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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0726; Directorate Identifier 2012-NM-023-AD; Amendment 39-17228; AD 2012-21-12]

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 cases of on-ground failure of the screw cap or end cap of hydraulic accumulators on other airplane models, resulting in high-energy impact damage to adjacent systems and structure. This AD requires inspecting for a part number and replacing the affected parking brake hydraulic accumulator, and relocating the parking brake accumulator, on the subject airplanes. We are issuing this AD to prevent failure of the screw caps and/or end caps of the parking brake hydraulic accumulator, which could result in damage to the airplane's primary structures, with potential adverse effect on the airplane's controllability.

DATES: This AD becomes effective December 4, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 4, 2012.

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: Cesar Gomez, 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) 228-7318; fax (516) 794-5531; email Cesar.Gomez@faa.gov.

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 August 2, 2012 (77 FR 45981). That NPRM proposed to correct an unsafe condition for the specified products. The Mandatory Continuing Airworthiness Information (MCAI) states:

Seven cases of on-ground hydraulic accumulator/screw cap/end cap failure have been experienced on CL-600-2B19 (CRJ) aeroplanes, resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. To date, the lowest number of flight cycles accumulated at the time of failure has been 6991.

Although there have been no failures to date on any DHC-8 aeroplanes, similar accumulators to those installed on the CL-600-2B19, Part Number (P/N) 08-60197-001 (Parking Brake Accumulator), are installed on the aeroplanes listed in the Applicability section of this [Canadian] Airworthiness Directive (AD). It was also found that some of these accumulators may be affected by manufacturing non-conformances.

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for the accumulator has been conducted. It has been identified that the worst-case scenarios would be the damage to the aeroplane's primary structures, which could have an adverse effect on the controllability of the aeroplane.

This [Canadian] AD mandates the [inspection for part and serial numbers and] replacement of the affected hydraulic accumulators and the relocation of the parking brake accumulator.

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 received no comments on the NPRM (77 FR 45981, August 2, 2012) or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the 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 (77 FR 45981, August 2, 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 45981, August 2, 2012).

Costs of Compliance

We estimate that this AD will affect about 83 products of U.S. registry. We also estimate that it will take about 17 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 \$5,205 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. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$551,950, or \$6,650 per product.

In addition, we estimate that any necessary follow-on actions would take about 3 work-hours and require parts costing \$4,643, for a cost of \$4,898 per product. 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 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 (77 FR 45981, August 2, 2012), 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:



2012-21-12 Bombardier, Inc.: Amendment 39-17228. Docket No. FAA-2012-0726; Directorate Identifier 2012-NM-023-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 4, 2012.

(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 through 4346 inclusive.

(d) Subject

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

(e) Reason

This AD was prompted by cases of on-ground hydraulic accumulator/screw cap/end cap failure, resulting in high-energy impact damage to adjacent systems and structure. We are issuing this AD to prevent failure of the screw caps and/or end caps of the hydraulic and parking brake accumulators, which could result in damage to the airplane's primary structures, with potential adverse effect on the airplane's controllability.

(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) Inspection/Replacement of the Parking Brake Hydraulic Accumulator

For airplanes having serial numbers 4001 through 4337 inclusive: Within 1,200 flight hours or 6 months after the effective date of this AD, whichever comes first, inspect the parking brake hydraulic accumulator to determine the part number and serial number, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-88, dated February 16, 2011.

(1) If the part number of the parking brake hydraulic accumulator can be determined by the inspection required by paragraph (g) of this AD, and is not identified in paragraph 1., Effectivity, of Goodrich Service Bulletin 08 60197 001-32-70 R2, dated February 1, 2011: No further action is required by this paragraph.

(2) If the part number and serial number of the parking brake hydraulic accumulator cannot be determined by the inspection required by paragraph (g) of this AD, or is identified in paragraph 1.

Effectivity, of Goodrich Service Bulletin 08 60197 001-32-70 R2, dated February 1, 2011: Before further flight, replace the parking brake hydraulic accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-88, dated February 16, 2011.

(h) Relocation of the Parking Brake Hydraulic Accumulator

(1) For airplanes having serial numbers 4001 through 4068 inclusive, 4070 through 4214 inclusive, 4216, 4219 through 4261 inclusive, and 4263 through 4346 inclusive: Within 6,000 flight hours after the effective date of this AD, relocate the parking brake hydraulic accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-87, Revision B, dated November 22, 2011.

(2) Accomplishing the actions specified in paragraph (h)(1) of this AD in accordance with previous revisions of Bombardier Service Bulletin 84-32-87 does not meet the requirements of paragraph (h)(1) of this AD.

(i) 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), 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.

(j) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2012-04, dated January 13, 2012, and the service information identified in paragraphs (j)(1) through (j)(3) of this AD, for related information.

(1) Bombardier Service Bulletin 84-32-87, Revision B, dated November 22, 2011.

(2) Bombardier Service Bulletin 84-32-88, dated February 16, 2011.

(3) Goodrich Service Bulletin 08 60197 001-32-70 R2, dated February 1, 2011.

(k) 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 84-32-87, Revision B, dated November 22, 2011.

(ii) Bombardier Service Bulletin 84-32-88, dated February 16, 2011.

(iii) Goodrich Service Bulletin 08 60197 001-32-70 R2, dated February 1, 2011.

(3) For Bombardier, Inc., 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>. For Goodrich service information identified in this AD, contact Goodrich Corporation, Landing Gear, 1400 South Service Road, West Oakville L6L 5Y7, Ontario, Canada; telephone 905-825-1568; email jean.breed@goodrich.com; Internet <http://www.goodrich.com/TechPubs>.

(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 October 11, 2012.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.