CS-26 ISSUE 2 — CHANGE INFORMATION

EASA publishes amendments to certification specifications as consolidated documents. These documents are used for establishing the certification basis for applications that are made after the date of entry into force of the amendment.

Consequently, except for a note '[Issue: 26/2]' under the amended paragraph, the consolidated text of CS-26 does not allow readers to see the detailed changes that are introduced by the new amendment. To allow readers to also see these detailed changes, this document has been created. The same format as for the publication of notices of proposed amendment (NPA) has been used to show the changes:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

BOOK 1 — CERTIFICATION SPECIFICATIONS

SUBPART B – Large aeroplanes

1. A new CS 26.60 is created as follows

CS 26.60 Emergency landing — dynamic conditions

Compliance with 26.60 of Part-26 is demonstrated by complying with CS 25.562, or its equivalent, or with the following (see GM1 26.60):

(a) Each seat type design that is approved for occupancy during taxiing, take-off, or landing must successfully complete dynamic tests or be demonstrated by rational analysis based on dynamic tests of a similar type seat, in accordance with each of the following emergency landing conditions. The tests must be conducted with an occupant simulated by a 77 kg (170 lb) anthropomorphic test dummy sitting in the normal upright position. The tests must include:

(1) A change in the downward vertical velocity (Δv) of not less than 10.7 m/s (35 ft/s), with the aeroplane's longitudinal axis canted downward at 30 degrees with respect to the horizontal plane, and with the wings level. The peak floor deceleration must occur in not more than 0.08 seconds after the impact, and reach a minimum of 14 g.

(2) A change in the forward longitudinal velocity (Δv) of not less than 13.4 m/s (44 ft/s), with the aeroplane's longitudinal axis horizontal and yawed by 10 degrees either to the right or the left, whichever would cause the greatest likelihood of the upper torso restraint system (if one is installed) moving off the occupant's shoulder, and with the wings level. The peak floor deceleration must occur in not more than 0.09 seconds after the impact, and it must reach a minimum of 16 g. If floor rails or floor fittings are used to attach the seating devices to the test fixture, the rails or fittings must be misaligned with respect to the adjacent set of rails or fittings by at least 10 degrees vertically (i.e. away from being parallel), with one rolled by 10 degrees.

(b) The following performance measures must not be exceeded during the dynamic tests that are conducted in accordance with subparagraph (a) of this paragraph:

(3) If upper torso straps are used, the tension loads in the individual straps must not exceed 794 kg (1 750 lb). If dual straps are used to restrain the upper torso, the total strap tension loads must not exceed 907 kg (2 000 lb).

(4) The maximum compressive load that is measured between the pelvis and the lumbar column of the anthropomorphic dummy must not exceed 680 kg (1 500 lb).

(5) The upper torso restraint straps (if installed) must remain on the occupant's shoulder during the impact.

(6) The lap safety belt must remain on the occupant's pelvis during the impact.

(7) Each occupant must be protected from serious head injury under the conditions that are prescribed in sub-paragraph (a) of this paragraph. Where head contact with seats or other structure can occur, protection must be provided so that the head impact does not exceed a Head Injury Criterion (HIC) of 1 000 units. The level of HIC is defined by the equation —

$$HIC = \left\{ (t_2 - t_1) \left[\frac{1}{(t_2 - t_1)} \int_{t_1}^{t_2} a(t)dt \right]^{2.5} \right\}_{\max}$$

Where —

't1' is the initial integration time,

't2' is the final integration time, and

'a(t)' is the total acceleration vs time curve for the head strike, and where

'(t)' is in seconds, and '(a)' is in units of gravity (g).

(8) Where leg injuries may result from contact with seats or other structures, protection must be provided to prevent axially compressive loads that exceed 1 021 kg (2 250 lb) in each femur.

(9) The seat must remain attached at all points of attachment, although the structure may have yielded.

(10) Seats must not yield under the tests that are specified in sub-paragraphs (a)(1) and (a)(2) of this paragraph to the extent that they would impede the rapid evacuation of the occupants of the aeroplane.

(11)

2. CS 26.120 is amended as follows

CS 26.120 Interior emergency lighting and emergency light operation

Compliance with ~~Part~~ 26.120 of Part-26 is demonstrated by complying with CS 25.812 (b),(c),(d)~~&~~ and (h) of CS-25 or equivalent and CS 25.812 (a) and (e) of CS-25 or equivalent, or with the following:

(…)

3. A new CS 26.156 is created as follows

CS 26.156 Thermal/acoustic insulation materials

(a) Compliance with 26.156(a) of Part-26 is demonstrated by complying with CS 25.856(a), or its equivalent.

(b) Compliance with 26.156(b) of Part-26 is demonstrated by complying with CS 25.856(a), or its equivalent.

(c) Compliance with 26.156(c) of Part-26 is demonstrated by complying with CS 25.856(b), or its equivalent.

4. A new CS 26.170 is created as follows

CS 26.170 Fire extinguishers

Compliance with 26.170 of Part-26 is demonstrated by complying with the following (see also GM1 26.170(b)):

(a) the extinguishing agent that is used in a built-in fire extinguisher for a lavatory waste receptacle or in a portable fire extinguisher for cabins and crew compartments must not be one of the agents that are listed in Annex A — Group II: Halons (halon 1211, halon 1301, and halon 2402) of 'The Montreal Protocol on Substances that Deplete the Ozone Layer', 8th Edition, 2009;

(b) the agent in any fire extinguisher must be acceptable, and be of a kind and in a quantity that is appropriate for the kinds of fire that are likely to occur in the compartment where the extinguisher is intended to be used;

(c) any agent that is used in a personnel compartment or that is likely to enter a personnel compartment must be selected to minimise the hazard of a toxic gas concentration; and

(d) a discharge of the extinguisher must not cause any structural damage.

(…)

SUBPART C – Large Rotorcraft

5. A new CS 26.400 is created as follows

CS 26.400 Fire extinguishers

Compliance with 26.400 of Part-26 is demonstrated by complying with the following (see also GM1 26.400(b)):

(a) the extinguishing agent that is used in a built-in fire extinguisher for a lavatory waste receptacle or in a portable fire extinguisher for cabins and crew compartments must not be one of the agents that are listed in Annex A — Group II: Halons (halon 1211, halon 1301, and halon 2402) of 'The Montreal Protocol on Substances that Deplete the Ozone Layer', 8th Edition, 2009;

(b) the agent in any fire extinguisher must be acceptable, and be of a kind and in a quantity that is appropriate for the kinds of fire that are likely to occur where the extinguisher is intended to be used;

(c) any agent that is used in a personnel compartment or that is likely to enter a personnel compartment must be designed to minimise the hazard of a toxic gas concentration; and

(d) a discharge of the extinguisher must not cause any structural damage.

BOOK 2 — ACCEPTABLE MEANS OF COMPLIANCE

6. GM1 26.1 is amended as follows

GM1 26.1 JAR-26/JAR/CS-25/FAR-25+121/OPS/Part-26/CS-26/GM-26 Cross-reference table

This table is intended to be a quick cross-reference table between those ~~provisions~~ requirements that are contained, on the one hand, in Part-26, CS-26 and GM-26, and, on the other hand, their 'parent' airworthiness code, if one exists, i.e. JAR-26, the FAA's ~~requirements~~ FAR-25 and/or FAR Part 121 requirements, as well as the related EU-OPS and the new EASA operational requirements. This table is only indicative, and it does not pre-empt compliance with the applicable requirements, which shall be assessed by the competent authority.

JAR-26-	JAR-25 / CS-25	FAR-25 / Part-121	OPS	Part-26	CS-26	GM-26
JAR 26.1	n/a	n/a	n/a	n/a	n/a	n/a
JAR 26.2	n/a	n/a	n/a	n/a	n/a	n/a
JAR 26.3	n/a	n/a	n/a	26.35	n/a	n/a
JAR 26.5	n/a	n/a	n/a	n/a	n/a	n/a
JAR 26.50	JAR 25.785(h), (j) & (k) at Change 8, 30/11/81 CS 25.785(g)	FAR 25.785(g), Amdt 25-51, 06/03/80 FAR 121.311 (d)(f) & (g) at Change 21, 17/02/98	OPS 1.730 CAT.IDE.A.205	Part 26.50	CS 26.50	GM1 26.50(c)
N/A	JAR 25.562 CS 25.562	FAR 25.562 FAR 121.311(j) Amdt 121-315	CAT.IDE.A.205	Part 26.60	CS 26.60	GM1 26.60
JAR 26.100	JAR 25.807(d)(7) at Change 13 and Amdt 93/1 08/03/93 CS 25.807	121.310(m)	n/a	Part 26.100	CS 26.100	n/a
JAR 26.105	JAR 25.813(d) to (f) at Change 8, 30/11/81 CS 25.813	121.310(f)	OPS 1.735 CAT.IDE.A.215	Part 26.105	CS 26.105	n/a
JAR 26.110	JAR 25.811(a) to (d) and (f) to (g) at Change 8, 30/11/81 JAR 25.811(e) at Change 14, 27/05/94 CS 25.811	121.310(b)	OPS 1.815 CAT.IDE.A.275	Part 26.110	CS 26.110	GM1 26.110(e)(4)~~,~~ & GM1 26.110 (e)(4)

JAR-26-	JAR-25 / CS-25	FAR-25 / Part-121	OPS	Part-26	CS-26	GM-26
JAR 26.120	JAR 25.812 (b),(c),(d) & (h) at Change 8, 30/11/81 JAR 25.812 (a) & (e) at Change 12, 16/06/86 CS 25.812	FAR 121.310 (b),(c) & (d) at Change 21, 17/02/98	OPS 1.815(a)(1) CAT.IDE.A.275(b)	Part 26.120	CS 26.120	n/a
JAR 26.125	JAR 25.812 (f) & (g) at Change 8, 30/11/81 CS 25.812	FAR 121.310 (h)(1) at Change 21, 17/02/98	OPS 1.185(a)(1)(iv) and (v) CAT.IDE.A.275 (b)(4) and (5)	n/a	n/a	n/a
JAR 26.130	CS 25.810	FAR 25.2 (a) at Amdt 25-72, 20/08/90 FAR 121.310 (a) & (h)(2) at Change 21, 17/02/98	OPS 1.805 CAT.IDE.A.265	n/a	n/a	n/a
JAR 26.150	JAR 25.791 at Change 8, 20/11/81 JAR 25.853(a) to (d) at Change 14, 27/05/94 JAR 25.853(e) at Change 13 plus Amdt 91/1, 12/04/91 JAR 25.853(f) and Appendix F at Change 14, 27/05/94 Appendix F, Part I, at Amdt 93/1, 08/03/93 Appendix F, Part II, III, IV, V at Change 13 05/10/89 CS 25.853	FAR 121.312	OPS 1.731 CAT.IDE.A.210	Part 26.150	CS 26.150 App. F	GM1 26.150(a), GM1 26.150(c), GM1 26.150(d)
JAR 26.155	JAR 25.855 and Appendix F, Part III at Change.13 plus Amdt 93/1, 08/03/93 CS 25.855	121.314	n/a	Part 26.155	CS 26.155 App. F	n/a
N/A	CS 25.856	FAR 25.856 121.312(e)	n/a	Part 26.156	CS 26.156	GM1 26.156(a)

JAR-26-	JAR-25 / CS-25	FAR-25 / Part-121	OPS	Part-26	CS-26	GM-26
JAR 26.160	JAR 25.854 at Change.13 at Amdt 93/1, 08/03/93 CS 25.854	121.308	n/a	Part 26.160	CS 26.160	n/a
N/A	CS 25.851(c)	n/a	n/a	Part 26.170	CS 26.170	GM1 26.170(b)
JAR 26.200	JAR 25.729 at Amdt 93/1, 08/03/93 CS 25.729	121.289, Amdt 121-227	n/a	Part 26.200	CS 26.200	n/a
JAR 26.250	n/a	121.313(j)(1)(ii)	n/a	Part 26.250	n/a	n/a
JAR 26.260	CS 25.795	121.313(j)(1)(ii)	OPS 1.1255 ORO.SEC.100.A	n/a	n/a	n/a
N/A	n/a	n/a	n/a	Part 26.400	CS 26.400	n/a

7. GM2 26.1 is amended as follows

GM2 26.1 Demonstration of compliance

For the initial issue of Part-26 ~~requirements~~, which is a transposition of existing JAR-26 requirements, the operators will be responsible for showing compliance. In most cases this can be done by referring to the certification basis of the aircraft or the approved changes in which the amendment level of the certification specification will indicate compliance. In any case, the JAR-26 requirements should have been implemented already by EU operators and since the CS-26 text is equivalent to the JAR-26 text, compliance with JAR-26 means also compliance with Part-26. See also Article 5 of the Commission Regulation (EU) 2015/640 In the rare case where the above possibilities are not sufficient, showing compliance by the operator directly to the NAA will be difficult. They will need to involve the design approval holder of the aircraft or the approved change as relevant. This design approval holder should then apply to the ~~Agency~~ EASA for certification that the design complies with the relevant CS-26 or CS-25 paragraph, special condition or equivalent safety case. With that approval information the operator can show compliance to the NAA.

8. A new GM1 26.60 is created as follows

GM1 26.60 Emergency landing — dynamic conditions

AC 25.562-1B (dated 10 January 2006) may be used for showing compliance with CS 26.60.

9. A new GM1 26.156(a) is created as follows

GM1 26.156(a) Insulation materials installed as replacements

The requirement of 26.156(a) of Part-26 is applicable to insulation materials which are:

(i) of a blanket construction, or

(ii) installed around air ducting

10. A new GM1 26.170(b) is created as follows:

GM1 26.170(b) Fire extinguishers

(1) LAVATORY FIRE EXTINGUISHERS

Appendix D to Report DOT/FAA/AR-96/122 'Development of a Minimum Performance Standard for Lavatory Trash Receptacle Automatic Fire Extinguishers' of February 1997 may be used for showing compliance with CS 26.170(b).

General guidance on the alternative extinguishing agents that are considered to be acceptable can be found in AMC 25.851(c).

(2) HANDHELD FIRE EXTINGUISHERS

Society of Automotive Engineers (SAE) Aerospace Standard (AS) 6271 'Halocarbon Clean Agent Hand-Held Fire Extinguisher' or European Technical Standard Order (ETSO) 2C515 'Aircraft Halocarbon Clean Agent — Handheld Fire Extinguisher' may be used for showing compliance with CS 26.170(b).

General guidance on the alternative extinguishing agents that are considered to be acceptable can be found in AMC 25.851(c).

11. Editorial changes throughout the document:

The wording 'Part 26.xxx' is replaced to read '26.xxx of Part-26'