



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 21

[Docket No. FAA-2017-0851]

Airworthiness Criteria: Glider Design Criteria for DG Flugzeugbau GmbH

Model DG-1000M Glider

AGENCY: Federal Aviation Administration (FAA), DOT

ACTION: Airworthiness design criteria.

SUMMARY: These airworthiness design criteria are for the DG Flugzeugbau GmbH model DG-1000M glider. The Administrator finds the design criteria, which make up the certification basis for the DG-1000M glider, acceptable.

DATES: These airworthiness design criteria are effective [INSERT A DATE 30 DAYS AFTER THE DATE OF PUBLICATION]

FOR FURTHER INFORMATION CONTACT: Mr. Jim Rutherford, AIR-692, Federal Aviation Administration, Policy & Innovation Division, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, MO 64106, telephone (816) 329-4165, facsimile (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Background

On May 18, 2011, DG Flugzeugbau GmbH submitted an application for type validation of the DG-1000M glider in accordance with the Technical Implementation Procedures for Airworthiness and Environmental Certification Between the FAA and the European Aviation

Safety Agency (EASA), dated May 05, 2011. This model is a variant of the DG-1000T powered glider and will be added to existing Type Certificate No. G20CE. The model DG-1000M is a two-seat, mid-wing, self-launching, powered glider with a retractable engine and fixed-pitch propeller. It is constructed from carbon and glass fiber reinforced plastic, and features a conventional T-type tailplane. The glider also features a 65.6 foot (20 meter) wingspan and a maximum weight of 1,742 pounds (790 kilograms).

The EASA type certificated the DG-1000M powered glider under Type Certificate Number (No.) EASA.A.072 on March 17, 2011. The associated EASA Type Certificate Data Sheet (TCDS) No. EASA.A.072 defines the DG Flugzeugbau GmbH certification basis submitted to the FAA for review and acceptance.

The applicable requirements for glider certification in the United States can be found in FAA Advisory Circular (AC) 21.17-2A, “Type Certification—Fixed-Wing Gliders (Sailplanes), Including Powered Gliders,” dated February 10, 1993. AC 21.17-2A has been the basis for certification of gliders and powered gliders in the United States for many years. AC 21.17-2A states that applicants may utilize the Joint Aviation Requirements (JAR)-22, “Sailplanes and Powered Sailplanes,” or another accepted airworthiness criteria, or a combination of both, as the accepted means for showing compliance for glider type certification.

Type Certification Basis

The certification basis is based on JAR-22, amendment 6, dated August 01, 2001. In addition to JAR-22 requirements, the applicant will comply with other requirements from the certification basis referenced in EASA TCDS No. EASA.A.072, including an equivalent safety finding.

Discussion of Comments

Notice of proposed airworthiness design criteria for the DG Flugzeugbau GmbH model DG-1000M glider was published in the Federal Register on September 21, 2017 (82 FR 44126). No comments were received; therefore, these airworthiness design criteria are adopted as proposed.

The Proposed Design Criteria

Applicable Airworthiness Criteria under § 21.17(b).

Based on the Special Class provisions of § 21.17(b), the following airworthiness requirements form the FAA Certification Basis for this design:

1. 14 CFR part 21, effective February 1, 1965, including amendments 21-1 through 21-92 as applicable.
2. JAR-22, amendment 6, dated August 01, 2001.
3. EASA Equivalent Safety Finding to JAR 22.207(c) – Stall warning. (FAA issued corresponding Equivalent Level of Safety (ELOS) Memorandum No. ACE-07-01A, dated April 02, 2012, as an extension to an existing ELOS finding).
4. “Standards for Structural Substantiation of Sailplane and Powered Sailplane Parts Consisting of Glass or Carbon Fiber Reinforced Plastics,” Luftfahrt-Bundesamt (LBA) document no. I4-FVK/91, issued July 1991.
5. “Guideline for the analysis of the electrical system for powered sailplanes,” LBA document no. I334-MS 92, issued September 15, 1992.
6. Operations allowed: VFR-Day, and “Cloud Flying” where “Cloud Flying” is considered flying in Instrument Meteorological Conditions (IMC) and requires an Instrument Flight Rules (IFR) clearance in the United States. This is permissible provided the pilot has the

appropriate rating per 14 CFR 61.3, the glider contains the necessary equipment specified under 14 CFR 91.205, and the pilot complies with IFR requirements.

7. EASA Type Certificate Data Sheet No. EASA.A.072, Issue 03, dated March 17, 2011.

8. Date of application for FAA Type Certificate: May 18, 2011.

Issued in Kansas City, Missouri on November 8, 2017.

Pat Mullen

Manager, Small Airplane Standards Branch

Aircraft Certification Service

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