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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0565; Directorate Identifier 2010-NM-280-AD; Amendment 39-16977; AD 2012-05-05]

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-215-1A10, CL-215-6B11 (CL-215T Variant), and CL-215-6B11 (CL-415 Variant) airplanes. This AD was prompted by reports of cracked or broken support bracket assemblies of the emergency water dump pulley. This AD requires inspecting the bracket assembly of the emergency water dump pulley to determine if certain rivets are installed; replacing rivets and installing new stiffeners on the bracket assembly, if necessary; inspecting the stiffeners for the bracket assembly for cracks, deformation, or corrosion, and replacement if necessary; and re-installing the bracket assembly with radius packers. We are issuing this AD to detect and correct failure of the support bracket assembly of the emergency water dump pulley, and in combination with other system failures, such as an engine failure during take off or a pitch control system jam, may result in loss of controllability of the airplane.

DATES: This AD becomes effective April 24, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 24, 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: Andreas Rambalacos, 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) 228-7345; 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 June 10, 2011 (76 FR 34014). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

The emergency water dump pulley support bracket assembly, Part Number (P/N) 215-94711-2, has been found cracked or broken on a number of aeroplanes. Failure of the emergency water dump pulley support bracket assembly in combination with other system failures such as an engine failure during take off or pitch control system jam, may result in a loss of control of the aeroplane.

Revision 2 of this [Transport Canada Civil Aviation (TCCA)] AD is issued to ensure that terminating action for this [TCCA] AD is carried out prior to the 2011 fire season.

The required actions include a general visual inspection to determine if either universal solid (round head) rivets or flush rivets of the bracket assembly of the emergency water dump pulley are installed; replacing the solid rivets with flush rivets and installing new stiffeners on the bracket assembly of the emergency water dump pulley, if necessary; a detailed inspection and a liquid penetrant inspection of the stiffeners for cracks, deformations, or signs of corrosion, and replacing the stiffeners with new stiffeners if necessary; and re-installing the bracket assembly of the emergency water dump pulley using radius packers. 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 Extend Proposed Compliance Time for Replacing Damaged Stiffeners for Airplanes Used in Utility-Category Flight Operations

Aero-Flite, Inc. stated that it does not find that a reduction in operational safety exists for utility-category flight operations where the water tanks remain empty and the emergency water dump system becomes inoperative. Aero-Flite, Inc. stated that its review of the airplane flight manual emergency and abnormal procedures for Model CL-215 airplanes conducting restricted category operations revealed that the emergency water dump system is required as a back up in the event of failure of the electro-hydraulic water door system. Aero-Flite, Inc. also stated that prohibiting all flight operations if cracks, signs of corrosion, or deformation of the stiffeners is found during inspection creates an unnecessary burden for the operator, affecting mission availability and increasing the cost of compliance without providing a meaningful improvement in safety. Aero-Flite, Inc. stated the changes will allow the operator to plan for utility-category flight mission requirements.

Aero-Flite, Inc. recommended that all flight limitations contained in the NPRM (76 FR 34014, June 10, 2011) be changed to consider that water or fire retardant must be in the tanks for the unsafe condition to exist. Therefore, Aero-Flite, Inc. suggested that all occurrences of "before further flight" (specified in paragraphs (i) and (j) of the NPRM) be changed to "before further approved restricted category operations with water or fire retardant in the tanks including scooping operations."

We do not agree. Per the type certificate data sheet for Model CL-215-1A10, CL-215-6B11 (CL-215T Variant), and CL-215-6B11 (CL-415 Variant) airplanes, these airplanes are certificated in the restricted category only and therefore no reference can be made to utility-category operations. In

addition, because of the safety implications and consequences associated with cracking, our policy requires repair of known cracks, deformation, and signs of corrosion, before further flight. This policy is based on the fact that such damaged airplanes do not conform to the FAA-certificated type design and, therefore, are not airworthy until a properly approved repair is made. While we recognize that repair deferrals might be necessary in certain cases of unusual need, routinely deferring repairs could reduce the safety of the type certificated design if such repair deferrals are practiced routinely. We have not changed the AD regarding this issue.

Request To Extend the Compliance Time for the Liquid Penetrant Inspection and Re-Installing the Bracket Assembly of the Emergency Water Dump Pulley

Aero-Flite, Inc. requested that we change the compliance time in paragraph (j) of the NPRM (76 FR 34014, June 10, 2011) to "Within 100 flight cycles or 120 days after the effective date of this AD or as of November 1, 2011, whichever occurs later." Aero-Flite, Inc. stated that it finds that the compliance time specified in paragraph (j) of this NPRM may provide an unnecessary burden for the operator, resulting in airplanes becoming unavailable, and risking substantial loss of property and life from wild fires without providing a meaningful improvement in airplane operational safety.

We disagree with extending the compliance time for the liquid penetrant inspection and re-installing the bracket assembly of the emergency water dump pulley. In developing an appropriate compliance time for the actions specified in paragraph (j) of this AD, we considered the safety implications, parts availability, and normal maintenance schedules for the timely accomplishment of the specified actions. We have determined that the proposed compliance time will ensure an acceptable level of safety and allow the actions to be done during scheduled maintenance intervals for most affected operators. In addition, investigations by Bombardier have revealed that the cracked support bracket assemblies did not pass limit and ultimate load conditions. Because this is a strength issue, Bombardier recommends replacement of affected parts followed by installation of radius packers to strengthen the support bracket assembly, which would terminate the need for repetitive inspections. Affected operators, however, may request an alternative method of compliance (AMOC) under the provisions of paragraph (1)(1) of this AD by submitting data substantiating that the change would provide an acceptable level of safety. We have not changed this AD in this regard.

Request To Use an Optional Service Inspection

Aero-Flite, Inc. requested that we revise paragraph (l) of the NPRM (76 FR 34014, June 10, 2011) to add an optional visual inspection for the exposed areas of the stiffeners, paying special attention to the identified critical locations (removing the bolt from the critical bolt hole and inspect the hole).

Aero-Flite, Inc. stated that accomplishing the repetitive inspections in accordance with Bombardier Service Bulletin 215-A543, Revision 1, dated June 23, 2010, requires removal of the bracket assembly from the airplane. Aero-Flite, Inc. stated that it finds that the repetitive visual inspections of the critical locations on the stiffeners can be accomplished without removing the bracket assembly and without substantial systems disassembly by removing the fastener common to the triangular flange. Aero-Flite, Inc. also stated that mandating removal of the bracket assembly to conduct visual inspections creates a burden on the operator, which may affect fire fighting mission availability, and increase the cost of compliance without providing a meaningful improvement in safety.

We disagree with the request to use an optional visual inspection. Bombardier has only validated the required inspections in Bombardier Service Bulletin 215-A543, Revision 1, dated June 23, 2010. We have not received sufficient technical information from Bombardier validating that a visual inspection without removing the bracket assembly would identify the unsafe condition. Affected operators, however, may request an AMOC under the provisions of paragraph (1)(1) of this AD by

submitting data substantiating that the change would provide an acceptable level of safety. We have not changed this AD in this regard.

Request To Use Optional Surface Eddy Current Inspection

Aero-Flite, Inc. recommends that we revise paragraph (j)(1) of the NPRM (76 FR 34014, June 10, 2011) to include an optional surface eddy current inspection for detecting cracks, corrosion, and deformation of the stiffeners.

Aero-Flite, Inc. stated that the liquid penetrant inspection specified in the NPRM (76 FR 34014, June 10, 2011) seems to eliminate an equivalent inspection, such as a surface eddy current inspection for detecting cracks, and a visual inspection for corrosion and deformation. Aero-Flite, Inc. also stated that general surface eddy current inspection procedures are published in the Bombardier CL-215 nondestructive testing manual, and that the procedures can be used to detect cracks in the stiffeners with an accuracy that is at least equivalent to liquid penetrant inspection procedure. Aero-Flite, Inc. stated that using a visual inspection for signs of corrosion allows the inspector to look for loose paint, discoloration of the surface, or variations in surface roughness, and that a visual inspection provides detection that is equivalent to the liquid penetrant inspection. Aero-Flite, Inc. stated that requiring the operator to inspect the stiffeners only using liquid penetrant may create a burden on the operator that may affect fire fighting mission availability and increase the cost of compliance without providing an improvement in safety.

We disagree with the request to use an optional surface eddy current inspection. Bombardier has only validated the required inspections in Bombardier Service Bulletin 215-A543, Revision 1, dated June 23, 2010. We have not received sufficient technical information from Bombardier validating that an inspection other than visual would identify the unsafe condition. Affected operators, however, may request an optional inspection under the provisions of paragraph (l)(1) of this AD by submitting data substantiating that the change would provide an acceptable level of safety. We have not changed this AD in this regard.

Requests To Allow Use of Locally or Operator Fabricated Parts

Aero-Flite, Inc. requested that we revise paragraph (j)(2) of the NPRM (76 FR 34014, June 10, 2011) to allow operators to install owner/operator fabricated replacement parts.

Aero-Flite, Inc. stated that the requirement for replacing defective stiffeners with new stiffeners, and using original equipment manufacturer radius packers appears to eliminate the possibility of using engineering dispositions for serviceable stiffeners or fabricated radius packers. Aero-Flite, Inc. also stated that it finds that installing locally fabricated stiffeners and radius packers will not reduce the level of safety achieved, and that requiring the operator to install only new parts and radius packers purchased from the OEM may create a burden on the operator that may affect fire fighting mission availability and increase the cost of compliance without providing an improvement in safety.

We disagree with the request to use locally or operator fabricated parts. The requested list of non-OEM substitute parts and materials is extensive and uncontrolled—and, in many cases, not FAA-approved. An operator may request approval of an AMOC in accordance with the provisions of paragraph (l)(1) of this AD. We have not changed this AD regarding this issue.

Explanation of Change Made to This AD

We have revised the heading for and the wording in paragraph (k) of this AD; this change has not changed the intent of that paragraph.

Conclusion

We reviewed the available data, including the comments received, 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 (76 FR 34014, June 10, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 34014, June 10, 2011).

Differences Between This AD and the MCAI or Service Information

This AD differs from the MCAI and/or service information as follows:

Although Canadian Airworthiness Directive CF-2010-38R2, dated March 17, 2011, has a compliance time of "No later than 01 June 2011," for Part II—Terminating Action, this AD has a compliance time for a terminating action of "Within 100 flight cycles or 60 days after the effective date of this AD, whichever occurs first." We have coordinated this difference with Transport Canada Civil Aviation (TCCA).

Although Canadian Airworthiness Directive CF-2010-38R2, dated March 17, 2011, has an initial compliance time of "within 50 flight cycles after the effective date of this AD" for identifying the type of rivet installed, this AD has a compliance time of "within 50 flight cycles or 30 days after the effective date of this AD, whichever occurs first." In addition, the follow-on inspections in paragraph (i) of this AD for airplanes on which flush rivets are determined to be installed, is "within 100 flight cycles or 60 days after the effective date of this AD, whichever occurs first." We have coordinated this difference with TCCA.

Costs of Compliance

We estimate that this AD will affect 6 products of U.S. registry. We also estimate that it will take about 40 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 \$20,400, or \$3,400 per product.

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in this AD. 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, 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:



2012-05-05 Bombardier, Inc.: Amendment 39-16977. Docket No. FAA-2011-0565; Directorate Identifier 2010-NM-280-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective April 24, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model CL-215-1A10 airplanes, serial numbers 1051 through 1125 inclusive; Model CL-215-6B11 (CL-215T Variant) airplanes, serial numbers 1056 through 1125 inclusive; and Model CL-215-6B11 (CL-415 Variant) airplanes; serial numbers 2001 through 2085 inclusive; certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 25: Equipment/Furnishings.

(e) Reason

This AD was prompted by reports of cracked or broken support bracket assemblies of the emergency water dump pulley. We are issuing this AD to detect and correct failure of the support bracket assembly of the emergency water dump pulley, and in combination with other system failures, such as an engine failure during take off or a pitch control system jam, may result in loss of controllability of the airplane.

(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) Inspections

Within 50 flight cycles or 30 days after the effective date of this AD, whichever occurs first, do a general visual inspection to determine if either universal solid (round head) rivets or flush rivets of the bracket assembly of the emergency water dump pulley are installed, in accordance with the Accomplishment Instruction of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(h) Corrective Action if Universal Solid Rivets are Installed

If, during the inspection required by paragraph (g) of this AD, universal solid rivets are determined to be installed: Within 50 flight cycles or 30 days after the effective date of this AD, whichever occurs first, replace the solid rivets with flush rivets, and install new stiffeners on the bracket assembly of the emergency water dump pulley, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(i) Corrective Action if Flush Rivets are Installed

If, during the inspection required by paragraph (g) of this AD, flush rivets are determined to be installed; and for airplanes on which flush rivets are installed in accordance with paragraph (h) of this AD: Within 100 flight cycles or 60 days after the effective date of this AD, whichever occurs first, do a detailed inspection of the stiffeners for cracks, deformation, and signs of corrosion, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes). Thereafter, at intervals not to exceed 100 flight cycles, repeat the detailed inspections of the stiffeners. If any crack, deformation, or signs of corrosion are found, before further flight, replace the stiffeners with new stiffeners, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(j) Terminating Action

Within 100 flight cycles or 60 days after the effective date of this AD, whichever occurs first, do the actions specified in paragraphs (j)(1) and (j)(2) of this AD. Installation of the radius packers terminates the repetitive detailed inspections of the support bracket assembly of the emergency water dump pulley required by paragraph (i) of this AD.

(1) Do a liquid penetrant inspection of the stiffeners having P/N 215-94711-6 and P/N 215-94711-8 for cracks, deformation, or signs of corrosion, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes). If any crack, deformation, or sign of corrosion is found, before further flight, replace damaged stiffeners with new stiffeners, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(2) Re-install the bracket assembly of the emergency water dump pulley using radius packers, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010 (for Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(k) Credit Previous Actions

This paragraph provides credit for the actions required by paragraphs (g), (h), (i), and (j) of this AD, if the actions were performed before the effective date of this AD using the service information specified in paragraphs (k)(1), (k)(2), and (k)(3) of this AD.

- (1) Bombardier Service Bulletin 215-4424, dated January 25, 2010.
- (2) Bombardier Alert Service Bulletin 215-A4424, Revision 1, dated May 18, 2010.
- (3) Bombardier Alert Service Bulletin 215-A543, dated May 19, 2010.

(l) 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, 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.

(m) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2010-38R2, dated March 17, 2011, and the service information specified in paragraphs (m)(1) and (m)(2) of this AD; for related information.

- (1) Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010.
- (2) Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010.

(n) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

- (i) Bombardier Alert Service Bulletin 215-A543, Revision 1, dated June 23, 2010.
- (ii) Bombardier Alert Service Bulletin 215-A4424, Revision 2, dated June 23, 2010.

(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 March 1, 2012.
Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.