DS-21LD Issue 1



Detailed Technical Specifications

and

Guidance Material

for the declaration of design compliance in accordance with Part 21 Light, Section A, Subpart C

(DS-21LD)

Issue 1

15 December 2023¹

¹ For the date of entry into force of this Issue, kindly refer to ED Decision 2023/022/R at the <u>Official Publication</u> of EASA.

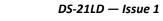




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SUBPART A — GENERAL

DS 21LD.10 Applicability

- (a) These detailed technical specifications are applicable to the following products for the declaration of design compliance in accordance with point 21L.A.41 of Subpart C of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012:
 - (1) an aeroplane with a maximum take-off mass (MTOM) of 1 200 kg or less that is not jet-powered, and has a seating configuration of maximum two persons;
 - (2) a sailplane or powered sailplane with an MTOM of 1 200 kg or less;
 - (3) a balloon designed for not more than four persons;
 - (4) a hot air airship designed for not more than four persons.
- (b) In accordance with point (c) of point 21L.A.41 of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012 and for the purposes of these detailed technical specifications for aeroplanes in DS 21LD.100, and for sailplanes and powered sailplanes in DS 21LD.200, the following design features or types of operation are considered to be novel or unusual for these categories of aircraft and are therefore not eligible for the submission of a declaration of design compliance:
 - A pusher propeller aircraft configuration;
 - VFR night operations;
 - IFR operations;
 - Flight into known icing (FIKI) conditions;
 - Installation of an electric or hybrid electric propulsion system;
 - Installation of a hydrogen powered engine;
 - Installation of a turboprop engine;
 - Installation of an autopilot or an auto throttle system;
 - Installation of a fly-by-wire control system;
 - Installation of an oxygen system (fixed / plumbed);
 - Pressurisation of the aircraft.



SUBPART B — Specifications For Particular Products

DS 21LD.100 Aeroplanes with a maximum take-off mass of 1 200 kg or less that are not jet-powered, and have a seating configuration of maximum two persons

- (a) The applicable detailed technical specifications for the submission of a declaration of design compliance shall consist of the following:
 - (1) For an aeroplane with an MTOM of 1 200 kg or less that is not jet-powered, and has a seating configuration of maximum two persons:
 - (i) CS-23 Amendment 6 (AMC1 of AMC & GM to CS-23 Issue 4 only); or
 - (ii) CS-LSA Amendment 1, as applicable to the aeroplane.
 - (2) For an engine that is installed on the aeroplane and declared as being compliant within the aeroplane declaration of design compliance:
 - (i) if the aeroplane compliance is declared in accordance with point (a)(1)(i):
 - (A) CS-E Amendment 6; or
 - (B) Subpart H of CS-22 Amendment 3, for an aeroplane with an MTOM of 750 kg or less.
 - (ii) if the aeroplane compliance is declared in accordance with point (a)(1)(ii):
 - (A) CS-E Amendment 6; or
 - (B) Subpart H of CS-22 Amendment 3; or
 - (C) ASTM F2339-06 or ASTM F2538-07a as modified by CS-LSA.35 of CS-LSA Amendment 1.
 - (3) For a propeller that is installed on the aeroplane and declared as being compliant within the aeroplane declaration of design compliance,
 - (i) if the aeroplane compliance is declared in accordance with point (a)(1)(i):
 - (A) CS-P Amendment 2; or
 - (B) Subpart J of CS-22 Amendment 3, for an aeroplane with an MTOM of 750 kg or less.
 - (ii) if the aeroplane compliance is declared in accordance with point (a)(1)(ii):
 - (A) CS-P Amendment 2; or
 - (B) Subpart J of CS-22 Amendment 3; or
 - (C) ASTM F2506-10 as modified by CS-LSA.40 of CS-LSA Amendment 1.
- (b) If the engine or propeller installed on the aeroplane has been issued with a type certificate and is eligible for installation on the aeroplane, points (a)(2) and (a)(3) shall not apply and the reference to the type certificate shall be provided in accordance with 21L.A.43(b)(7)(i) of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.



GM1 21LD.100(a) Aeroplanes with a maximum take-off mass of 1 200 kg or less that are not jet-powered, and have a seating configuration of maximum two persons

APPLICABLE DETAILED TECHNICAL SPECIFICATIONS

The table below summarises the detailed technical specifications that are applicable for the declaration of design compliance for aeroplanes in accordance with Subpart C of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

For an aeroplane with an MTOM of 1 200 kg or less that is not jet-powered, and has a seating configuration of maximum two persons				
CS-23 Amendment 6 (AMC1 of AMC & GM to CS-23 Issue 4 only)		OR	CS-LSA Amendment 1*	
Engine	Propeller		Engine	Propeller
Installed on the aeroplane and declared as being compliant within the aeroplane declaration of design compliance			Installed on the aerop being compliant wi declaration of de	thin the aeroplane
CS-E Amendment 6	CS-P Amendments 2		CS-E Amendment 6	CS-P Amendments 2
OR	OR		OR	OR
Subpart H of CS-22 Amendment 3, for an aeroplane with an MTOM of 750 kg or less	Subpart J of CS-22 Amendment 3, for an aeroplane with an MTOM of 750 kg or less		Subpart H of CS-22 Amendment 3	Subpart J of CS-22 Amendment 3
			OR	OR
			ASTM F2339-06 or ASTM F2538-07a as modified by CS-LSA.35 of CS-LSA Amendment 1	ASTM F2506-10 as modified by CS-LSA.40 of CS-LSA Amendment 1

* The applicability of CS-LSA is provided in 'CS-LSA.5 Applicability'

DS 21LD.200 Sailplanes or powered sailplanes with a maximum takeoff mass of 1 200 kg or less

- (a) The applicable detailed technical specifications for the submission of a declaration of design compliance shall consist of the following:
 - (1) For a sailplane or powered sailplane,
 - (i) with an MTOM of 850 kg or less:



- (A) CS-22 Amendment 3; and if applicable
- (B) SC-D22-D01¹ 'Special Condition on Airworthiness Standards for CS-22 Sailplanes with hand rudder control of longitudinal type
- (ii) with an MTOM greater than 850 kg and equal to or less than 1 200 kg:
 - (A) (reserved);
- (2) For an engine that is installed on the powered sailplane and declared as being compliant within the sailplane declaration of design compliance,
 - (i) if the sailplane has an MTOM of 850 kg:
 - (A) CS-E Amendment 6; or
 - (B) Subpart H of CS-22 Amendment 3;
 - (ii) if the sailplane has an MTOM greater than 850 kg and equal to or less than 1 200 kg:
 - (A) (reserved).
- (3) For a propeller that is installed on the powered sailplane and declared as being compliant within the sailplane declaration of design compliance,
 - (i) if the sailplane has an MTOM of 850 kg:
 - (A) CS-P Amendments 2; or
 - (B) Subpart J of CS-22 Amendment 3.
 - (ii) if the sailplane has an MTOM greater than 850 kg and equal to or less than 1 200 kg:
 - (A) (reserved).
- (b) If the engine or propeller installed on the powered sailplane has been issued with a type certificate and is eligible for installation on the powered sailplane, points (a)(2) and (a)(3) shall not apply and the reference to the type certificate shall be provided in accordance with 21L.A.43(b)(7)(i) of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

GM1 21LD.200(a) Sailplanes or powered sailplanes with a maximum take-off mass of 1 200 kg or less

APPLICABLE DETAILED TECHNICAL SPECIFICATIONS

The table below summarises the detailed technical specifications that are applicable for the declaration of design compliance for sailplanes or powered sailplanes in accordance with Subpart C of Annex Ib (Part 21 Light) to Regulation (EU) No 748/2012.

¹ <u>https://www.easa.europa.eu/en/downloads/65378/en</u>



For a sailplane or powered sailplane with a maximum take-off mass of 850 kg or less				
CS-22 Amendment 3				
AND IF APPLICABLE				
SC-D22-D01 ¹ 'Special Condition on Airworthiness Standards for CS-22 Sailplanes with hand rudder control of longitudinal type'				
Engine	Propeller			
Installed on the powered sailplane and declared as being compliant within the sailplane declaration of design compliance				
CS-E Amendment 6	CS-P Amendments 2			
OR	OR			
Subpart H of CS-22 Amendment 3	Subpart J of CS-22 Amendment 3			

DS 21LD.300 Balloons designed for not more than four persons

- (a) The applicable detailed technical specifications for a balloon designed for not more than four persons for the submission of a declaration of design compliance shall consist of the following certifications specifications as applicable to the balloon:
 - (1) CS-31HB Amendment 1;
 - (2) CS-31GB Initial Issue;
 - (3) CS-31TGB Initial Issue.

DS 21LD.400 Hot air airships designed for not more than four persons

(reserved)

¹ https://www.easa.europa.eu/en/downloads/65378/en