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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0583; Directorate Identifier 2013-NM-130-AD; Amendment 39-18258; AD 2015-17-25]

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 chafing of the fuel lines due to contact with the surrounding structures in the fuel tank. This AD requires replacing and modifying fuel lines, revising the maintenance or inspection program, as applicable, to include critical design configuration control limitations (CDCCL) and airworthiness limitation (AWL) items, and, for certain airplanes, removing certain clamps and mounting hardware. We are issuing this AD to prevent chafing of the fuel lines in the fuel tank, which could result in potential ignition sources in the fuel tank in the event of a lightning strike and consequent fire or explosion.

DATES: This AD becomes effective October 7, 2015.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 7, 2015.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0583> 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-2014-0583.

FOR FURTHER INFORMATION CONTACT: Kent Fredrickson, Aerospace Engineer, Propulsion and Services Branch, ANE-173, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7364; 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 26, 2014 (79 FR 50860).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2013-09R1, dated May 28, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc. Model DHC-8-400 series airplanes. The MCAI states:

Reports from operators have revealed a number of instances of chafing of the fuel lines due to contact with the surrounding structures in the fuel tank. An internal audit conducted by Bombardier revealed a number of locations in the fuel tank where low clearances were noted between fuel lines and the surrounding structure. Low clearances between fuel lines and the surrounding structures may result in ignition sources in the fuel tank in the event of a lightning strike, creating an unacceptable level of safety.

Bombardier had issued Service Bulletin (SB) 84-28-09 to introduce new fuel line assemblies that include new fuel lines and Teflon protective sleeves, and SBs 84-28-10 and 84-28-13 to remove unnecessary hardware in the wing fuel tanks, in order to eliminate potential fouling conditions on the affected fuel lines.

Upon an operator's incorporation of SB 84-28-09, an additional fouling condition was identified on the post-modification fuel lines. In order to address this concern on the aeroplane, Bombardier has issued SBs 84-28-14 and 84-28-15, along with ModSum IS4Q2800012 to rectify this problem.

This [Canadian] AD mandates the replacement of fuel lines and the installation of fuel line Teflon protective sleeves. In addition, the fuel line Teflon protective sleeves have been added to the Critical Design Configuration Control Limitations (CDCCL) along with the introduction of associated Fuel System Limitations tasks, to ensure integrity of the new assembly.

Since the original issue of this [Canadian] AD, it was found that there were editorial errors in Parts IB and II A of this [Canadian] AD. In addition, the Temporary Revisions (TR) Airworthiness Limitation Items (ALI)-111/-112 "referenced" in Parts III and IV of this AD had been superseded by later revisions. This [Canadian] AD is revised to correct the editorial errors and accept the later TR approved by Transport Canada.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0583-0002>.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 50860, August 26, 2014) and the FAA's response to each comment.

Request To Refer to Revised Service Information

All Nippon Airways (ANA) and Horizon Air requested that we revise paragraph (g) of the proposed AD (79 FR 50860, August 26, 2014) to refer to the following service information:

- Bombardier Service Bulletin 84-28-14, Revision A, dated June 9, 2014
- Bombardier Service Bulletin 84-28-09, Revision D, January 29, 2013
- Bombardier Service Bulletin 84-28-15, dated August 17, 2012

Horizon also requested that we revise paragraph (n) of the proposed AD (79 FR 50860, August 26, 2014) to provide credit for the prior accomplishment of the actions specified in Bombardier Service Bulletin 84-28-14, dated August 17, 2012.

We agree with the requests and have revised paragraphs (g)(1), (g)(2)(i), (g)(2)(ii), and (m) of this AD accordingly. We have also redesignated paragraph (n) of the proposed AD (79 FR 50860, August 26, 2014) as paragraph (n)(1) of this AD, and added new paragraph (n)(2) to this AD to indicate the new credit service information.

Request To Clarify Certain Affected Airplanes

ANA requested that we correct the identity of the affected airplanes in paragraph (g)(2) of the proposed AD (79 FR 50860, August 26, 2014). Although paragraph (g)(2) of the NPRM specified airplanes on which ModSum 4-113643 "was incorporated" in production, ANA noted that this requirement should apply to airplanes on which ModSum 4-113643 "was not incorporated" in production. ANA noted that ModSum 4-113643 is equivalent to the Bombardier Service Bulletin 84-28-09.

We agree with the request. The intent of the NPRM (79 FR 50860, August 26, 2014) was to include only airplanes on which neither the ModSum nor the corresponding service bulletin was done. We have revised paragraph (g)(2) of this AD accordingly.

Request To Exclude Specific Access and Close Requirements

Horizon Air requested that we revise paragraphs (g) and (i) of the proposed AD (79 FR 50860, August 26, 2014) to exclude the Job Set-up and the Close Out sections in certain service information, because these actions do not directly correct the unsafe condition. Horizon Air stated that requiring the actions in these sections restricts an operator's ability to do other maintenance actions concurrently with the actions required by this AD.

We agree to revise paragraphs (g) and (i) of this AD to specify only the actions in paragraph B., "Procedures," which correct the unsafe condition.

Request To Allow Use of Later Revisions of Service Information

ANA requested that we allow use of "later revisions" of the service information, as done in the MCAI.

We disagree with the request. We cannot use the phrase "or later revisions" in an AD when referring to service documents because doing so violates Office of the Federal Register (OFR)

regulations for approval of materials "incorporated by reference" in rules. See 1 CFR 51.1(f). In general terms, we are required by these OFR regulations to either publish the service document contents as part of the actual AD language; or submit the service document to the OFR for approval as "referenced" material, in which case we may refer to such material in the text of an AD. The AD may refer to service documents only if the OFR has approved them for incorporation by reference. See 1 CFR part 51.

To allow operators to use later revisions of the referenced document (issued after publication of the AD), either we must revise the AD to refer to specific later revisions, or operators must request approval to use later revisions as an alternative method of compliance with this AD under the provisions of paragraph (o)(1) of this AD. We have not changed this AD regarding this issue.

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 50860, August 26, 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 50860, August 26, 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 has issued the following service information:

- Service Bulletin 84-28-09, Revision D, dated January 29, 2013, which describes procedures for replacing fuel lines, adding Teflon tubing to certain fuel lines in the fuel tank, and contacting the manufacturer for certain corrective actions.
- Service Bulletin 84-28-10, Revision B, dated March 19, 2013, which describes procedures for inspecting for the presence of certain clamps and hardware and, if those are present, removing those certain clamps and mounting hardware.
- Service Bulletin 84-28-13, dated August 17, 2012, which describes procedures for removing certain clamps and mounting hardware.
- Service Bulletin 84-28-14, Revision A, dated June 9, 2014, which describes procedures for replacing a tube assembly.
- Service Bulletin 84-28-15, dated August 17, 2012, which describes procedures for replacing fuel lines, adding Teflon tubing to certain fuel lines in the fuel tank, and contacting the manufacturer for certain corrective actions.
- Temporary Revision ALI-111, dated January 11, 2011, to Section 4-1, "Fuel System Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7, which describes updates to the fuel system limitations for inspections of the Teflon sleeve on the fuel tank vent lines.
- Temporary Revision ALI-112, dated January 11, 2011, to Section 5-1, "Critical Design Configuration Control Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7, which describes updates to the critical design configuration control limitations on Teflon protective sleeves on fuel vent lines inside the fuel tanks.

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 NPRM.

Costs of Compliance

We estimate that this AD affects 72 airplanes of U.S. registry. We also estimate that it will take about 80 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 \$2,845 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$694,440, or \$9,645 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-2014-0583>; 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):



2015-17-25 Bombardier, Inc.: Amendment 39-18258. Docket No. FAA-2014-0583; Directorate Identifier 2013-NM-130-AD.

(a) Effective Date

This AD becomes effective October 7, 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, and 4003 through 4417 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by reports of chafing of the fuel lines due to contact with the surrounding structures in the fuel tank. We are issuing this AD to prevent chafing of the fuel lines in the fuel tank, which could result in potential ignition sources in the fuel tank in the event of a lightning strike and consequent fire or explosion.

(f) Compliance

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

(g) Installation of New Fuel Tube Assemblies

For airplanes having serial numbers 4001, 4003, 4004, 4006, and 4008 through 4417 inclusive: Within 6,000 flight hours or 3 years after the effective date of this AD, whichever occurs first, install new, improved fuel tube assemblies, in accordance with paragraph B., "Procedure," of the Accomplishment Instructions of the applicable service information identified in paragraphs (g)(1) and (g)(2) of this AD.

(1) For airplanes on which Bombardier Service Bulletin 84-28-09 was incorporated prior to the effective date of this AD, or on which Bombardier Modification Summary (ModSum) 4-113643 was incorporated in production: Bombardier Service Bulletin 84-28-14, Revision A, dated June 9, 2014.

(2) For airplanes on which Bombardier Service Bulletin 84-28-09 was not incorporated prior to the effective date of this AD, or on which Bombardier ModSum 4-113643 was not incorporated in production, use the service information identified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD.

(i) Bombardier Service Bulletin 84-28-09, Revision D, dated January 29, 2013; and Bombardier Service Bulletin 84-28-14, Revision A, dated June 9, 2014.

(ii) Bombardier Service Bulletin 84-28-15, dated August 17, 2012.

(h) Prior Incorporation of Bombardier ModSum IS4Q2800012

For airplanes on which Bombardier Service Bulletin 84-28-09, and Bombardier ModSum IS4Q2800012 were incorporated before the effective date of this AD; and for airplanes on which Bombardier ModSum 4-113643 was incorporated in production, and Bombardier ModSum IS4Q2800012 was incorporated prior to the effective date of this AD: The requirements of paragraph (g) are not required.

(i) Removal of Clamps and Mounting Hardware

For airplanes having serial numbers 4003 through 4151 inclusive, and 4332 through 4417 inclusive: Within 6,000 flight hours or 3 years after the effective date of this AD, whichever occurs first, do the actions required by paragraphs (i)(1) and (i)(2) of this AD, as applicable.

(1) For airplanes having serial numbers 4003 through 4151 inclusive, on which Bombardier ModSum IS4Q2800010 was incorporated: Inspect for the presence of certain clamps and hardware, and, if present, remove certain clamps and mounting hardware, in accordance with paragraph B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-28-10, Revision B, dated March 19, 2013.

(2) For airplanes having serial numbers 4332 through 4417 inclusive: Remove certain clamps and mounting hardware, in accordance with paragraph B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-28-13, dated August 17, 2012.

(j) Incorporation of Fuel System Limitations (FSL) Tasks

Within 60 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the information in FSL Task Numbers 284000-406 and 284000-418 as specified in Bombardier Temporary Revision ALI-111, dated January 11, 2011, to Section 4-1, "Fuel System Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7. The initial compliance time for Task 284000-418 is within 108 months or 18,000 flight hours after accomplishing the requirements of paragraph (g) of this AD, whichever occurs first, for airplanes identified in paragraphs (g)(1) and (g)(2) of this AD; or, for those airplanes identified in paragraph (h) of this AD, within 108 months or 18,000 flight hours after the incorporation of Bombardier ModSum IS4Q2800012. The maintenance program revision required by this paragraph may be done by inserting a copy of Bombardier Temporary Revision ALI-111, dated January 11, 2011, into the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7. When Bombardier Temporary Revision ALI-111, dated January 11, 2011, has been included in the general revisions of the manual, the general revisions may be inserted into the manual, and this temporary revision may be removed, provided the relevant information in the general revision is identical to that in Bombardier Temporary Revision ALI-111.

(k) Incorporation of Critical Design Configuration Control Limitations (CDCCL) Items

Within 60 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the CDCCL items specified in Bombardier Temporary Revision ALI-112, dated January 11, 2011, to Section 5-1, "Critical Design Configuration Control Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of

Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7. The maintenance program revision required by this paragraph may be done by inserting a copy of Bombardier Temporary Revision ALI-112, dated January 11, 2011, into the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7. When Bombardier Temporary Revision ALI-112, dated January 11, 2011, has been included in the general revisions of the manual, the general revisions may be inserted into the manual, and this temporary revision may be removed, provided the relevant information in the general revision is identical to that in Bombardier Temporary Revision ALI-112.

(l) No Alternative Actions, Intervals, and CDCCLs

After the maintenance or inspection program, as applicable, has been revised as required by paragraphs (j) and (k) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, or CDCCL are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (o)(1) of this AD.

(m) Exception to Service Information Specifications

Where Bombardier Service Bulletin 84-28-09, Revision D, dated January 29, 2013; and Bombardier Service Bulletin 84-28-15, dated August 17, 2012; specify contacting the manufacturer for corrective action during accomplishment of the actions in those service bulletins: Before further flight, repair the discrepancy using a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO).

(n) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (i)(1) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-28-10, dated December 6, 2011; or Bombardier Service Bulletin 84-28-10, Revision A, dated May 15, 2012. This service information is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (g) of this AD, if the corresponding actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-28-14, dated August 15, 2012, which is not incorporated by reference in this AD.

(o) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York 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 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 516-794-5531. 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, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(p) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-09R1, dated May 28, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0583-0002>.

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

(q) 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 84-28-09, Revision D, dated January 29, 2013.

(ii) Bombardier Service Bulletin 84-28-10, Revision B, dated March 19, 2013.

(iii) Bombardier Service Bulletin 84-28-13, dated August 17, 2012.

(iv) Bombardier Service Bulletin 84-28-14, Revision A, dated June 9, 2014.

(v) Bombardier Service Bulletin 84-28-15, dated August 17, 2012.

(vi) Bombardier Temporary Revision ALI-111, dated January 11, 2011, to Section 4-1, "Fuel System Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7.

(vii) Bombardier Temporary Revision ALI-112, dated January 11, 2011, to Section 5-1, "Critical Design Configuration Control Limitations," of Part 2, "Airworthiness Limitation Items," of the Airworthiness Limitation Items section of Bombardier Q400 Dash 8 Maintenance Requirements Manual PSM 1-84-7.

(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 August 21, 2015.

Kevin Hull,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.