European Aviation Safety Agency

The Executive Director

DECISION NO. 2003/4/RM

OF THE EXECUTIVE DIRECTOR OF THE AGENCY

of 17 October 2003

on certification specifications providing for acceptable means of compliance for aircraft noise (« CS-36 »)

THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY

Having regard to Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency¹ (hereinafter referred to as the "Basic Regulation"), and in particular Articles 13 and 14 thereof,

Having regard to the Commission Regulation (EC) No 1702/2003 of 24 September 2003² 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, in particular 21A.16A and 21A.18 of Part 21 thereof;

Whereas:

- (1) The Agency shall issue certification specifications, including airworthiness codes and acceptable means of compliance, as well as guidance material to be used in the certification process.
- (2) The Agency has, pursuant to Article 43 of the Basic Regulation, consulted widely interested parties on the matters which are subject to this Decision and following that consultation provided a written response to the comments received,

² OJ L 243, 27.09.2003, p. 6.

¹ OJ L 240, 7.09.2002, p. 1.

HAS DECIDED AS FOLLOWS:

Article 1

The certification specifications providing for acceptable means of compliance for aircraft noise are those laid down in the Annex to this Decision.

Article 2

This Decision shall enter into force on 17 October 2003. It shall be published in the *Official Publication of the Agency*.

Done at Brussels, 17 October 2003.

For the European Aviation Safety Agency,

Patrick GOUDOU

Executive Director

Certification Specifications for Aircraft Noise

CS-36

EASA Certification Specifications for Aircraft Noise

CS-36 Book 1 BOOK 1 CS-36

CS-36 BOOK 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).

BOOK 1 CS-36

EASA Certification Specifications for Aircraft Noise

CS-36 Book 2

Acceptable Means of Compliance and Guidance Material

BOOK 2 CS-36

CS-36 BOOK 2

AMC 36.1 Aircraft noise

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

- (a) for aeroplanes for which Chapter 2 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 1 of ICAO Annex 16, Volume I;
- (b) for aeroplanes for which Chapter 3 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 2 of ICAO Annex 16, Volume I;
- (c) for aeroplanes for which Chapter 4 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 2 of ICAO Annex 16, Volume I;
- (d) for aeroplanes for which Chapter 5 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 2 of ICAO Annex 16, Volume I;
- (e) for aeroplanes for which Chapter 6 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 3 of ICAO Annex 16, Volume I;
- (f) for helicopters for which Chapter 8 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 2 of ICAO Annex 16, Volume I;
- (g) for aeroplanes for which Chapter 10 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 6 of ICAO Annex 16, Volume I;
- (h) for helicopters for which Chapter 11 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 4 of ICAO Annex 16, Volume I; and
- (i) for aeroplanes for which Chapter 12 of ICAO Annex 16, Volume I, Part II is applicable, Appendix 1 of ICAO 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 ICAO Annex 16, Volume I;
- (b) for evaluating an alternative method of measuring helicopter noise during approach, Attachment D to ICAO Annex 16, Volume I;
- (c) for applicability of noise certification standards for propeller driven aeroplanes, Attachment E to ICAO Annex 16, Volume 1;
- (d) for equivalent procedures for sub-sonic jet aeroplanes, Section 2 of the ICAO Environmental Technical Manual;
- (e) for equivalent procedures for propeller driven aeroplanes over 8,618 kg, Section 3 of the ICAO Environmental Technical Manual;
- (f) for equivalent procedures for propeller driven aeroplanes not exceeding 8,618 kg, Section 4 of the ICAO Environmental Technical Manual;

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(g) for equivalent procedures for helicopters, Section 5 of the ICAO Environmental Technical Manual:

- (h) for evaluation methods, Section 6 of the ICAO Environmental Technical Manual;
- (i) for measurement and analysis equipment, Section 7 of the ICAO Environmental Technical Manual;
- (j) for control of noise certification computer programme software and documentation related to static to flight projection processes, Section 8 of the ICAO Environmental Technical Manual:
- (k) for calculation of confidence intervals, Appendix 1 of the ICAO Environmental Technical Manual:
- (I) 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, 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 7.