



**EXPLANATORY NOTE**

**CS-25 Amendment 2**

Executive Director Decision 2006/05/R amends Executive Director Decision No. 2005/06/R of 12.12.2005.

This Amendment 2 of CS-25: Large Aeroplanes, incorporates the output from the following EASA rulemaking task:

<b>Rulemaking Task No.:</b>	25.001
<b>Title:</b>	Operation on Contaminated Runways
<b>NPA No.:</b>	NPA 14/2004
<b>CRD No.:</b>	CRD 14/2004

This Notice of Proposed Amendment (NPA) has been subject to consultation in accordance with Article 43 of the Basic Regulation<sup>1</sup> and Article 15 of the rulemaking procedure established by the Management Board<sup>2</sup>. The Agency has addressed and responded to the comments received on the NPA. The responses are contained in a comment-response document (CRD) which has been produced for the NPA and which is available on the Agency's website.

**LIST OF PARAGRAPHS AFFECTED**

- Existing CS 25.1591 is deleted and replaced with a new CS 25.1591
- References to CS 25X1591(c)(2) in AMC 25.1583(k) are replaced by reference to CS 25.1591.
- New AMC to CS 25.1591 is created

**GENERAL COMMENTS**

Incorporates JAA NPA 25G-334

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<sup>1</sup> 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 Agency (*OJ L 240, 7.9.2002, p. 1.*). Regulation as last amended by Commission Regulation (EC) 1701/2003 (*OJ L 243, 27.9.2003, p. 5*);

<sup>2</sup> 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"), as adopted by EASA MB/07/2003, 27.6.2003;

## **EDITORIAL CORRECTIONS IN AMENDMENT 2**

Apart from the changes that came out of the above NPA, this Amendment 2 of CS-25 also incorporates a number of changes aiming to remove certain editorial errors and inconsistencies identified during the first 2 years of implementation of CS-25. As a background the following should be considered:

1. The initial issue of CS-25 was based upon JAR-25 at Amendment 16. It has appeared that certain editorial errors and inconsistencies were already present in JAR-25 Amendment 16 from where they were not recognized and introduced into the initial issue of CS-25.
2. Other editorial errors and inconsistencies were caused by incorrect transposition of JAR-25 Amendment 16 text into the initial issue of CS-25.
3. The Agency was notified by the users of the CS-25 document about some of the above editorial errors and inconsistencies.
4. Article 13 of the Basic Regulation requires that the documents issued by the Agency, including certification specifications shall be updated as necessary.

### **LIST OF PARAGRAPHS AFFECTED**

#### **BOOK 1**

##### **SUBPART B – FLIGHT**

In CS 25.101 (b)(2), corrected the figure of 10 °C to 28 °C.

*Justification:*

When making conversions from imperial to SI units, the value of the 50 °F was incorrectly converted in the initial issue of CS-25 to 10 °C as if it was an absolute value. Since it is a differential value it corresponds to 28 °C.

##### **SUBPART C- STRUCTURE**

In CS 25.399 (a)(1), the reference to JAR 25.395 is replaced by reference to CS 25.395.

*Justification:*

Correction of an obvious transposition error.

##### **SUBPART D- DESIGN AND CONSTRUCTION**

In CS 25.735 (f) (2), the word "landing" is replaced by "take-off".

*Justification:*

The wording "aeroplane landing weight" inadvertently replaced the wording "aeroplane take-off weight" when transferring the text of this sub-paragraph from JAR-25 Amendment 16 into the CS-25 text. The Amendment 16 of JAR-25 correctly reads "aeroplane take-off weight" as it relates to "rejected take-off" conditions.

In CS 25.745(c), the reference to 25.1309 (d) is deleted.

*Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA

25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).

## **SUBPART F - EQUIPMENT**

In CS 25.1301 (c), the “; and” at the end of the sentence is replaced by a full stop.

### *Justification:*

Editorial error caused when transposing JAR-25 Amendment 16 into CS-25. The last sub-paragraph 25.1301 (d) which was in JAR-25 “Reserved” was deleted in line with the transposition guidelines; however the end of sub-paragraph (c) was not adapted accordingly.

In CS 25.1365(a), the reference to 25.1309 (d) is deleted.

### *Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA 25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).

In CS 25.1423, the introductory sentence is amended.

### *Justification:*

JAR-25 / CS-25 do not require a public address system. A public address system is required by operational rules (FAR Part 121, section 121.318(a) and JAR OPS 1, paragraph JAR-OPS 1.695). The incorrect wording “required by this CS” in this paragraph originated from transposition of the FAR § 25.1423 text that reads “required by this chapter” which in the FAA system includes FAR Part 1 up to FAR Part 199. This was incorrectly transposed into JAR 25.1423 in Change 14 as “required by this JAR”. From JAR-25 (Amendment 16) this editorial error was brought up into the initial issue of CS-25.

In CS 25.1435 (b) (2) the reference to JAR 25.1435(a)(1) is replaced by reference to CS 24.1435(a)(1).

### *Justification:*

Correction of an obvious transposition error.

## **Appendix F**

In Appendix F, Part II, paragraph (a)(3), last sentence, the reference to “CS 25.853(b)” is replaced by the reference to “CS 25.853(c)”.

### *Justification:*

CS 25.853 (b) in Book 1 is “reserved” and therefore cannot be the correct reference. An investigation of previous corresponding texts of JAR-25 and

FAR Part 25 revealed that this error was introduced into JAR-25 from FAR Part 25. In Amendment 25-94 to FAR Part 25 the FAA corrected the reference to Sec. 25.853 (b) by replacing it by the reference to Sec. 25.853(c). The FAA justified this correction by the fact that the text of Sec. 25.853 (b) was moved to Sec. 25.853(c). This correction in FAR Part 25 was not reflected in JAR-25.

## **Appendix J**

In Appendix J, first sentence, the reference to JAR 25.803 is replaced by reference to CS 25.803.

*Justification:*

Correction of an obvious transposition error.

## **BOOK 2 – ACCEPTABLE MEANS OF COMPLIANCE**

In AMC 25.335(b)(2) the title of paragraph 2 is amended.

*Justification:*

Many AMCs in Book 2 use, without any particular reason, different titles in those paragraphs intended to cross-reference related certification specifications. For the sake of harmonisation of these titles the wording "RELATED CERTIFICATION SPECIFICATIONS" was adopted to replace all the varying titles (e.g. "RELATED CS PARAGRAHS", RELATED REQUIREMENTS, etc). Corresponding changes have been made in titles of the relevant paragraphs of AMC 25.415, AMC 25.491, AMC 25.703, AMC 25.723, AMC 25.1322, AMC 25-11, AMC 25-13 and AMC 25-19.

In AMC 25.571(a),(b) and (c) sub-paragraph 3.2.2 a., "ACJ" is replaced by "AMC".

*Justification:*

Correction of an obvious transposition error

### **AMC – SUBPART D**

In AMC 25.703, sub-paragraph 3.a, a new item (7) is added after item (6).

In AMC 25.703, sub-paragraph 3.b (2), the reference to EUROCAE ED-12B/RTCA document DO-178B is completed.

In AMC 25.703, sub-paragraph 5.b (4), the reference to "the applicable version of EUROCAE ED-12/RTCA document DO-178" is replaced by a reference to "AMC 20-115()".

*Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178()document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25.735, sub-paragraph 2 a., the cross-reference to IR-21, IR 21.303 and IR 21.101 and their titles is corrected.

*Justification:*

Designations IR 21 and IR 21.303/21.101 do not exist. Correction of obvious transposition errors.

In AMC 25.735, sub-paragraph.2. b.(ii), the existing text and add the cross-reference to AMC 20-115() is amended.

*Justification:*

Editorial correction.

A new AMC 25.1591 was introduced by NPA 14/2004. Correction reflects the new title.

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178()document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25.735, sub-paragraph 2. b. (vi), the reference to ED-12B/RTCA DO-178B is amended.

*Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178() document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25.735, sub-paragraph 4. a.(1)(e), the reference to IR 21.101 is amended.

*Justification:*

IR 21.101 does not exist. Correction of an obvious transposition error.

The designation of AMC 25.785 (c) is amended to read AMC 25.785 (d).

*Justification:*

The content of this AMC does not correspond to the content of CS 25.785 (c) which also does not contain any cross-reference to an AMC. However, it obviously corresponds to the content of CS 25.785 (d) where there is also reference to AMC 25.785 (d). An investigation of older corresponding texts of JAR-25 and FAR Part 25 revealed that this error occurred in JAR-25 when Amendment 25-72 to FAR Part 25 was introduced. From JAR-25 Amendment 16 this error was brought up into CS-25.

## **AMC – SUBPART F**

In AMC 25.1309, sub-paragraph 3.a.(3), the reference to AC 20-115B document is replaced by reference to AMC 20-115 ().

*Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178()document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document

should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25.1309, sub-paragraph 3.a.(4), the existing text is amended.

*Justification:*

Rectification of incorrect reference to reflect correct existing designation of the AMC intended to be cross-referenced.

In AMC 25.1309, sub-paragraph.3.b.(2), the reference to RTCA DO-178B/EUROCAE ED-12B is amended.

*Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178()document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25.1309, the heading of paragraph 7 is inserted after sub-paragraph 6. c. (2).

*Justification:*

JAR-25 Amendment 16, on which CS-25 is based, contains the above title. The title was obviously omitted by mistake when transposing the text of the Amendment 16 of JAR-25 into CS-25.

In Appendix 2 to AMC 25.1309(d)(2) the CS-TSO is amended to read ETSO.

*Justification:*

Correction of an obvious transposition error.

In AMC 25.1322, paragraph 2.1, the reference to CS 25B1305 is replaced by reference to CS 25J1305.

*Justification:*

Paragraph 25B1305 no longer exists. After re-designation of all the paragraphs in Subpart J by CS-25 Amendment 1 (NPA 10/2004) the new designation of this paragraph reads 25J1305.

In AMC 25.1435, sub-paragraph 2. (b) (i), TSO is amended to read ETSO.

*Justification:*

Correction of an obvious transposition error.

In AMC 25.1457, the existing text is amended to introduce the ETSO reference.

*Justification:*

ETSO-C123a, was issued in CS-ETSO in the meantime.

## **AMC – SUBPART G**

In AMC 25.1581, sub-paragraph 6. b. (6) (i), the existing text is amended.

### *Justification:*

Paragraph 25A1521 no longer exists. After re-designation of all the paragraphs in Subpart J of CS-25 Amendment 1 (NPA 10/2004) the new designation of this paragraph reads 25J1521.

## **AMC 25.1581, APPENDIX 1 COMPUTERISED AEROPLANE FLIGHT MANUAL**

In AMC 25.1581, APPENDIX 1, sub-paragraph 6. b. (1), the reference to RTCA DO-178B/EUROCAE ED-12B is amended.

### *Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178() document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

## **GENERAL AMCs**

In Book 2, AMC 25-11, sub-paragraph 3 a., the last listed reference is amended.

### *Justification:*

Paragraph 25B1305 no longer exists. After re-designation of all the paragraphs in Subpart J by CS-25 Amendment 1 (NPA 10/2004) the new designation of this paragraph reads 25J1305.

In AMC 25-11, sub-paragraphs 3 b. and 3 d. (1), the existing text is amended.

### *Justification:*

1) AMC 25.1309-1 does not exist. Correction of an obvious transposition error in designation and title of this cross-reference.

2) AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178() document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25-11, sub-paragraph 4 a. (1), reference to AMC 25.1309-1 is corrected.

*Justification:*

AMC 25.1309-1 does not exist. Correction of an obvious transposition error in designation of this cross-reference.

In AMC 25-11, sub-paragraph 4 a. (2), the reference to the ED12A/RTCA DO-178A is replaced by the reference to the AMC 20-115() Recognition of EUROCAE ED-12()/RTCA DO-178().

*Justification:*

AMC 20-115B in the EASA AMC-20 document (General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) was issued to recognize and control the applicable version of EUROCAE ED-12()/RTCA DO-178() document. Therefore all the cross-references made in CS-25 to the applicable version of the EUROCAE ED-12()/RTCA DO-178() document should always be made through cross-reference to the applicable version of the EASA AMC 20-115().

In AMC 25-11, sub-paragraph 4 b. (2) (ii), the reference to CS 25.1309 (d) is replaced by the reference to AMC 25.1309.

*Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA 25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).

In AMC 25-11, sub-paragraph 7 b. (1), the reference to JAR 25.1321 is replaced by the reference to CS 25.1321.

*Justification:*

Correction of an obvious transposition error.

### **AMC 25–19 Certification Maintenance Requirements**

In AMC 25-19, sub-paragraph 3 b., reference to AMC 25.1309-1 is corrected.

*Justification:*

AMC 25.1309-1 does not exist. Correction of an obvious transposition error in designation of this cross-reference.

In AMC 25-19, section 6, the reference to CS 25.1309 (d) is deleted.

*Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA 25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).

In AMC 25-19, section 7, the references to CS 25.1309 (d) is replaced by the references to AMC 25.1309, sub-paragraph 9 b.(1).

*Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA 25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).

In AMC 25-19, section 8, the reference to CS 25.1309 (d)(4) is deleted.

*Justification:*

Paragraph (d) of CS 25.1309 does not exist. Its predecessor, paragraph JAR 25.1309(d) was deleted in JAR-25 Amendment 16 with justification (NPA 25F-281) that this paragraph actually described a means of compliance with JAR 25.1309(b). The AMC 25.1309, sub-paragraph 9. b. (1) contains a means of compliance which is similar, but not identical to, the requirements formerly stated in JAR 25.1309(d).