

[Federal Register: July 15, 2009 (Volume 74, Number 134)]
[Rules and Regulations]
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[DOCID:fr15jy09-8]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0138; Directorate Identifier 2008-NM-216-AD; Amendment 39-15966; AD 2009-15-03]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model BD-700-1A10 and BD-700-1A11 Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding an existing 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:

During scheduled maintenance inspection, a bolt which connects the PCU (power control unit) to the elevator surface was found fractured in the assembly. Further inspection of the assembly revealed that the bearing on the PCU rod end had seized, which resulted in damage to the attachment fitting bushing and fracture of the bolt. Inspection of other in-service airplanes revealed two more seized PCU attachment joints. However, except seizure, no fractured bolt was found on these airplanes. Failure of the bolts in both PCUs on one side could result in disconnection of the elevator control surface which would lead to flutter and loss of the aircraft.

* * * * *

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

DATES: This AD becomes effective August 19, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of August 19, 2009.

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: Pong K. Lee, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7324; 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 February 23, 2009 (74 FR 8045). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During scheduled maintenance inspection, a bolt which connects the PCU (power control unit) to the elevator surface was found fractured in the assembly. Further inspection of the assembly revealed that the bearing on the PCU rod end had seized, which resulted in damage to the attachment fitting bushing and fracture of the bolt. Inspection of other in-service airplanes revealed two more seized PCU attachment joints. However, except seizure, no fractured bolt was found on these airplanes. Failure of the bolts in both PCUs on one side could result in disconnection of the elevator control surface which would lead to flutter and loss of the aircraft.

This Airworthiness Directive (AD) is issued to mandate the inspection and lubrication of all part number (P/N) GT411-3800-5 and GT411-3800-7 PCU attachment joints.

The required actions include inspections for damage and seizure (including signs of seizure) of the PCU attachment joints, an inspection for damage (including wear damage, fretting, corrosion, galling, scoring, fretting wear, and parts that do not meet inspection requirements) of the PCU attachment joint components, and applicable corrective actions. You may obtain further information by examining the MCAI in the AD docket.

Explanation of Revised Service Information

Bombardier has issued the revised service information specified in the below table. We have changed paragraphs (f)(1) through (f)(5), paragraph (f)(7), and paragraphs (g)(1) and (g)(2) of this AD to add the revised service information specified in the following table.

Revised Service Information

Service Bulletin	Revision Level	Date
Bombardier Alert Service Bulletin A700-1A11-27-024	02	November 10, 2008
Bombardier Alert Service Bulletin A700-27-066	02	November 10, 2008
Bombardier Service Bulletin 700-1A11-27-025	01	November 24, 2008
Bombardier Service Bulletin 700-27-067	01	November 24, 2008

No additional work is necessary for airplanes on which the previously issued service information specified in the following table has been accomplished. We have revised paragraph (f)(6) and added a new paragraph (g)(3) to this AD to include credit for accomplishing the actions before the effective date of this AD using the previously issued service information.

Previously Issued Service Information

Service Bulletin	Revision Level	Date
Bombardier Alert Service Bulletin A700-1A11-27-024	01	October 3, 2008
Bombardier Alert Service Bulletin A700-27-066	01	October 3, 2008
Bombardier Service Bulletin 700-1A11-27-025	(¹)	October 9, 2008
Bombardier Service Bulletin 700-27-067	(¹)	October 9, 2008

¹ Original.

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.

We reviewed the available data and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes 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 about 157 products of U.S. registry.

We estimate that it will take about 4 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$50,240, or \$320 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, 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 removing Amendment 39-15753 (73 FR 72316, November 28, 2008) and adding the following new AD:



2009-15-03 Bombardier, Inc.: Amendment 39-15966. Docket No. FAA-2009-0138; Directorate Identifier 2008-NM-216-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective August 19, 2009.

Affected ADs

- (b) This AD supersedes AD 2008-24-12, Amendment 39-15753.

Applicability

- (c) This AD applies to Bombardier Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category, serial numbers (S/Ns) 9002 through 9222 inclusive; equipped with elevator power control units (PCUs) having part number (P/N) GT411-3800-5 or GT411-3800-7.

Subject

- (d) Air Transport Association (ATA) of America Code 27: Flight controls.

Reason

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

During scheduled maintenance inspection, a bolt which connects the PCU (power control unit) to the elevator surface was found fractured in the assembly. Further inspection of the assembly revealed that the bearing on the PCU rod end had seized, which resulted in damage to the attachment fitting bushing and fracture of the bolt. Inspection of other in-service airplanes revealed two more seized PCU attachment joints. However, except seizure, no fractured bolt was found on these airplanes. Failure of the bolts in both PCUs on one side could result in disconnection of the elevator control surface which would lead to flutter and loss of the aircraft.

This Airworthiness Directive (AD) is issued to mandate the inspection and lubrication of all part number (P/N) GT411-3800-5 and GT411-3800-7 PCU attachment joints.

The required actions include inspections for damage and seizure (including signs of seizure) of the PCU attachment joints, an inspection for damage (including wear damage, fretting, corrosion, galling, scoring, fretting wear, and parts that do not meet inspection requirements) of the PCU attachment joint components, and applicable corrective actions.

Restatement of Requirements of AD 2008-24-12:

- (f) Unless already done: For airplanes on which elevator PCUs with P/N GT411-3800-5 or P/N GT411-3800-7, S/N 0615 and lower, are installed, excluding P/N GT411-3800-7 PCUs having a

serial number listed in Table 1 of this AD, and excluding P/N GT411-3800-7 PCUs on which less than 1,000 flight hours have accumulated on the PCUs as of December 15, 2008 (the effective date of AD 2008-24-12), do the actions specified in paragraphs (f)(1), (f)(2), and (f)(3) of this AD.

Note 1: Units listed in Table 1 of this AD have been lubricated by the vendor and the inspections required by paragraphs (f)(1), (f)(2), (f)(3), and (f)(4) of this AD are not required for those units.

Table 1 – Serial Numbers

0030	0097	0156	0188	0218	0369	0438
0031	0101	0161	0190	0222	0406	0453
0033	0105	0163	0191	0223	0407	0491
0041	0108	0164	0197	0240	0408	0495
0046	0109	0165	0198	0262	0413	0504
0060	0110	0171	0199	0265	0420	0506
0062	0111	0173	0202	0281	0427	0513
0066	0119	0174	0205	0296	0429	0533
0081	0130	0178	0206	0301	0430	0536
0083	0138	0179	0208	0310	0431	0586
0087	0141	0181	0210	0323	0433	
0092	0145	0183	0214	0365	0435	

(1) Within 10 flight cycles or 50 flight hours after December 15, 2008, whichever occurs first: Inspect for damage and wear and lubricate the PCU attachment joints in accordance with Bombardier Alert Service Bulletin A700-1A11-27-024, Revision 02, dated November 10, 2008; or Bombardier Alert Service Bulletin A700-27-066, Revision 02, dated November 10, 2008; as applicable.

(2) Within 90 days or 200 flight hours after performing the actions required by paragraph (f)(1) of this AD, whichever occurs first: Repeat the inspection and lubrication of the PCU attachment joints in accordance with Bombardier Alert Service Bulletin A700-1A11-27-024, Revision 02, dated November 10, 2008; or Bombardier Alert Service Bulletin A700-27-066, Revision 02, dated November 10, 2008; as applicable.

(3) Within 45 days or 100 flight hours after performing the actions required by paragraph (f)(2) of this AD, whichever occurs first: Repeat the inspection and lubrication of the PCU attachment joints in accordance with Bombardier Alert Service Bulletin A700-1A11-27-024, Revision 02, dated November 10, 2008; or Bombardier Alert Service Bulletin A700-27-066, Revision 02, dated November 10, 2008; as applicable. Repeat the inspection thereafter at intervals not to exceed 45 days or 100 flight hours, whichever occurs first, until paragraph (f)(4) of this AD is accomplished.

(4) Completion of a disassembly with an inspection for damage, applicable corrective actions, and lubrication of the PCU attachment joint components in accordance with Bombardier Service Bulletin 700-1A11-27-025, Revision 01, dated November 24, 2008; or Bombardier Service Bulletin 700-27-067, Revision 01, dated November 24, 2008; as applicable; constitutes terminating action for the inspections required by paragraphs (f)(1), (f)(2), and (f)(3) of this AD.

(5) Unless already done, if any damage or seizure is found during any inspection required by paragraphs (f)(1), (f)(2), (f)(3), and (f)(4) of this AD, before further flight, replace the affected part in accordance with Bombardier Service Bulletin 700-1A11-27-025, Revision 01, dated November 24, 2008; or Bombardier Service Bulletin 700-27-067, Revision 01, dated November 24, 2008; as applicable.

(6) Actions done before December 15, 2008, in accordance with Bombardier Alert Service Bulletin A700-1A11-27-024 or Bombardier Alert Service Bulletin A700-27-066, both dated October 2, 2008; or Revision 01, both dated October 3, 2008; as applicable; are acceptable for compliance with the corresponding requirements of this AD.

(7) Unless already done, submit a report to Bombardier of all findings found during any inspection required by paragraphs (f)(1), (f)(2), (f)(3), and (f)(4) of this AD, in accordance with the applicable service bulletin listed in Table 2 of this AD.

(i) If the inspection was done on or after December 15, 2008: Submit the report within 14 days after the inspection.

(ii) If the inspection was done before December 15, 2008: Submit the report within 14 days after December 15, 2008.

Table 2 – Service Bulletins for Reports

Service Bulletin	Revision Level	Date
Bombardier Alert Service Bulletin A700-1A11-27-024	02	November 10, 2008
Bombardier Alert Service Bulletin A700-27-066	02	November 10, 2008
Bombardier Service Bulletin 700-1A11-27-025	01	November 24, 2008
Bombardier Service Bulletin 700-27-067	01	November 24, 2008

New Requirements of This AD: Actions and Compliance

(g) Unless already done, do the actions specified in paragraph (g)(1) or (g)(2) of this AD, as applicable, at the time specified.

(1) For airplanes identified in paragraph (f) of this AD: Within 45 days or 100 flight hours after the effective date of this AD, whichever occurs first, complete a disassembly with an inspection for damage, applicable corrective actions, and lubrication of the PCU attachment joint components in accordance with Bombardier Service Bulletin 700-1A11-27-025, Revision 01, dated November 24, 2008; or Bombardier Service Bulletin 700-27-067, Revision 01, dated November 24, 2008; as applicable.

(2) For airplanes not identified in paragraph (f) of this AD on which elevator PCUs with P/N GT411-3800-7 are installed: Within 180 days or 400 flight hours after the effective date of this AD, whichever occurs first, complete a disassembly with an inspection for damage, applicable corrective actions, and lubrication of the PCU attachment joint components in accordance with Bombardier Service Bulletin 700-1A11-27-025, Revision 01, dated November 24, 2008; or Bombardier Service Bulletin 700-27-067, Revision 01, dated November 24, 2008; as applicable.

(3) Actions done before the effective date of this AD in accordance with Bombardier Service Bulletin 700-1A11-27-025, dated October 9, 2008; or Bombardier Service Bulletin 700-27-067, dated October 9, 2008; as applicable; are acceptable for compliance with the corresponding requirements of this AD.

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows: Paragraph A.3. of the MCAI requires a one-time inspection; however, since we have changed the compliance time for the terminating action in paragraph A.4. of the MCAI (refer to paragraph (g)(1) of this AD), paragraph (f)(3) of this AD requires repeating the inspections until the terminating action is performed.

Other FAA AD Provisions

(h) 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. Send information to Attn: Pong K. Lee, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7324; fax (516) 794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(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: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

(4) Special Flight Permits: As described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), special flight permits are not allowed.

Related Information

(i) Refer to MCAI Canadian Emergency Airworthiness Directive CF-2008-31, dated October 9, 2008, and the service information specified in Table 2 of this AD, for related information.

Material Incorporated by Reference

(j) You must use the service information contained in Table 3 of this AD to do the actions required by this AD, as applicable, unless the AD specifies otherwise.

Table 3 – Material incorporated by reference

Document	Revision Level	Date
Bombardier Alert Service Bulletin A700-1A11-27-024	02	November 10, 2008
Bombardier Alert Service Bulletin A700-27-066	02	November 10, 2008
Bombardier Service Bulletin 700-1A11-27-025	01	November 24, 2008
Bombardier Service Bulletin 700-27-067	01	November 24, 2008

(1) The Director of the Federal Register approved the incorporation by reference of the 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 or 425-227-1152.

(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 July 2, 2009.

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