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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0524; Directorate Identifier 2014-NM-042-AD; Amendment 39-18189; AD 2015-13-02]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-400 series airplanes. This AD was prompted by reports of corrosion in the low-rate discharge tubes of the fire protection system leading to the forward baggage compartment, and perforation of one or more tubes. This AD requires repetitive checks for leakage of the discharge tubes of the fire protection system. This AD also mandates eventual replacement of all existing aluminum tube assemblies with new, improved corrosion-resistant stainless steel tube assemblies. We are issuing this AD to prevent perforation of the low-rate discharge tubes, which could result in insufficient fire extinguishing agent reaching the forward baggage compartment in the event of a fire, which could result in damage to the airplane and injury to the occupants.

DATES: This AD becomes effective July 31, 2015

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 31, 2015.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0524> 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 Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0524.

FOR FURTHER INFORMATION CONTACT: Fabio Buttitta, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7303; fax 516-794-5531.

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 certain Bombardier, Inc. Model DHC-8-400 series airplanes. The NPRM published in the Federal Register on August 13, 2014 (79 FR 47384).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-06, dated January 21, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Corrosion has been reported in the fire protection system low rate discharge tubes leading to the forward baggage compartment. In some cases, this has led to perforation of one or more tubes.

Perforation of forward baggage compartment fire protection system tubes may result in decreased effectiveness of the fire protection system in the event of a fire in the forward baggage compartment.

This [Canadian] AD mandates a repetitive integrity check of the forward baggage compartment fire protection system tube assemblies, and the replacement of aluminum forward baggage compartment fire protection tube assemblies with corrosion resistant stainless steel (CRES) tubes.

The unsafe condition is perforation of the low-rate discharge tubes, which could result in insufficient fire extinguishing agent reaching the forward baggage compartment and reduce the capability of the fire protection system to extinguish fires, possibly resulting in damage to the airplane and injury to occupants. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0524-0004>.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 47384, August 13, 2014) and the FAA's response to each comment.

Request To Remove Certain Service Information Procedures

Horizon Air requested that the language in paragraph (g) of the NPRM (79 FR 47384, August 13, 2014) be changed to specify only required actions. Instead of mandating the entire Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014, Horizon Air recommended mandating only the actions necessary to correct the identified unsafe condition. Horizon Air stated that the Accomplishment Instructions, Part A, "Job Set-up," and Part C, "Close Out," have nothing to do with correcting the unsafe condition. Horizon Air reasoned that mandating operators to perform these actions restricts operators' ability to perform other maintenance in conjunction with incorporation of the required actions specified in this AD.

We agree with the commenter's request to exclude the "Job Set-up" and "Close Out" sections of the Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014, from this AD. We have revised the introductory text of paragraphs (g) and (h) of this AD for clarification because there are two sections in the service information which contain paragraph 3.B. "Procedure." Accomplishment of the actions specified in paragraph 3.B., "Procedure," of Parts A and B, as applicable, of the Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014, is required by this AD.

Second Alternative for Failed Integrity Check

Horizon Air also asked that a second alternative for a failed integrity check be included in paragraph (i) of the NPRM (79 FR 47384, August 13, 2014). Horizon Air stated that, as an alternative to replacing all tubes by incorporating Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014, operators should be allowed the option to replace only the leaking tubes using Bombardier Service Bulletin 84-26-15, dated January 7, 2013. Horizon Air noted that it would then repeat the integrity check required by the paragraph (g) of the proposed AD. Horizon Air stated that disabling the forward baggage compartment is not a viable option in its operation.

We agree with the commenter. As an additional option for a failed integrity check, operators may replace only the leaking tubes and return the airplane to service if no additional leakage is found. We have added a new paragraph (i)(2) to this AD to include this option in lieu of disabling the forward baggage compartment. We have also re-designated paragraphs (i)(1), (i)(2), and (i)(3) of the proposed AD to paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this AD.

Request to Remove or Change Exception to Service Information

All Nippon Airways requested that the exception to the electrical bonding resistance check specified in paragraph (j) of the proposed AD (79 FR 47384, August 13, 2014), be either removed or clarified. All Nippon Airways stated that, if the electrical bonding resistance check of the high rate discharge bottle was deleted from the referenced service information, it should also be removed from the NPRM. If the FAA disagrees, All Nippon Airways asked that we clarify the language in paragraph (j) of the proposed AD.

We agree that the electrical bonding resistance check of the high rate discharge bottle was removed from Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014. The electrical bonding resistance check was identified in Bombardier Service Bulletin 84-26-15, dated June 7, 2013, and was subsequently included in the exception identified in the NPRM (79 FR 47384, August 13, 2014). Therefore, we have removed paragraph (j) of the proposed AD from this final rule and re-designated subsequent paragraphs accordingly. Instead, we have included that exception in the Credit for Previous Actions specified in paragraph (j) of this AD (identified as paragraph (k) of the proposed AD).

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 47384, August 13, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 47384, August 13, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information Under 1 CFR Part 51

Bombardier, Inc. has issued Service Bulletin 84-26-15, Revision A, dated January 15, 2014. The service information describes procedures for repetitive checks for leakage of the discharge tubes of the fire protection system. The service information also mandates eventual replacement of all existing aluminum tube assemblies with new, improved corrosion-resistant stainless steel tube assemblies. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this AD.

Costs of Compliance

We estimate that this AD affects 82 airplanes of U.S. registry.

We also estimate that it would take about 42 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$7,852 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$936,604, or \$11,422 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0524-0004>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



2015-13-02 Bombardier, Inc.: Amendment 39-18189. Docket No. FAA-2014-0524; Directorate Identifier 2014-NM-042-AD.

(a) Effective Date

This AD becomes effective July 31, 2015.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001 through 4424 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 26, Fire protection.

(e) Reason

This AD was prompted by reports of corrosion in the low-rate discharge tubes of the fire protection system leading to the forward baggage compartment, and perforation of one or more tubes. We are issuing this AD to prevent perforation of the low-rate discharge tubes, which could result in insufficient fire extinguishing agent reaching the forward baggage compartment in the event of a fire, which could result in damage to the airplane and injury to the occupants.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Inspections

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD, perform an inspection (integrity check) for leakage of the fire protection tube assemblies of the forward baggage compartment, in accordance with paragraph 3.B., "Procedure," of Part A of the Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014. If no leakage is found, repeat the inspection at intervals not to exceed 2,000 flight hours or 12 months, whichever occurs first. If any leakage is found, before further flight, do the terminating action required by paragraph (h) of this AD, except as provided by paragraph (i) of this AD.

(1) For airplanes that have accumulated 10,000 total flight hours or more, or have been in service for 60 months or more as of the effective date of this AD: Within 2,000 flight hours or 12 months after the effective date of this AD, whichever occurs first.

(2) For airplanes that have accumulated less than 10,000 total flight hours, and have been in service for less than 60 months, as of the effective date of this AD: Before the accumulation of 12,000 total flight hours or 72 months in service, whichever occurs first.

(h) Terminating Action for Repetitive Inspections

At the applicable time specified in paragraph (h)(1) or (h)(2) of this AD: Replace all existing aluminum tube assemblies of the forward baggage compartment with new, improved corrosion-resistant stainless steel tube assemblies, in accordance with paragraph 3.B., "Procedure," of Part B of the Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014. Accomplishing this replacement terminates the repetitive inspections required by paragraph (g) of this AD.

(1) For airplanes that have accumulated 12,000 total flight hours or more, or have been in service for 72 months or more, as of the effective date of this AD: Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first.

(2) For airplanes that have accumulated less than 12,000 total flight hours, and have been in service for less than 72 months, as of the effective date of this AD: Before the accumulation of 18,000 total flight hours or 108 months in service, whichever occurs first.

(i) Alternatives to Replacement for Failed Integrity Check

(1) As an alternative to the immediate tube assembly replacement following any failed inspection (integrity check) required by paragraph (g) of this AD, the airplane may be returned to service for a maximum of 10 days, provided the conditions specified in paragraphs (i)(1)(i), (i)(1)(ii), and (i)(1)(iii) of this AD are met.

(i) The forward baggage compartment is empty. For ballast purposes, the use of bags (made of glass fiber or Kevlar) of sand or ingots of non-magnetic metals (such as lead) are acceptable.

(ii) The flight compartment and forward baggage compartment are placarded to indicate the forward baggage compartment is inoperative.

(iii) An appropriate entry in the aircraft maintenance log is made.

(2) As an alternative to the immediate tube assembly replacement following any failed inspection (integrity check) required by paragraph (g) of this AD, the airplane may be returned to service for a maximum of 10 days provided no additional leakage is found. Any tubes found with a leak are to be replaced before further flight, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-26-15, dated January 7, 2013.

(j) Credit for Previous Actions

This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, as applicable, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-26-15, dated June 7, 2013, which is not incorporated by reference in this AD. The electrical bonding resistance check of the high rate discharge bottle specified in Bombardier Service Bulletin 84-26-15, dated June 7, 2013, is not required.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the New York ACO, send it to ATTN: Program Manager, Continuing

Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-553. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-06, dated January 21, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0524-0004>.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (m)(4) of this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 84-26-15, Revision A, dated January 15, 2014.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>.

(4) You may view this 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.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington on June 17, 2015.

Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.