



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0562; Product Identifier 2017-NM-027-AD; Amendment 39-19088; AD 2017-22-08]

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 CL-600-2C10 (Regional Jet Series 700, 701, & 702), Model CL-600-2D15 (Regional Jet Series 705), Model CL-600-2D24 (Regional Jet Series 900), and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This AD was prompted by a report indicating that a number of rubber bull gear (RBG) wheels installed in the horizontal stabilizer trim actuator (HSTA) were manufactured using an incorrect material specification. This AD requires replacement of the affected RBG wheels. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 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-2017-0562.

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-2017-0562; 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 Office (telephone 800-647-5527) is 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 20590.

FOR FURTHER INFORMATION CONTACT: Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; 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 CL-600-2C10 (Regional Jet Series 700, 701, & 702), Model CL-600-2D15 (Regional Jet Series 705), Model CL-600-2D24 (Regional Jet Series 900), and Model CL-600-2E25 (Regional Jet Series 1000). The NPRM published in the Federal Register on June 21, 2017 (82 FR 28266) (“the NPRM”). The NPRM was prompted by a report indicating that a number of RBG wheels installed in the HSTA were manufactured using an incorrect material specification. The NPRM proposed to require replacement of the affected RBG wheels. We are issuing this AD to prevent premature wear-out of the teeth of the RBG wheels, which could cause difficulties in maneuvering the airplane.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2016-22, dated June 24, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702), Model CL-600-2D15 (Regional Jet Series 705), Model CL-600-2D24 (Regional Jet Series 900), and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The MCAI states:

An inspection by the vendor revealed that a number of Rubber Bull Gear (RBG) Wheels installed in the Horizontal

Stabilizer Trim Actuator (HSTA) of the CL-600-2C10, CL-600-2D15, CL-600-2D24 and CL-600-2E25 aeroplanes were manufactured from the incorrect material specification. The use of the incorrect material specification has a direct impact on the RBG Wheels life limit. The teeth of these non-conforming RBG Wheels may experience premature wear out and if not corrected, this condition could result in difficulties in maneuvering the aeroplane.

This [Canadian] AD mandates replacement of the RBGs whose wheels have been made using an incorrect material specification.

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-2017-0562.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comment received on the NPRM and the FAA's response.

Request to Revise Compliance Times

Air Line Pilots Association, International (ALPA) requested that we review and revise the compliance times specified in the proposed AD to reflect flight hours rather than flight cycles, and to align the times with a previous AD, AD 2011-12-06, Amendment 39-16713 (76 FR 33982, June 10, 2011) ("AD 2011-12-06"). The commenter asserted that the compliance times in AD 2011-12-06 were more conservative than what is written in the proposed AD, and that for a component with a known material defect that is continuously used throughout the duration of any given flight, flight hours rather than flight cycles would be a more appropriate metric to measure compliance time.

We disagree with the commenter's proposed change. We reviewed TCCA's evaluation of the compliance times, and determined that they are appropriate to mitigate the unsafe condition. We have not received any data to demonstrate otherwise. In

addition, the compliance times in AD 2011-12-06 are also based on flight cycles instead of flight hours. Therefore, have not changed this AD in this regard.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

We reviewed Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016. This service information describes procedures for identification of affected HSTAs, and replacement if necessary. 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.

Costs of Compliance

We estimate that this AD affects 544 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection and Replacement	Up to 20 work-hours X \$85 per hour = \$1700	¹	Up to \$1700	Up to \$924,800

¹We have received no definitive data that would enable us to provide cost estimates for the parts cost specified in this AD.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

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.

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):

2017-22-08 Bombardier, Inc.: Amendment 39-19088; Docket No. FAA-2017-0562;

Product Identifier 2017-NM-027-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the Bombardier, Inc., airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, equipped with horizontal stabilizer trim actuator (HSTA) part number 8489-7 or 8489-7R.

(1) Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes.

(2) Model CL-600-2D15 (Regional Jet Series 705) airplanes.

(3) Model CL-600-2D24 (Regional Jet Series 900) airplanes.

(4) Model CL-600-2E25 (Regional Jet Series 1000) airplanes.

(d) Subject

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

(e) Reason

This AD was prompted by a report indicating that a number of rubber bull gear (RBG) wheels installed in the HSTA were manufactured using an incorrect material specification. We are issuing this AD to prevent premature wear-out of the teeth of the RBG wheels, which could cause difficulties in maneuvering the airplane.

(f) Compliance

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

(g) Serial Number Verification

Within 600 flight hours after the effective date of this AD, inspect to determine whether the serial number (S/N) of the installed HSTA is listed in paragraph 1.A, “Effectivity,” of Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016. If the S/N of the installed HSTA is not listed in paragraph 1.A, “Effectivity,” of Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016, no further action is required by this AD, except as required by paragraph (j) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the HSTA can be conclusively determined from that review.

(h) Replacement

For any HSTA with a S/N listed in paragraph 1.A, “Effectivity,” of Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016: Within the compliance times specified in figure 1 to paragraph (h) of this AD, as applicable, replace the affected HSTA, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016.

Figure 1 to paragraph (h) of this AD – Compliance time criteria

For HSTAs with S/N suffix A or with no suffix, that have accumulated 10,000 flight cycles (FC) or fewer	Within 3600 FC accumulated on the unit from the effective date of this AD
For HSTAs with S/N suffix A or with no suffix, that have accumulated more than 10,000 FC	Within 1800 FC accumulated on the unit from the effective date of this AD
For HSTAs with S/N suffix B or AB, that have accumulated 10,000 FC or fewer since the incorporation of Bombardier Service Bulletin 670BA-27-058	Within 3600 FC accumulated on the unit from the effective date of this AD
For HSTAs with S/N suffix B or AB, that have accumulated more than 10,000 FC since the incorporation of Bombardier Service Bulletin 670BA-27-058.	Within 1800 FC accumulated on the unit from the effective date of this AD

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 670BA-27-072, dated April 26, 2016.

(j) Parts Installation Limitation

As of the effective date of this AD, no person may install, on any airplane, an HSTA having part number 8489-7 or 8489-7R, with a S/N listed in paragraph 1.A, “Effectivity,” of Bombardier Service Bulletin 670BA-27-072, Revision A, dated October 26, 2016, unless the S/N has a suffix “C” marked on the identification plate adjacent to the S/N.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards Branch, 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 International Section, send it to the attention of the person identified in paragraph (l)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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.

(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 Branch, 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-2016-22, dated June 24, 2016, 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-2017-0562.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

(3) 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 670BA-27-072, Revision A, dated October 26, 2016.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com; Internet <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 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 October 19, 2017.

Jeffrey E. Duven,
Director,
System Oversight Division,
Aircraft Certification Service.

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