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[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2015-2393; Notice No. 25-16-07-SC]

Special Conditions: Bombardier Inc. Models BD-700-2A12 and BD-700-2A13 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. (Bombardier) Model BD-700-2A12 and BD-700-2A13 airplanes. These airplanes will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. These features are associated with an 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 **[INSERT DATE 45 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Send comments identified by docket number FAA-2015-2393 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, D.C., 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, D.C., between 8 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, D.C., 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 by the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On May 30, 2012, Bombardier applied for an amendment to type certificate no. T00003NY to include the new Model BD-700-2A12 and BD-700-2A13 airplanes. These airplanes are derivatives of the Model BD-700 series of airplanes and are marketed as the Bombardier Global 7000 (Model BD-700-2A12) and Global 8000 (Model BD-700-2A13). These airplanes are twin-engine, transport-category, executive-interior business jets. The maximum passenger capacity is 19 and the maximum takeoff weights are 106,250 lbs. (Model BD-700-2A12) and 104,800 lbs. (Model BD-700-2A13).

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.101, Bombardier must show that the Model BD-700-2A12 and BD-700-2A13 airplanes meet the applicable provisions of the regulations listed in Type Certificate no. T00003NY, or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA.

In addition, the certification basis includes other regulations, special conditions, and exemptions that are not relevant to these proposed special conditions. Type Certificate no. T00003NY will be updated to include a complete description of the certification basis for these airplane models.

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 Model BD-700-2A12 and BD-700-2A13 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 novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, these special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the Model BD-700-2A12 and BD-700-2A13 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.

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 § 21.101.

Novel or Unusual Design Features

Bombardier Inc. Model BD-700-2A12 and BD-700-2A13 airplanes will incorporate the following novel or unusual design feature: The fuselage will be fabricated using aluminum-lithium materials instead of conventional aluminum.

Discussion

The certification basis for the Bombardier Model BD-700-2A12 and BD-700-2A11 airplanes does not include the burn-through requirements defined in § 25.856(b) because both airplane models have a passenger capacity of fewer than 20. The Model BD-700-2A12 and BD-700-2A13 airplanes are introducing a new material other than what has traditionally been shown to be survivable from a “toxic” standpoint. The applicant must ensure that the material being installed on an airplane does not introduce a new hazard that would reduce the survivability of the passengers during a post-crash situation, or that would provide levels of toxic fumes that would be lethal or incapacitating, thus preventing evacuation of the airplane in a crash scenario.

In accordance with § 21.16, fuselage structure that includes aluminum-lithium construction is an unusual design feature for large, transport-category airplanes certificated under 14 CFR part 25.

Regulations applicable to burn requirements, including §§ 25.853 and 25.856(a), remain valid for these airplanes, but do not reflect the threat generated from potentially toxic levels of gases produced from aluminum-lithium materials.

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.

Applicability

As discussed above, these special conditions are applicable to the Bombardier Model BD-700-2A12 and BD-700-2A13 airplanes. Should Bombardier apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to the other model as well.

Conclusion

This action affects only certain novel or unusual design features on Bombardier Model BD-700-2A12 and BD-700-2A13 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 Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Bombardier Model BD-700-2A12 and BD-700-2A13 airplanes.

The Model BD-700-2A12 and BD-700-2A13 airplanes must show that toxic levels of gases produced from the aluminum-lithium material, when exposed to a post-crash fire threat, are in no way an additional threat to the passengers, including, but not limited to, their ability to evacuate, when compared to traditional aluminum airplane materials.

Issued in Renton, Washington, on October 14, 2016.

/s/

Michael Kaszycki
Assistant Manager, Transport Airplane Directorate
Aircraft Certification Service

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