# CS-36 AMENDMENT 1 CHANGE INFORMATION

The Agency publishes amendments to Certification Specifications as consolidated documents. These documents are used for establishing the certification basis for applications made after the date of entry into force of the amendment.

Except for a note under the amended paragraph the detailed amendments in the text of the consolidated version are not visible. To allow readers to also see these detailed amendments this information is provided in this document, in the same format as used for publication of Notices of Proposed Amendments.

The text of the amendment is arranged to show deleted text and new text as shown below:

- 1. Text to be deleted is shown with a line through it.
- 2. New text to be inserted is highlighted with grey shading.

# Certification Specifications for Aircraft Noise

# **CS-36**

# Amendment 1

CS-36

# CONTENTS (general layout)

# CS-36

### AIRCRAFT NOISE

PREAMBLE

**BOOK 1 – NOISE REQUIREMENTS** 

### **BOOK 2 – ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL**

[Amdt. No. 36/1]

#### **CS-36**

#### PREAMBLE

#### CS-36 Amendment 1

The following is a list of paragraphs affected by this amendment.

Title page

Contents

Book 1

Preamble

Title page amended

Preamble added

Contents page added

Amended

Book 2 AMC 36.1 (a) - (i) GM 36.1 (a) - (h), (j) and (q)

GM 36.1 final section

Amended Amended Deleted and reserved Amended

[Amdt. No. 36/1]

GM 36.1 (i)

EASA Certification Specifications for Aircraft Noise

> CS-36 Book 1

# Noise Requirements

[Amdt. No. 36/1]

# CS 36.1 Aircraft noise

(See AMC 36.1 and GM 36.1)

The aircraft must be designed to comply with the applicable noise requirements defined under 21A.18(a).

EASA Certification Specifications for Aircraft Noise

> CS-36 Book 2

# Acceptable Means of Compliance and Guidance Material

# AMC 36.1 Aircraft noise

The acceptable means of compliance for aircraft noise are presented in:

- (a) for aeroplanes for which Chapter 2 of <del>ICAO</del> Annex 16 to the Chicago Convention<sup>1</sup>, Volume I, Part II is applicable, Appendix 1 of <del>ICAO</del> Annex 16, Volume I;
- (b) for aeroplanes for which Chapter 3 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of <del>ICAO</del> Annex 16, Volume I;
- (c) for aeroplanes for which Chapter 4 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of <del>ICAO</del> Annex 16, Volume I;
- (d) for aeroplanes for which Chapter 5 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of <del>ICAO</del> Annex 16, Volume I;
- (e) for aeroplanes for which Chapter 6 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 3 of <del>ICAO</del> Annex 16, Volume I;
- (f) for helicopters for which Chapter 8 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 2 of <del>ICAO</del> Annex 16, Volume I;
- (g) for aeroplanes for which Chapter 10 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 6 of <del>ICAO</del> Annex 16, Volume I;
- (h) for helicopters for which Chapter 11 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 4 of <del>ICAO</del> Annex 16, Volume I; and
- (i) for aeroplanes for which Chapter 12 of <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I, Part II is applicable, Appendix 1 of <del>ICAO</del> Annex 16, Volume I.

#### GM 36.1 Aircraft noise

Guidance material for the application of the certification specifications for aircraft noise is presented in:

- (a) for equations for the calculation of noise levels as a function of take-off mass, Attachment A to <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I;
- (b) for evaluating an alternative method of measuring helicopter noise during approach, Attachment D to <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I;
- (c) for applicability of noise certification standards for propeller driven aeroplanes, Attachment E to <del>ICAO</del> Annex 16 to the Chicago Convention, Volume I;

<sup>&</sup>lt;sup>1</sup> The Convention on International Civil Aviation on 7 December 1944

- (d) for equivalent procedures for sub-sonic jet aeroplanes, SectionChapter 2 of the International Civil Aviation Organisation (ICAO) Environmental Technical Manual;
- (e) for equivalent procedures for propeller driven aeroplanes over 8,618 kg, SectionChapter 3 of the ICAO Environmental Technical Manual;
- (f) for equivalent procedures for propeller driven aeroplanes not exceeding 8,618 kg, SectionChapter 4 of the ICAO Environmental Technical Manual;
- (g) for equivalent procedures for helicopters, SectionChapter 5 of the ICAO Environmental Technical Manual;
- (h) for evaluation methods, SectionChapter 6 of the ICAO Environmental Technical Manual;
- (i) for measurement and analysis equipment, Section 7 of the ICAO Environmental Technical Manual[Reserved];
- (j) for control of noise certification computer programme software and documentation related to static to flight projection processes, SectionChapter 8 of the ICAO Environmental Technical Manual;
- (k) for calculation of confidence intervals, Appendix 1 of the ICAO Environmental Technical Manual;
- (l) for identification of spectral irregularities, Appendix 2 of the ICAO Environmental Technical Manual;
- (m) for a procedure for removing the effects of ambient noise levels from aeroplane noise data, Appendix 3 of the ICAO Environmental Technical Manual;
- (n) for reference tables and figures used in the manual calculation of Effective Perceived Noise Level, Appendix 4 of the ICAO Environmental Technical Manual;
- (o) for worked examples of calculation of reference flyover height and reference conditions for source noise adjustments for certification of light propeller driven aeroplanes, Appendix 5 of the ICAO Environmental Technical Manual;
- (p) for noise data corrections for tests at high altitude test sites, Appendix 6 of the ICAO Environmental Technical Manual; and
- (q) for reassessment criteria for the re-certification of an aeroplane from ICAO Annex 16 to the Chicago Convention, Volume 1, Chapter 3 to Chapter 4, Appendix 8 of the ICAO Environmental Technical Manual.

References throughout these Certification Specifications to the ICAO Environmental Technical Manual refer to the ICAO Environmental Technical Manual on the Use of

Procedures in the Noise Certification of Aircraft, CAEP Steering Group Approved Revision 7ICAO Doc 9501 AN/929, Third Edition – 2004.

[Amdt. No. 36/1]