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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1311; Directorate Identifier 2011-NM-204-AD; Amendment 39-17636; AD 2013-22-04]

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-8-102, -103, and -106 airplanes; and Model DHC-8-200, -300, and -400 series airplanes. This AD was prompted by reports of excessive wear found in the clevis (bolt) hole where the rod assembly attaches to the rudder/brake pedal bellcrank, due to prolonged fretting. This AD requires measuring the bellcrank clevis holes, inspecting for cracking of the bellcrank, and re-working the clevis holes with steel bushings, or replacing the bellcrank. We are issuing this AD to detect and correct a worn or cracked clevis hole, which could cause failure of the bellcrank on one side, with subsequent asymmetric braking and consequent runway excursion.

DATES: This AD becomes effective December 5, 2013.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 5, 2013.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2012-1311>; or in person at the 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.

FOR FURTHER INFORMATION CONTACT: Luke Walker, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7363; 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 the specified products. The NPRM was published in the Federal Register on December 26, 2012 (77 FR 75906). The NPRM proposed to correct an unsafe condition for the specified products. Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, issued Canadian Airworthiness Directive CF-2011-32, dated August 15, 2011 (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:

There have been several in-service reports of excessive wear found in the bolt [clevis] hole where the rod assembly, Part Numbers (P/N) 82710795-001 or 82710024-003, is attached to the rudder/brake pedal bellcrank. An investigation revealed that the wear was attributed to prolonged fretting.

Failure of the bellcrank on one side could lead to asymmetric braking and may lead to runway excursion.

This [Canadian] directive mandates [measuring clevis holes for length, and, for certain bellcranks, doing a liquid penetrant inspection for cracking, and] the re-work [by installing steel bushings] or replacement of each bellcrank, P/N 82710022-001/-002, 82710029-001/-002, 82710813-001/-002 and 82710814-001/-002, found with a worn [or cracked] bolt hole.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-1311-0002>.

Revised Service Information

Bombardier, Inc. has issued Service Bulletin 84-27-55, Revision A, dated February 22, 2012. The NPRM (77 FR 75906, December 26, 2012) referred to Bombardier Service Bulletin 84-27-55, dated June 15, 2011, in paragraphs (h) and (i) of the NPRM. In this final rule, we have revised the service bulletin references in those paragraphs accordingly, and have added new paragraph (j) to this final rule to give credit for actions done before the effective date of this AD in accordance with Bombardier Service Bulletin 84-27-55, dated June 15, 2011 (and redesignated subsequent paragraphs accordingly).

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comments received.

Request To Allow Use of Serviceable Parts

An anonymous commenter requested that the references to "new bellcrank" in the NPRM (77 FR 75906, December 26, 2012) be changed to allow operators to install "serviceable" bellcranks (new bellcranks or ones that have been modified according to the applicable service information), thus giving equal safety, yet providing more flexibility and less recordkeeping for operators.

We agree with the commenter's request for the reasons given. We have revised paragraphs (g)(2), (h)(2), (h)(3), (h)(4), (i)(2), (i)(3), and (i)(4) of this AD by specifying to replace the bellcrank with a new bellcrank "or with a serviceable bellcrank with bushings having part number 82710297-101 installed." We have also clarified paragraphs (h)(1) and (i)(1) of this final rule by specifying to replace the bellcrank "with a new or with a serviceable bellcrank with bushings having part number 82710297-101 installed."

Request To Add Eddy Current Inspection Option

The same anonymous commenter requested that we include an eddy current inspection option in this final rule to agree with parallel actions specified in Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

We agree with the commenter's request because Bombardier added that inspection option in Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012. Accordingly, we have added the option in paragraphs (h) and (i) of this final rule.

Request To Clarify Compliance Times

The same anonymous commenter, in an incomplete request, stated that the replacement times in paragraph (h) of the NPRM (77 FR 75906, December 26, 2012) do not sufficiently remove the identified unsafe condition. From the truncated statement, we cannot infer what part of paragraph (h) the commenter requested that we change. We have made no change to this final rule in this regard.

Conclusion

We reviewed the available data, including 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 changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 75906, December 26, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 75906, December 26, 2012).

Costs of Compliance

We estimate that this AD will affect 178 products of U.S. registry. We also estimate that it will take 5 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$75,650, or \$425 per product.

In addition, we estimate that any necessary follow-on actions would take about 16 work-hours and require parts costing up to \$2,532, for a cost of \$3,892 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. We have no way of determining the number of products that may need these actions.

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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

Examining the AD Docket

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-1311-0002>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the MCAI, 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 AD:



2013-22-04 Bombardier, Inc.: Amendment 39-17636. Docket No. FAA-2012-1311; Directorate Identifier 2011-NM-204-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 5, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. airplanes, certificated in any category, as specified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes: Serial numbers 003 through 672 inclusive.

(2) Model DHC-8-400, -401, and -402 airplanes: Serial numbers 4003 through 4372 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 27: Flight controls.

(e) Reason

This AD was prompted by reports of excessive wear found in the clevis (bolt) hole where the rod assembly attaches to the rudder/brake pedal bellcrank, due to prolonged fretting. We are issuing this AD to detect and correct a worn or cracked clevis hole, which could cause failure of the bellcrank on one side, with subsequent asymmetric braking and consequent runway excursion.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Actions for Model DHC-8-100, -200, and -300 Series Airplanes

For Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes: Within 6,000 flight hours or 24 months after the effective date of this AD, whichever occurs first, inspect each bellcrank for cracking using liquid penetrant, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-111, dated June 15, 2011.

(1) If no cracking is found: Before further flight, rework the bellcrank, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-111, dated June 15, 2011.

(2) If any clevis hole is greater than 0.218 inch (measured edge-to-edge), or if any cracking is found: Before further flight, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-111, dated June 15, 2011.

(h) Actions for Certain Model DHC-8-400 Series Airplanes

For Model DHC-8-400, -401, and -402 airplanes that have accumulated less than or equal to 15,000 total flight hours as of the effective date of this AD: Within 6,000 flight hours after the effective date of this AD, but not to exceed 15,600 total flight hours, measure the edge-to-edge length of the clevis holes of each bellcrank, and inspect each bellcrank for cracking using liquid penetrant or eddy current inspection method; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(1) If no cracking is found, and the edge-to-edge length of all clevis holes is less than or equal to 0.218 inch: Within 6,000 flight hours after the effective date of this AD, but not to exceed 15,600 total flight hours, rework the bellcrank, or replace the bellcrank with a new bellcrank or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(2) If no cracking is found, and any clevis hole edge-to-edge length is greater than 0.218 inch, but is less than or equal to 0.248 inch: Within 6,000 flight hours after the effective date of this AD, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(3) If no cracking is found, and any clevis hole edge-to-edge length is greater than 0.248 inch, but is less than or equal to 0.278 inch: Within 1,200 flight hours after doing the measurement/inspection required by paragraph (h) of this AD, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(4) If any cracking is found, or if any clevis hole edge-to-edge length exceeds 0.278 inch: Before further flight, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(i) Actions for Certain Other Model DHC-8-400 Series Airplanes

For Model DHC-8-400, -401, and -402 airplanes that have accumulated more than 15,000 total flight hours as of the effective date of this AD: Within 600 flight hours after the effective date of this AD, measure the edge-to-edge length of the clevis holes of each bellcrank, and inspect each bellcrank for cracking using liquid penetrant or eddy current inspection method; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(1) If no cracking is found, and the edge-to-edge length of all clevis holes is less than or equal to 0.218 inch: Within 1,200 flight hours after the effective date of this AD, rework the bellcrank, or replace the bellcrank with a new bellcrank or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(2) If no cracking is found, and any clevis hole edge-to-edge length is greater than 0.218, inch but is less than or equal to 0.248 inch: Within 6,000 flight hours after the effective date of this AD, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(3) If no cracking is found, and any clevis hole edge-to-edge length is greater than 0.248 inch, but is less than or equal to 0.278 inch: Within 1,200 flight hours after the effective date of this AD, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(4) If any cracking is found, or any clevis hole edge-to-edge length exceeds 0.278 inch: Before further flight, replace the bellcrank with a new bellcrank, or with a serviceable bellcrank with bushings having part number 82710297-101 installed, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(j) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraphs (h) and (i) of this AD, if those actions were performed before the effective date of this AD using the Accomplishment Instructions of Bombardier Service Bulletin 84-27-55, dated June 15, 2011.

(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 ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 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) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2011-32, dated August 15, 2011, for related information. The MCAI can be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-1311-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be obtained 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 the AD specifies otherwise.

(i) Bombardier Service Bulletin 8-27-111, dated June 15, 2011.

(ii) Bombardier Service Bulletin 84-27-55, Revision A, dated February 22, 2012.

(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 review copies of the 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 September 30, 2013.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.