[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

Docket No. FAA-2016-4224; Directorate Identifier 2015-NM-170-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-400 airplanes. This proposed AD was prompted by one in-service report of a cracked and corroded barrel nut found at the mid-spar location of the horizontal stabilizer to vertical stabilizer attachment joint. There have also been two other reports of corroded barrel nuts found at mid-spar locations. This proposed AD would require repetitive detailed inspections of each barrel nut and cradle, a check of the bolt torque of any preload indicating washer (PLI), and corrective action if necessary. We are proposing this AD to detect and correct cracked and corroded barrel nuts. This condition could compromise the structural integrity of the vertical stabilizer attachment joints, which could lead to loss of control of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-4224; 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 proposed 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. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, N Y 11590; telephone 516-228-7329; fax 516-794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2016-4224; Directorate Identifier 2015-NM-170-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2015-13, dated June 25, 2015 (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 airplanes. The MCAI states:

> There has been one in-service report of a cracked and corroded barrel nut, part number (P/N) DSC228-12, found at the mid-spar location of the horizontal stabilizer to vertical stabilizer attachment joint. There have also been two other reports of corroded barrel nuts found at mid-spar locations.
>
> Preliminary investigation determined that the cracking is initiated by corrosion. The corrosion may have been caused by inadequate cadmium plating on the barrel nut. Failure of the barrel nuts could compromise the structural integrity of the joint and could lead to loss of control of the aeroplane.
>
> This [Canadian] AD mandates initial and repetitive inspections of the barrel nuts [and cradles for cracks and corrosion] at each horizontal stabilizer to vertical stabilizer attachment joints.

Required actions include a bolt preload check of any PLI washers and applicable corrective actions (retorque of the bolts and replacement of the barrel nut), a detailed inspection of cracked or broken barrel nuts for damaged bores of the fittings, replacement of barrel nuts, and repair of damage and corrosion.

You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-4224.

Related Service Information under 1 CFR part 51

Bombardier, Inc. has issued Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015. The service information describes procedures for a detailed inspection of the barrel nuts and cradles for cracks and corrosion, a bolt preload check of any PLI washers and applicable corrective actions, a detailed inspection for corrosion and damage

of the bores of the fittings, replacement of the barrel nuts, and repair of damage and corrosion.

Bombardier has issued Bombardier Repair Drawing (RD) 8/4-55-1143, Issue 1, dated May 21, 2015. The service information describes procedures for repairing corrosion and damage of the bore of the fitting.

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.

FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD affects 76 airplanes of U.S. registry.

We also estimate that it would take about 6 work-hours per product to comply with the basic requirements of this proposed AD and 1 work-hour per product for reporting. The average labor rate is $85 per work-hour. Required parts would cost about $0 per product. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $45,220, or $595 per product.

In addition, we estimate that any necessary follow-on actions would take about 4 work-hours, and require parts costing $8,881, for a cost of $9,221 per product. We have no way of determining the number of aircraft that might need this action.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this proposed AD is 2120-0056. The paperwork cost associated with this proposed AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this proposed AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave., SW, Washington, DC 20591, ATTN: Information Collection Clearance Officer, AES-200.

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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

Bombardier, Inc.: Docket No. FAA-2016-4224; Directorate Identifier 2015-NM-170-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-400 airplanes, certificated in any category, serial numbers 4001 and subsequent.

(d) Subject

Air Transport Association (ATA) of America Code 55, Stablizers.

(e) Reason

This AD was prompted by one in-service report of a cracked and corroded barrel nut, part number DSC228-12, found at the mid-spar location of the horizontal stabilizer to vertical stabilizer attachment joint. There have also been two other reports of corroded barrel nuts found at mid-spar locations. We are issuing this AD to detect and correct cracked and corroded barrel nuts. This condition could compromise the structural

integrity of the vertical stabilizer attachment joints, which could lead to loss of control of the airplane.

(f) Compliance

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

(g) Detailed Inspection of Barrel Nuts for Cracks and Corrosion

(1) For airplanes that have accumulated 5,400 flight hours or more, or have been in service 32 months or more since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness as of the effective date of this AD: Within 600 flight hours or 4 months, whichever occurs first, after the effective date of this AD, do a detailed visual inspection for signs of cracks and corrosion of the barrel nut and cradle, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015.

(2) For airplanes that have less than 5,400 flight hours, and have been in-service for less than 32 months since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness as of the effective date of this AD: Before the accumulation of 6,000 total flight hours or 36 months since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, whichever occurs first, do a detailed visual inspection of the barrel nut for signs of cracks and corrosion of the barrel nut and cradle, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015.

(h) Corrective Actions, Detailed Inspection, and Repetitive Inspections

Depending on the findings of any inspection required by paragraphs (g) and (j) of this AD, do the applicable actions in paragraphs (h)(1), (h)(2), and (h)(3) of this AD.

(1) If any barrel nut or cradle is found cracked or broken, before further flight, replace the barrel nut and associated hardware, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015.

(i) Concurrently with the replacement of any barrel nut, do a detailed inspection for corrosion and damage of the bore of the fitting, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015, and, before further flight, repair all corrosion and damage, in accordance with Bombardier Repair Drawing (RD) RD 8/4-55-1143, Issue 1, dated May 21, 2015. If the bore of the fitting cannot be repaired in accordance with Bombardier RD 8/4-55-1143, Issue 1, dated May 21, 2015, repair before further flight using a method approved by the Manager, New York ACO, ANE-170, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO).

(ii) Within 600 flight hours or 4 months, whichever occurs first, after the replacement of a cracked barrel nut, replace the remaining barrel nuts and their associated hardware at the horizontal stabilizer to vertical stabilizer attachment joints, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015.

(2) If any corrosion is found on any barrel nut on the front or rear-spar joints, before further flight, replace the barrel nut using a method approved by the Manager, New York ACO, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO.

(3) If any corrosion above level 1, as defined in Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015, is found on a barrel nut at the mid-spar joint, before further flight, replace the barrel nut using a method approved by the Manager, New York ACO, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO.

(4) If all corrosion found is at level 1 or below, as defined in Bombardier Service Bulletin A84-55-04, Revision A, dated June 2, 2015, on a barrel nut at the mid-spar joint, repeat the inspection specified in paragraph (g) of this AD at intervals not to exceed 600 flight hours or 4 months, whichever occurs first, until completion of the actions required by paragraph (k) of this AD.

(i) Preload Indicating (PLI) Washers Check

For airplanes with PLI washers installed at the front and rear spar joints, before further flight after accomplishing any inspection required by (g) of this AD and all applicable corrective actions required by paragraph (h) of this AD, check the bolt preload, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015. Do all applicable corrective actions before further flight.

(j) Repetitive Inspection Interval

Repeat the inspection and preload check required by paragraphs (g) and (i) of this AD at intervals not to exceed 3,600 flight hours or 18 months, whichever occurs first, except as provided by paragraph (k) of this AD.

(k) Optional Barrel Nut Replacement

Inspection and replacement of all barrel nuts at the horizontal stabilizer to vertical stabilizer attachment joints, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015, extends the next inspection required by paragraph (j) of this AD to within 6,000 flight hours or 36 months, whichever occurs first, after accomplishing the replacement.

(l) Reporting Requirements

At the applicable time specified in paragraph (l)(1) or (l)(2) of this AD, submit a report of the findings (both positive and negative) of each inspection required by this AD to Technical Help Desk – Qseries, telephone: 416-375-4000, fax: 416-375-4539, e-mail: thd.qseries@aero.bombardier.com, using the inspection form in Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(m) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Alert

Service Bulletin A84-55-04, dated May 21, 2015, which is not incorporated by reference in this AD.

(n) 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.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control

Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(o) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2015-13, dated June 25, 2015, for related information. This MCAI may be found in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-4224.

(2) 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 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.

Issued in Renton, Washington, on March 3, 2016.

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

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