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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0031; Directorate Identifier 2010-NM-135-AD; Amendment 39-16860; AD 2011-23-09]

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 Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900) airplanes. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

There have been two reported cases of failure of the MLG [main landing gear] piston axle, P/N [part number] 49203-3 or 49203-5, resulting from fretting between the inboard axle sleeve and axle thrust face, damage to the protective coating and consequent stress corrosion. In both cases, the MLG did not collapse.

* * * * *

The unsafe condition is failure of the MLG, which could adversely affect the airplane's safe landing. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective December 9, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 9, 2011.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> 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 FURTHER INFORMATION CONTACT: Andreas Rambalacos, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7345; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on January 25, 2011 (76 FR 4264). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

There have been two reported cases of failure of the MLG [main landing gear] piston axle, P/N [part number] 49203-3 or 49203-5, resulting from fretting between the inboard axle sleeve and axle thrust face, damage to the protective coating and consequent stress corrosion. In both cases, the MLG did not collapse.

In order to avoid future axle failures, which could potentially result in gear collapse and collateral damage, this [Canadian] directive mandates repetitive visual inspection [for damage and corrosion of the protective coating] and repair, as necessary, of the MLG piston axles, P/N 49203-3 and 49203-5.

The unsafe condition is failure of the MLG, which could adversely affect the airplane's safe landing. You may obtain further information by examining the MCAI in the AD docket.

Comments

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

Request To Include Additional Piston Axle Part Numbers

Comair, Inc. (Comair) requested that we revise paragraph (g) of the NPRM (76 FR 4264, January 25, 2011) to include MLG piston axles having P/Ns 49263-1 and 49263-3. Comair explained that it has been in contact with Goodrich regarding these part numbers. Comair expressed that Goodrich's response supports what Comair surmised from the Goodrich component maintenance manual (CMM) for P/N 49000, which was that P/Ns 49263-1 and 49263-3 are a next higher assembly (NHA) part number consisting of a piston axle with a metering pin assembly installed. Comair stated that the Goodrich CMM for P/N 49000 uses the following nomenclature, "Piston/Axle/Metering Pin Assy (Pre SB 32-45)."

Comair also explained that there have been several instances where Comair has sent Goodrich Landing Gear Services a piston/axle having P/N 49203-3 for repair. Comair stated that while the piston/axle was at Goodrich, a metering pin was installed.

Comair expressed that when the piston/axle was returned, the authorized release certificate (Form One) only contained P/N 49263-1, and that Form One does not list the part number for the piston/axle and metering pin, only the higher assembly part number. Comair further explained that when they received the piston/axle back into stock, the part number had changed from 49203-3 to 49263-1, during the receiving process. Comair stated that, consequently, when the piston/axle is installed on the airplane, it shows that P/N 49263-1 is installed; therefore, as the NPRM is written,

Comair asserted that the NPRM would not apply by part number. Comair suggested that if P/Ns 49203-3 and 49203-5 exhibit an unsafe condition, then P/Ns 49263-1 and 49263-3 should be considered to have the same fretting concern and the same unsafe condition.

We agree, for clarification, to include MLG piston axles having P/Ns 49263-1 and 49263-3, in a note in the final rule. It has also come to our attention that several operators failed to do the inspection because the MLG rework paperwork (Form One) from Goodrich only annotated piston/axle/metering pin assembly NHA having P/N 49263-1 or 49263-3, while the NPRM only proposed to require inspection for MLG piston axles having P/N 49203-3 or 49203-5. While neither this AD nor Canadian AD CF-2010-15, dated May 13, 2010, require inspection for MLG piston axles having P/N 49263-1 or 49263-3, we want to avoid the possibility of an operator overlooking the intent of this final rule simply because the operator's overhaul paperwork is the only document that references the NHA part number. This change has been coordinated with Transport Canada Civil Aviation. We have revised this final rule to include new Note 2 to inform operators that MLG piston axles having P/N 49203-3 or 49203-5 that are installed on the airplane could be identified as having P/N 49263-1 or 49263-3. We have re-identified subsequent notes accordingly.

Request To Extend the Proposed Compliance Time

Mesa Airlines (Mesa) requested that we revise the NPRM (76 FR 4264, January 25, 2011) to extend the proposed compliance time of 12 months for the initial inspection specified in paragraph (h)(1) of the NPRM to 24 months. Mesa explained that its request is due to the number of applicable components, the size of its fleet, repair vendor capacity, and the turn time for the piston axle if needed.

We disagree to extend the compliance time specified in paragraph (h)(1) of the final rule. In developing an appropriate compliance time for this action, we considered the urgency associated with the subject unsafe condition, the availability of required parts, and the practical aspect of accomplishing the required inspection within a period of time that corresponds to the normal scheduled maintenance for most affected operators. According to the manufacturer, an ample number of required parts will be available to modify the airplanes identified in the Applicability section of this final rule within the compliance time. In consideration of these items, we have determined that a 12-month compliance time for the initial inspection in paragraph (h)(1) of this final rule is appropriate. However, under the provisions of paragraph (l) of the final rule, we will consider requests for approval of an extension of the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed the final rule in this regard.

Request To Add a Compliance Time for Proposed Terminating Action

In its request to extend the proposed compliance time for the initial inspection, Mesa added the following statement, "6,000 hrs. to terminate." Mesa did not provide any explanation for this request.

From this statement, we infer that Mesa requested that we include a compliance time of 6,000 flight hours after the initial inspection for the terminating action required by paragraph (j) of the final rule. We disagree with adding a compliance time to paragraph (j) of the final rule. Mesa has not provided any justification for this request. Further, including an additional compliance time would necessitate additional rulemaking, and we do not consider that delaying this action until that time is warranted, since the actions required by this AD are adequate to ensure continued safety of the affected fleet. We have not changed the final rule in this regard.

Request To Add a Provision for Piston Axles That Require Overhaul

Mesa also requested that we revise the NPRM (76 FR 4264, January 25, 2011) to add a paragraph to paragraph (h) of the NPRM to allow for a provision for MLG piston axles which are

scheduled for overhaul. Mesa suggested the following wording: "(4) For any piston axle that has been in service more than 48 months, of the effective date of this AD and is due to be overhauled within 36 months of the effective date of this AD, must be complied with at schedule overhaul."

We disagree to include a provision for MLG axles which are scheduled for overhaul. Mesa has not provided any technical justification for this request. However, affected operators may request to allow for a provision for MLG piston axles which are scheduled for overhaul, under the provisions of paragraph (l) of this final rule by submitting data, substantiating that the change would provide an acceptable level of safety. We have not changed the final rule in this regard.

Request To Clarify Paragraph (i) of the NPRM (76 FR 4264, January 25, 2011)

Mesa also requested that we clarify paragraph (i) of the NPRM (76 FR 4264, January 25, 2011). Mesa has not specified what aspect of the requirement it wants clarified, nor has it provided any reason for this request.

We agree to clarify paragraph (i) in this comment section of this final rule. Paragraph (i) of this final rule states the compliance time for doing the inspections specified in paragraph (h) of this AD for airplanes that have the mark "32-45" in the MOD STATUS field on the piston axle nameplate, or for airplanes that have done one of the repair engineering orders listed in the service information in paragraph (i) of this AD; within the compliance times required in paragraph (i) of this AD, these airplanes do the inspection and repeat the inspection as required by paragraph (h) of this AD. We have also added paragraphs (i)(1), (i)(2), and (i)(3) to the final rule to clarify the compliance times for paragraph (i).

Clarification

We have revised paragraph (g) of this final rule to clarify that the compliance times for doing the inspection required by paragraph (g) of this final rule are the same as the applicable compliance times specified in paragraphs (h) and (i) of this final rule.

We have also added Note 3 to this final rule to clarify that the MCAI specifies to inspect only airplanes having certain serial numbers that are part of the MCAI applicability. Because the affected part could be rotated onto any of the airplanes listed in the applicability, this AD requires the inspection be done on all airplanes.

Conclusion

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously. We determined that this change will not increase the economic burden on any operator or increase the scope of the AD.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect 380 products of U.S. registry. We also estimate that it will take about 22 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 \$710,600, or \$1,870 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 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); and
3. 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 AD docket on the Internet at <http://www.regulations.gov>; 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 the NPRM (76 FR 4264, January 25, 2011), 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.

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:



2011-23-09 Bombardier, Inc.: Amendment 39-16860. Docket No. FAA-2011-0031; Directorate Identifier 2010-NM-135-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective December 9, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900) airplanes; certificated in any category.

Note 1: This AD is not applicable to piston axles having part number (P/N) 49203-7 or P/N 49203-9, which were installed in production on Bombardier, Inc. Model CL-600-2C10 airplanes having serial numbers (S/Ns) 10266 and subsequent; and Models CL-600-2D15 and CL-600-2D24 airplanes having S/Ns 15155 and subsequent.

Subject

(d) Air Transport Association (ATA) of America Code 32: Landing Gear.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

There have been two reported cases of failure of the MLG [main landing gear] piston axle, P/N 49203-3 or 49203-5, resulting from fretting between the inboard axle sleeve and axle thrust face, damage to the protective coating and consequent stress corrosion. In both cases, the MLG did not collapse.

* * * * *

The unsafe condition is failure of the MLG, which could adversely affect the airplane's safe landing.

Compliance

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

Inspection and Repair

(g) At the applicable time in paragraph (h)(1), (h)(2), (h)(3) or (i) of this AD, inspect to determine whether the airplane has a main landing gear piston axle having P/N 49203-3 or 49203-5. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the main landing gear piston axle can be conclusively determined from that review.

Note 2: Operators should be aware that the Goodrich authorized release certificate (Form One) provided for MLG piston axles following overhaul, refers to only the higher assembly P/N 49263-1 or 49263-3; therefore, it is possible that MLG piston axles having P/N 49203-3 or 49203-5 that are installed on the airplane could be identified as having P/N 49263-1 or 49263-3.

(h) Except as required by paragraph (i) of this AD, if, during the inspection required by paragraph (g) of this AD, the landing gear piston axle is determined to have P/N 49203-3 or 49203-5: At the applicable time specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, do a detailed inspection for corrosion and damage of the inboard and outboard piston axles, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009. Before further flight, repair any corrosion or damage found, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009. Within 30 months after the initial inspection, or within 12 months after the effective date of this AD, whichever occurs later, do the inspection specified in this paragraph; and repeat the inspection thereafter at intervals not to exceed 30 months.

(1) For any piston axle that has been in service for 48 months or more as of the effective date of this AD: Inspect within 12 months after the effective date of this AD.

(2) For any piston axle that has been in service for 24 months or more, but less than 48 months, as of the effective date of this AD: Inspect within 24 months after the effective date of this AD.

(3) For any piston axle that has been in service for less than 24 months as of the effective date of this AD: Inspect within 36 months after the effective date of this AD.

(i) For airplanes that have mark "32-45" in the MOD STATUS field of the piston axle nameplate or that have incorporated one of the Bombardier repair engineering orders listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009: At the latest of the applicable times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, do the inspection specified in paragraph (h) of this AD and repeat the inspection thereafter at the time specified in paragraph (h) of this AD:

(1) Within 30 months after marking "32-45" in the MOD STATUS field of the piston axle nameplate.

(2) Within 30 months after incorporating one of the Bombardier repair engineering orders listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009.

(3) Within 12 months after the effective date of this AD.

Terminating Action

(j) Installing a piston axle having P/N 49203-7 or P/N 49203-9 on any airplane constitutes a terminating action for the requirements of paragraphs (h), (h)(1), (h)(2), and (h)(3) of this AD, for that airplane.

Credit for Actions Accomplished in Accordance With Previous Service Information

(k) Inspections and repairs accomplished before the effective date of this AD according to any service bulletin specified in table 1 of this AD, are considered acceptable for compliance with the corresponding inspections and repairs specified in paragraph (h) of this AD.

Table 1–Credit for Accomplishment of Previous Service Information

Document	Revision	Date
Bombardier Service Bulletin 670BA-32-023	Original	October 24, 2007
Bombardier Service Bulletin 670BA-32-023	A	January 7, 2008
Bombardier Service Bulletin 670BA-32-023	B	March 5, 2008

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: The MCAI specifies to inspect only airplanes having certain serial numbers that are part of the MCAI applicability. Because the affected part could be rotated onto any of the airplanes listed in the applicability, this AD requires the inspection be done on all airplanes.

Other FAA AD Provisions

(l) 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.

Related Information

(m) Refer to MCAI Canadian Airworthiness Directive CF-2010-15, dated May 13, 2010; and Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009; for related information.

Material Incorporated by Reference

(n) You must use Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009, including Appendix A, Revision B, dated March 5, 2008, to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone (514) 855-5000; fax (514) 855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call (425) 227-1221.

(4) You may also review copies of the 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on October 21, 2011.

Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.