL), the adjustment of aircraft noise data to reference conditions using the simplified and integrated methods, measurement and characterisation of atmospheric sound attenuation, and miscellaneous technical issues and editorial errors; and
 - e. Clarification that the maximum noise levels applicable to subsonic jet aeroplanes may be used as a guideline for supersonic aeroplanes.
11. All proposals for changes in ICAO Annex 16, Volume I are considered stringency neutral (i.e. the proposals for changes do not change the noise limits).

Amendment 7 to ICAO Annex 16, Volume II

12. The purpose of the amendment of the SARPs in ICAO Annex 16, Volume II is to update the provisions regarding the stringency of emissions (i.e. increase in stringency of NO_x limits) and to address technical issues arising from the application of demonstration schemes and related guidance for aircraft engine emissions certification. The proposals include:
 - a. The adoption of a new NO_x standard recommended by CAEP/8 to further reduce gaseous emissions, which increases the stringency of NO_x limits compared to the current CAEP/6 standard⁶ between 5 per cent to 15 per cent for small engines and by 15 per cent for large engines with an effective date as of 1 January 2014;
 - b. An update to the production cut-off provision for engines which do not fulfil the CAEP/6 NO_x standard with an effective date as of 1 January 2013;

⁶ The CAEP/6 Standard was recommended at the CAEP/6 meeting in February 2004.

- c. Updates to the text to replace 'variations in procedures' by 'equivalent procedures' in order to improve consistency and harmonisation within Annex 16, Volume II and within ICAO Doc 9501 — Environmental Technical Manual, Volume II — Procedures for the Emissions Certification of Aircraft Engines; and
- d. Improvements to the readability by moving some paragraphs to more appropriate places and correcting some typographical and editorial issues.

The NOx production cut-off requirement and the exemption process

13. Amendment 7 to Annex 16, Volume II contains a NOx production cut-off requirement stating that the engines produced on or after the 1 January 2013 have to comply with the NOx stringency level approved at CAEP/6. The CAEP/6 NOx production cut-off requirement provides certainty that non-compliant engines will no longer be produced after that date. However, Annex 16, Volume II introduces also the possibility of having exemptions to this requirement allowing for time adjustments to decrease negative economic impacts. The exemption process is described in ICAO Doc 9501 – Environmental Technical Manual, Volume II – Procedures for the Emissions Certification of Aircraft Engines.
14. For the present rulemaking activity the text related to the exemption process from the Environmental Technical Manual, Volume II needed some adaptation in order to fulfil the needs of the Agency's regulation system. Moreover, it was necessary to make some key points binding (e.g. the timeframe in which exemptions can be granted and the limitation of the number of exemptions) in order to ensure that the purpose of the production cut-off requirement is maintained. For this reason the Agency decided to introduce the exemption process at the level of the Commission Regulation amending Regulations (EC) No 216/2008 and (EC) No 1702/2003.
15. Consequently, the text for the Opinion, concerning the production cut-off requirement and the exemption process, suggests the following:
 - a. Paragraph 2 of Article 3 of the Commission Regulation amending Regulations (EC) No 216/2008 and (EC) No 1702/2003 introduces a transition period of four years after the date on which the engine produced has to comply with the CAEP/6 NOx production cut-off requirement (which is 1 January 2013). During this transition period (1 January 2013 to 31 December 2016) Member States may grant exemptions. The number of exemptions is limited in the case of new engines installed on new aircraft. A register containing the data related to these exemptions has to be established and maintained by the Agency.
 - b. The provisions for the NOx production cut-off requirement require amending Commission Regulation (EC) No 1702/2003, namely the provisions in Section A of Part-21 (21A.4 (a), 21A.130 (b) and 21A.165 (c)).

III. Summary of Regulatory Impact Assessment

16. Amendment 10 to ICAO Annex 16, Volume I, and Amendment 7 to ICAO Annex 16, Volume II, as explained here above, close loopholes and help achieving equal treatment of all applicants. As some of these changes affect the formulation of the requirements themselves there is a need to include these improvements of ICAO Annex 16 in EU law.
17. The scope of the requirements to be changed, however, is not limited to Article 6 of the Basic Regulation. As described above, the NOx production cut-off requirement and the exemption process require amending Part 21 of Commission Regulation (EC) No 1702/2003.
18. The major issue in this regard is the adoption of a new NOx standard and the update of the production cut-off provision for engines according to the CAEP/6 NOx standard. Although it is not possible to make a quantified evaluation of the volume of business and

the number of persons affected, it can be assumed that the amendments to the Basic Regulation and to Commission Regulation (EC) No 1702/2003 (Part 21) do not lead to a major change of today's situation.

19. Three options are identified:
- a. Option 1: Do nothing.
 - b. Option 2: To implement alternative requirements that would provide for an equivalent level of environmental protection.
 - c. Option 3: To adopt the amendments unaltered as agreed in ICAO

Safety

20. No safety impacts are expected from these measures for any of the options.

Economic

21. Economic impacts for the industry can be expected for all options. Concerning Options 1 and 2 it can be stated that any deviation from the measures adopted by ICAO would increase the risk of European products not being acceptable in different parts of the world, with the associated costs that this would bring. Concerning Option 3, the adoption of a new NOx standard and the update to the production cut-off provision for engines, which do not fulfil the CAEP/6 NOx standard, will lead to additional costs for manufacturers and airlines. On the other hand and when compared to Options 1 and 2 (which both deviate from the measures adopted by ICAO), the reduction in administrative burden to the industry brought about by Option 3 (to adopt the measures of ICAO unaltered) is expected to have a positive economic effect.

Environmental

22. Option 1 (the 'do nothing' option) would have a negative impact on the environment, while Options 2 and 3 are expected to have a positive effect on the environment. Concerning Option 3, this especially holds for the adoption of a new NOx standard and the update to the production cut-off provision for engines according to the CAEP/6 NOx standard. However, it is also believed that other changes implemented in ICAO Annex 16, Volumes I and II will have a positive impact on the environment. These changes resolve ambiguities and inconsistencies, provide clarification, provide update to the latest technical developments and introduce technically sound and well-defined specifications.

Social

23. No social impacts are expected from the options other than the indirect effect of the mitigation of negative environmental effects of aviation on the environment

Harmonisation with international law

24. The proposed rule has taken into account the development of international law (ICAO). The proposed rule based on option 3:
- a. is equivalent to the ICAO Standards and Recommended Practices;
 - b. the content of the FAA and TCCA rules is not certain yet, but there could be some differences regarding the implementation of the NOx production cut-off requirement; the Agency thinks that it is still of the interest of the EU to adopt the amendments as agreed in ICAO.

Cologne, dd month YYYY

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