Conclusion

This action affects only certain novel or unusual design features on two models of airplanes. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Bombardier Inc. Model BD–500–1A10 and BD–500–1A11 series airplanes.

1. *Fuselage In-Flight Fire Safety and Flammability Resistance.* Bombardier must demonstrate that the fuselage would not materially contribute to the propagation of an in-flight fire or introduce any additional in-flight fire risk.

2. To demonstrate compliance, the test set-up and methodology must be commensurate with 14 CFR part 25, appendix F, part VII, except the size of the test samples, modifications to the sample holder, and the test methodology would be varied as described below.

3. In demonstrating that the aluminum-lithium material used to fabricate the fuselage has equal or better flammability resistance characteristics than the aluminum alloy sheet typically used as skin material on similar airplanes, the accepted test methods for compliance include:

a. Each test sample must consist of a flat test specimen. A set of three samples of the material must be tested. The size of each sample must be 16 inches by 24 inches by 0.063 inches.

b. The test samples must be installed into a steel sheet subframe with outside dimensions of 18 inches by 32 inches. The subframe must have an opening cut into it of 14.5 inches by 22.5 inches. The tests samples must be mounted onto the subframe using .250–20 UNC threaded bolts.

c. Test specimens must be conditioned at 70 °F ± 5 °F and 55 percent ± 5 percent humidity for at least 24 hours before testing.

4. Demonstration of compliance will be achieved if the material is not ignited during any of the tests.

Issued in Renton, Washington, on September 12, 2013.

Jeffrey E. Duven,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2013–25663 Filed 10–30–13; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2013–0858; Notice No. 25–13–09–SC]

Special Conditions: Bombardier Inc., Models BD–500–1A10 and BD–500–1A11 Series Airplanes; Fuselage Post-Crash Fire Survivability

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for the Bombardier Inc. Models BD–500–1A10 and BD–500–1A11 series airplanes. These airplanes will have a novel or unusual design feature associated with aluminum-lithium fuselage construction that may provide different levels of protection from post-crash fire threats than similar aircraft constructed from traditional aluminum structure. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Send your comments on or before December 16, 2013.

ADDRESSES: Send comments identified by docket number FAA–2013–0858 using any of the following methods:

- *Federal eRegulations Portal:* Go to *http://www.regulations.gov/* and follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M–30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays.
- *Fax:* Fax comments to Docket Operations at 202–493–2251.

Privacy: The FAA will post all comments it receives, without change, to *http://www.regulations.gov/,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov/.*

Docket: Background documents or comments received may be read at *http://www.regulations.gov/* at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays.

FOR FURTHER INFORMATION CONTACT: Alan Sinclair, FAA, Airframe and Cabin Safety Branch, ANM–115 Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone 425–227–2195; facsimile 425–227–1232.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive on or before the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On December 10, 2009, Bombardier Inc. applied for a type certificate for their new Models BD–500–1A10 and BD–500–1A11 series airplanes (hereafter collectively referred to as ''C-series''). The C-series airplanes are swept-wing monoplanes with a pressurized cabin. They share an identical supplier base and significant common design elements. The fuselage is an aluminum alloy material, blended double-bubble design, sized for nominal 5-abreast seating. Each airplane's powerplant

consists of two under wing Pratt and Whitney PW1524G ultra-high bypass, geared turbofan engines. Flight controls are fly-by-wire systems with two passive/uncoupled side sticks. Avionics include five landscape primary cockpit displays. The dimensions of the airplanes encompass a wingspan of 115 feet; a height of 37.75 feet; and a length of 114.75 feet for the Model BD–500–1A10 and 127 feet for the Model BD–500–1A11. Passenger capacity is designated as 110 for the Model BD–500–1A10 and 125 for the Model BD–500–1A11. Maximum takeoff weight is 131,000 pounds for the Model BD–500–1A10 and 144,000 pounds for the Model BD–500–1A11. Maximum takeoff thrust is 21,000 pounds for the Model BD–500–1A10 and 23,300 pounds for the Model BD–500–1A11. Range is 3,394 miles (5,463 kilometers) for both models of airplanes. Maximum operating altitude is 41,000 feet for both models of airplanes.

The fuselage of the Bombardier C-series airplanes will be fabricated using aluminum-lithium construction. Structure fabricated from aluminum-lithium may provide different levels of protection from post-crash fuel-fed fire threats than similar aircraft constructed from traditional aluminum structure.

There are no existing regulations that adequately ensure that aluminum-lithium structure offers passengers the same protection from a post-crash fire condition as would a conventional aluminum structure. These proposed special conditions are necessary to ensure that the Bombardier C-series airplanes provide a level of safety equivalent to that provided by Title 14, Code of Federal Regulations (14 CFR) part 25.

Type Certification Basis

Under the provisions of 14 CFR 21.17, Bombardier Inc. must show that the C-series airplanes meet the applicable provisions of part 25 as amended by Amendments 25–1 through 25–129 thereto.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the C-series airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, the special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the C-series airplanes must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36, and the FAA must issue a finding of regulatory adequacy under § 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type-certification basis under § 21.17(a)(2).

Novel or Unusual Design Features

The Bombardier C-series airplanes will incorporate the following novel or unusual design features: The fuselage will be fabricated using aluminum-lithium materials instead of conventional aluminum.

The performance of airplanes consisting of a conventional aluminum fuselage is understood based on service history and extensive intermediate and large-scale fire testing. The new aluminum-lithium materials must provide the same levels of protection against post-crash fuel-fed fire threats.

Discussion

The certification basis for the Bombardier C-series airplanes includes meeting the burn-through requirements defined in § 25.856(b). The Bombardier C-series airplanes are introducing a new material from what has traditionally been shown to be survivable from a toxic standpoint. Toxicity levels from post-crash fire threats are typically more severe than threats generated from an in-flight fire with regards to the quantity level of toxins produced by off-gases from burning materials. Therefore, it is necessary to ensure that the material being used does not introduce a new hazard that would reduce the survivability of the passengers during a post-crash situation, or provide levels of toxic fumes that would be lethal or incapacitating, thus preventing evacuation of the aircraft in a crash scenario.

Bombardier Inc. will have to demonstrate that aluminum-lithium material does not produce levels of toxic fumes that will reduce the survivability of the passengers or their ability to evacuate when compared to typically constructed aluminum airplanes.

A way of showing acceptable capability is to conduct a laboratory-scale test to assess the survivability characteristics of this non-traditional fuselage material. If negligible amounts of combustion products are produced in this test, the material can be considered acceptable with respect to post crash survivability. A test method developed by the FAA's William J. Hughes Technical Center should be utilized (Ref. DOT/FAA/AR–TN07/15 dated August 2008).

Related regulations, including §§ 25.853 and 25.856(a), remain valid for this airplane, but they do not reflect the potential threat generated from toxic levels of gases produced from aluminum-lithium materials.

Applicability

As discussed above, these special conditions are applicable to the Model BD–500–1A10 and BD–500–1A11 series airplanes. Should Bombardier Inc. apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on two model series of airplanes. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Bombardier Inc. Model BD–500–1A10 and BD–500–1A11 (C-series) airplanes.

The Bombardier C-series airplanes must show that any toxic levels of gases produced from the aluminum-lithium material are in no way an additional threat to the passengers and their ability to evacuate when compared to a typically constructed aluminum airplane exposed to a post-crash fuel-fed fire.

Issued in Renton, Washington, on September 19, 2013.

Ross Landes,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2013–25843 Filed 10–30–13; 8:45 am]

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