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 used (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.

Discussion of Comments

Notice of proposed special conditions No. 25–13–08–SC for the Bombardier C-series airplanes was published in the **Federal Register** on October 31, 2013 (78 FR 65233). No comments were received, and the special conditions are adopted as proposed.

Applicability

As discussed above, these special conditions are applicable to the Models 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 on the same type certificate 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 Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Bombardier Inc. Models BD–500–1A10 and BD–500–1A11 (C-series) airplanes.

Fuselage Post-Crash Fire Survivability. 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 January 22, 2014.

Jeffrey E. Duven,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2014–03585 Filed 2–18–14; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2013–0819; Special Conditions No. 25–519–SC]

Special Conditions: Bombardier Inc., Models BD–500–1A10 and BD–500–1A11 Series Airplanes; Fuselage In-Flight Fire Safety and Flammability Resistance

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Bombardier Inc. Models BD–500–1A10 and BD–500–1A11 series 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 the materials used to fabricate the fuselage, which may affect fire propagation during an in-flight fire. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These 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: *Effective Date:* March 21, 2014.

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:

Background

On December 10, 2009, Bombardier Inc. applied for a type certificate for their new Models BD–500–1A10 and BD–500–1A1 series airplanes (hereafter collectively referred to as ''C-series''). The C-series airplanes are swept-wing monoplanes with an aluminum alloy fuselage sized for 5-abreast seating. 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.

The Bombardier C-series airplanes will be fabricated using aluminum-lithium materials. The performance of airplanes consisting of a conventional aluminum fuselage in an inaccessible in-flight fire scenario is understood based on service history and extensive intermediate and large-scale fire testing. The fuselage itself does not contribute to in-flight fire propagation. This may not be the case for an all-aluminum-lithium fuselage. Experience has shown that eliminating the fire propagation of the interior materials and insulation materials tends to increase survivability since other aspects of in-flight fire safety (e.g., toxic gas emission and smoke obscuration) are typically by-products of the propagating fire. The Bombardier C-series airplanes must provide protection against an in-flight fire propagating along the surface of the fuselage.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, Bombardier Inc. must show that the C-series airplanes meet the applicable provisions of part 25, as amended by Amendment 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 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. This new type of material must provide protection against an in-flight fire propagating along the surface of the fuselage.

Discussion

The Bombardier C-series airplanes will be fabricated using aluminum-lithium materials. The performance of airplanes consisting of a conventional aluminum fuselage in an inaccessible in-flight fire scenario is understood based on service history and extensive intermediate and large-scale fire testing. Experience has shown that eliminating the fire propagation of the interior materials and insulation materials tends to increase survivability since other aspects of in-flight fire safety (e.g., toxic gas emission and smoke obscuration) are typically by-products of the propagating fire. The fuselage itself does not contribute to in-flight fire propagation. This may not be the case for an all-aluminum-lithium fuselage.

In the past, fatal in-flight fires have originated in inaccessible areas of the airplane where thermal/acoustic insulation located adjacent to the aluminum airplane skin has been the path for flame propagation and fire growth. Concern over the fire performance of thermal/acoustic insulation was initially raised by five incidents in the 1990's, which revealed unexpected flame spread along the insulation film that covered the thermal/acoustic insulation. In all cases, the ignition source was relatively modest and, in most cases, was electrical in origin (e.g., electrical short circuit, arcing caused by chafed wiring, ruptured ballast case).

In 1996, the FAA Technical Center began a program to develop new fire test criteria for insulation films directly relating to in-flight fire resistance. The current test standard at that time was evaluated as well as another small-scale test method that has been used by airplane manufacturers to evaluate flame propagation on thermal/acoustic insulation materials.

An inter-laboratory comparison of these methods revealed a number of deficiencies. A new test method subjecting a material to a pilot flame while the material is heated by a radiant panel was developed. The new radiant panel test method and criteria were specifically established to improve the evaluation of the in-flight fire ignition/flame propagation of thermal/acoustic insulation materials based on real-world fire scenarios. While these tests were developed for thermal/acoustic insulation materials, this same type of test methodology can be used to assess the flammability characteristics of the proposed aluminum-lithium material for the fuselage.

The FAA reviewed the test method proposed by Bombardier Inc. and determined that a larger flame and test article would be necessary to make a determination of the potential flammability of the aluminum-lithium material. It would also be more representative of a real-life fire scenario.

The FAA recently conducted additional testing in our Components Fire Test facility and determined that another way to assess the survivability within the cabin of the C-series airplanes is to use the cargo liner flammability test (part III of appendix F to part 25, *Test Method to Determine Flame Penetration Resistance of Cargo Compartment Liners*). However, the problem with using this particular test is that when the aluminum panels melt, molten globs of aluminum fall directly into the burner, which adversely affects the flame. So the FAA decided that a similar test for the measurement of insulation burnthrough resistance could be used (part VII of appendix F to part 25, *Test Method to Determine the Burnthrough Resistance of Thermal/Acoustic Insulation Materials*). Although this test method uses the same burner as the cargo liner test, it uses a slightly larger flame. In addition, the burner is not vertical, so there was no problem with molten material falling into it, requiring disassembly of the burner. The only slight change was the size of the sample and the sample holder. These were modified slightly to accommodate the samples that we received.

The recent FAA tests that were conducted in our Components Fire Test facility used a 6-gallon/hour oil burner, the same apparatus used to determine burnthrough resistance of thermal/acoustic insulation (part VII of appendix F to part 25). The test used 16 by 24-inch Al-Li panels that were installed into a sheet steel subframe, which measured 18 by 32 inches (outside dimensions). The subframe had an opening cut into it, which measured 14.5 by 22.5 inches; this allowed the test panels to be mounted onto the subframe using .250–20 UNC threaded bolts.

The FAA proposes that Bombardier use the test method contained in part VII of appendix F to part 25, *Test Method to Determine the Burnthrough Resistance of Thermal/Acoustic Insulation Materials,* with the slight changes to the sample size and sample holder as an alternate test method to show compliance with applicable requirements. Bombardier Inc. is responsible for finding a suitable testing facility in which to conduct the testing.

Discussion of Comments

Notice of proposed special conditions No. 25–13–06–SC for the Bombardier C-series airplanes was published in the **Federal Register** on October 31, 2013 (78 FR 65231). No comments were received, and the special conditions are adopted as proposed.

Applicability

As discussed above, these special conditions are applicable to the Models 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 on the same type certificate 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 Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Bombardier Inc. Models BD–500–1A10 and BD–500–1A11 (C-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 January 22, 2014.

Jeffrey E. Duven,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2014–03586 Filed 2–18–14; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2013–0632; Directorate Identifier 2013–NM–045–AD; Amendment 39–17752; AD 2014–03–14]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Airbus Model A330–200 and –300 series airplanes, and Model A340–200, –300, –500, and –600 series airplanes. This AD was prompted by results from fuel system reviews conducted by the airplane manufacturer. This AD requires removing bulb-type maintenance lights; installing a drain mast on certain airplanes; and installing muffs on connecting bleed elements on certain airplanes. We are issuing this AD to prevent ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

DATES: This AD becomes effective March 26, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 26, 2014.

ADDRESSES: You may examine the AD docket on the Internet at *http://www.regulations.gov/#!docketDetail;D=FAA-2013-0632;* or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email *airworthiness.A330-A340@airbus.com*; Internet *http://www.airbus.com*. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–1138; fax 425–227–1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A330–200 and –300 series airplanes, and Model A340–200, –300, –500, and –600 series airplanes. The NPRM published in the **Federal Register** on July 31, 2013 (78 FR 46306). The NPRM was prompted by results from fuel system reviews conducted by the airplane manufacturer. The NPRM proposed to require removing bulb-type maintenance lights; installing a drain mast on certain airplanes; and installing muffs on connecting bleed elements on certain airplanes. We are issuing this AD to prevent ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013–0033, dated February 19, 2013 (referred to after this the Mandatory Continuing Airworthiness Information, or ''the MCAI''), to correct an unsafe condition for the specified products. The MCAI states:

> [Subsequent to accidents involving fuel tank system explosions in flight and on ground], the FAA published Special Federal Aviation Regulation (SFAR) 88 [66FR 23086, May 7, 2001], and the Joint Aviation Authorities (JAA) published Interim Policy INT/POL/25/12.
>
> In response to these regulations, a global design review conducted by Airbus on the A330 and A340 type design Section 19, which is a flammable fluid leakage zone and a zone adjacent to a fuel tank, highlighted potential deviations. The specific identified cases were that drainage is inefficient in flight on A340–500/–600 aeroplanes, maintenance lights are not qualified explosion proof, and hot surfaces may exist on bleed system during normal/failure operations.
>
> This condition, if not corrected, in combination with a fuel leak generating flammable vapours in the area, could result in a fuel tank explosion and consequent loss of the aeroplane.
>
> For the reasons described above, this [EASA] AD requires removal of bulb type maintenance lights for all aeroplanes, installation of the drain mast between Frame (FR) 80 and FR83 for A340–500/–600, and installation of muffs on connecting bleed elements to minimize hot surfaces on A330 and A340–200/–300.

You may examine the MCAI in the AD docket on the Internet at *http://www.regulations.gov/#!documentDetail;D=FAA-2013-0632-0002.*

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comments received. The following presents the comments received on the proposal (78 FR 46306, July 31, 2013) and the FAA's response to each comment.

Request To Require New Service Information

Airbus requested that we specify the use of Revision 01 of Airbus Mandatory Service Bulletin A340–36–4035, dated September 24, 2013, instead of the original issue of Airbus Mandatory Service Bulletin A340–36–4035, dated September 18, 2012. Airbus stated that since the issuance of the MCAI, it identified an inversion of configurations in Airbus Mandatory Service Bulletin A340–36–4035. Airbus stated that it