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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-1108; Directorate Identifier 2010-NM-151-AD; Amendment 39-16592; AD 2011-03-08]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Model CL-215-1A10 (CL-215), CL-215-6B11 (CL-215T Variant), and CL-215-6B11 (CL-415 Variant) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. 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:

Seven cases of on-ground hydraulic accumulator screw cap or end cap failure have been experienced * * * resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. * * *

* * * * *

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for each accumulator has been conducted. It has identified that the worst-case scenarios would be impact damage to various components, potentially resulting in fuel spillage, uncommanded flap movement, or loss of aileron control [and consequent reduced controllability of the airplane].

* * * * *

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective March 14, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 14, 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: Christopher Alfano, 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) 228-7340; 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 November 9, 2010 (75 FR 68728). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Seven cases of on-ground hydraulic accumulator screw cap or end cap failure have been experienced on CL-600-2B19 (CRJ) aircraft, 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 CL-215-1A10 (CL-215) or CL-215-6B11 (CL-215T and CL-415) aircraft, similar accumulators, Part Number (P/N) 08-8423-010 (MS28700-3), to those installed on the CL-600-2B19, are installed on the aircraft listed in the Applicability section of this directive [MCAI].

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for each accumulator has been conducted. It has identified that the worst-case scenarios would be impact damage to various components, potentially resulting in fuel spillage, uncommanded flap movement, or loss of aileron control [and consequent reduced controllability of the airplane].

This directive [MCAI] mandates repetitive [ultrasonic] inspections of the accumulators for cracks and replacement of any accumulator in which a crack is detected.

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 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.

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 6 products of U.S. registry. We also estimate that it will take about 7 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 \$3,570, or \$595 per product.

In addition, we estimate that any necessary follow-on actions would take about 6 work-hours and require parts costing \$4,055, for a cost of \$4,565 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 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, 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:



2011-03-08 Bombardier, Inc.: Amendment 39-16592. Docket No. FAA-2010-1108; Directorate Identifier 2010-NM-151-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective March 14, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Bombardier, Inc. airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) Model CL-215-1A10 (CL-215) airplanes, serial numbers 1001 through 1990 inclusive;

(2) Model CL-215-6B11 (CL-215T Variant) airplanes, serial numbers 1056 through 1125 inclusive;

(3) Model CL-215-6B11 (CL-415 Variant) airplanes, serial numbers 2001 through 2990 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight controls; and 32: Landing gear.

Reason

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

Seven cases of on-ground hydraulic accumulator screw cap or end cap failure have been experienced * * * resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. * * *

* * * * *

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for each accumulator has been conducted. It has identified that the worst-case scenarios would be impact damage to various components, potentially resulting in fuel spillage, uncommanded flap movement, or loss of aileron control [and consequent reduced controllability of the airplane].

* * * * *

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 to Determine Flight Hours

(g) Within 50 flight hours after the effective date of this AD, inspect to determine the number of flight cycles accumulated by each of the applicable accumulators (i.e., brake, aileron, elevator, and rudder accumulators) having part number (P/N) 08-8423-010 (MS28700-3) installed on the airplane. A review of airplane maintenance records is acceptable in lieu of this inspection if the number of flight cycles accumulated can be conclusively determined from that review.

Initial Ultrasonic Inspection

(h) For Model CL-215-1A10 (CL-215) and CL-215-6B11 (CL-215T) airplanes: do an ultrasonic inspection for cracking of the accumulator at the applicable time specified in paragraph (h)(1) or (h)(2) of this AD, in accordance with Part B of the Accomplishment Instructions of the applicable service bulletin listed in table 1 of this AD.

Table 1 – Service Bulletins

For Model –	Use Bombardier Service Bulletin –	Revision –	Dated –
CL-215-1A10 (CL-215)	215-541	1	March 12, 2010
CL-215-6B11 (CL-215T)	215-3155	1	March 12, 2010
CL-600-6B11 (CL-415)	215-4414	1	March 12, 2010

(1) For any accumulator on which the inspection required by paragraph (g) of this AD shows an accumulation of more than 875 total flight cycles or on which it is not possible to determine the number of total accumulated flight cycles, do the inspection within 125 flight cycles after the effective date of this AD.

(2) For any accumulator on which the inspection required by paragraph (g) of this AD shows an accumulation of 875 total flight cycles or fewer, do the inspection before the accumulation of 1,000 flight cycles on the accumulator.

(i) For Model CL-215-6B11 (CL-415) airplanes, do an ultrasonic inspection for cracking of the accumulator at the applicable time specified in paragraph (i)(1) or (i)(2) of this AD, in accordance with Part B of the Accomplishment Instructions of the applicable service bulletin listed in Table 1 of this AD.

(1) For any accumulator on which the inspection required by paragraph (g) of this AD shows an accumulation of more than 750 flight cycles or on which it is not possible to determine the number of total accumulated flight cycles, do the inspection within 250 flight cycles after the effective date of this AD.

(2) For any accumulator on which the inspection required by paragraph (g) of this AD shows an accumulation of 750 total flight cycles or fewer, do the inspection before the accumulation of 1,000 flight cycles on the accumulator.

Repetitive Inspections

(j) If no cracking is found during any inspection required by paragraph (h) or (i) of this AD, repeat the inspection thereafter at intervals not to exceed 750 flight cycles.

(k) If any cracking is found during any inspection required by paragraph (h) or (i) of this AD, before further flight, replace the accumulator with a serviceable accumulator, in accordance with Part

B of the Accomplishment Instructions of the applicable service bulletin listed in Table 1 of this AD. Doing the replacement does not end the inspection requirements of this AD. Repeat the inspections required by paragraph (h) or (i) of this AD at intervals not to exceed 750 flight cycles.

Parts Installation

(l) As of the effective date of this AD, no person may install an accumulator (P/N) 08-8423-010 (MS28700-3) on any airplane unless the accumulator has been inspected in accordance with the requirements of this AD.

Credit for Actions Accomplished in Accordance With Previous Service Information

(m) Inspections accomplished before the effective date of this AD in accordance with the applicable service bulletin listed in Table 2 of this AD are considered acceptable for compliance with the corresponding action specified in this AD.

Table 2 – Credit Service Bulletins

For Model –	Use Bombardier Service Bulletin –	Dated –
CL-215-1A10 (CL-215)	215-541	July 9, 2009
CL-215-6B11 (CL-215T)	215-3155	July 9, 2009
CL-600-6B11 (CL-415)	215-4414	July 9, 2009

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:
No differences.

Other FAA AD Provisions

(n) 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. Send information 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.

(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.

Related Information

(o) Refer to MCAI Canadian Airworthiness Directive CF-2009-42R1, dated May 14, 2010; and the service bulletins listed in table 1 of this AD; for related information.

Material Incorporated by Reference

(p) You must use the service information contained in Table 3 of this AD 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; e-mail 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.

Table 3 – Material incorporated by reference

Document	Revision	Date
Bombardier Service Bulletin 215-541	1	March 12, 2010
Bombardier Service Bulletin 215-3155	1	March 12, 2010
Bombardier Service Bulletin 215-4414	1	March 12, 2010

Issued in Renton, Washington, on January 26, 2011.

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