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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2014-0175; Directorate Identifier 2014-NM-014-AD; Amendment 39-17957; AD 2014-17-04]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc. Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. This AD was prompted by reports that elevator power control unit (PCU) shear pins may fail prematurely. This AD requires repetitive replacement of the elevator PCU shear pins. We are issuing this AD to prevent premature elevator PCU shear pin failure. If all pins fail on one elevator, the elevator surface would become inoperative, which could reduce the controllability of the airplane and could result in a loss of redundancy for flutter prevention.

**DATES:** This AD becomes effective October 1, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 1, 2014.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0175>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

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](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced 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.

**FOR FURTHER INFORMATION CONTACT:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The NPRM published in the Federal Register on March 28, 2014 (79 FR 17453).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-04, dated January 13, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The MCAI states:

It was found that the elevator power control unit (PCU) shear pins may fail prematurely. The failure of an elevator PCU shear pin is dormant. There are three PCUs on each elevator. If all three PCU shear pins failed on one elevator, the elevator surface would become inoperative, which could reduce the controllability of the aeroplane and could result in a loss of redundancy for flutter prevention.

This [Canadian] AD mandates the repetitive replacement of the elevator PCU shear pins to prevent premature elevator PCU shear pin failures.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0175-0002>.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (79 FR 17453, March 28, 2014) and the FAA's response to each comment.

### **Request To Delete the Repetitive Requirement**

Air Wisconsin Airlines Corporation (AWAC) requested that we revise the NPRM (79 FR 17453, March 28, 2014) to delete the repetitive actions required by paragraph (g) of the NPRM. AWAC pointed out that, typically, when the design approval holder determines that a repetitive action for a task is required, the repetitive action is normally published in the maintenance requirements manual as an airworthiness limitation, a certification maintenance requirement, or a systems and powerplant program task. AWAC notes that the design approval holder has no such requirement in its proposed or published documents, and that the service information identified in the NPRM states that it does not affect airworthiness limitations or damage tolerance inspections.

As an alternative to removing the repetitive requirement specified in paragraph (g) of the NPRM (79 FR 17453, March 28, 2014), AWAC requested that, if we do not agree to revise the NPRM as requested, we remove the compliance time of 48 months for the repetitive replacement. AWAC questioned why the repetitive replacements should be required, if the airplane has not been regularly operated. For example, an airplane on which the replacement task was previously performed, that has subsequently been sitting in storage in the desert for 3-4 years would not have any stress.

We disagree to delete the repetitive replacements required by paragraph (g) of this final rule. There are various contributing factors to the premature failure of the elevator PCU shear pins, and corrosion is one of those factors. The repetitive replacement interval was determined by the design approval holder and certifying authority. And, because corrosion is generally a function of time and exposure to the environment, rather than number of flights, we have determined that a specific

interval of calendar time is required to address this failure mode. Bombardier indicated that it did not wish to state a repetitive action within its service bulletin, as operators prefer service bulletins that are not left open-ended.

We also do not agree to remove the 48-month compliance time. The 48-month compliance time is necessary to address the identified unsafe condition on any airplanes with a low utilization rate. An airplane on which the proposed replacement has been done that has been parked in storage in the desert for three to four years might not have undergone any operational stress, but the airplane is still exposed to its environment making it susceptible to corrosion. We have made no changes to this final rule in this regard.

### **Request To Provide Credit for Certain Previous Actions**

AWAC requested that we revise paragraph (i) of the NPRM (79 FR 17453, March 28, 2014) to allow credit for replacements done previously using maintenance Task 55-21-27-960-802 and/or other service information identified in the airplane's maintenance records. AWAC suggested that there might be other service information that has been used to do the replacements required by paragraph (g) of the NPRM.

We partially agree. We agree to allow credit for the replacements performed before the effective date of this AD using Task 55-21-27-960-802 of the Canadair Regional Jet Model CL-600-2B19 Aircraft Maintenance Manual, CSP A-001, Revision 49, dated May 10, 2014. We have added new paragraph (i)(3) in this final rule to provide credit for using Task 55-21-27-960-802 to accomplish the replacements specified in paragraph (g) of this final rule. We also have revised paragraph (i) of this final rule and redesignated that text as paragraphs (i), (i)(1), and (i)(2) of this AD; this change was for formatting purposes only.

We do not agree to provide credit in this final rule for replacements done using unspecified service information that might be identified in unspecified service documents in the airplane maintenance records. However, affected operators may request approval to use other, specific service information as an alternative method of compliance under the provisions of paragraph (j)(1) of this AD.

### **"Contacting the Manufacturer" Paragraph in This AD**

Since late 2006, we have included a standard paragraph titled "Airworthy Product" in all MCAI ADs in which the FAA develops an AD based on a foreign authority's AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In the NPRM (79 FR 17453, March 28, 2014), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to this FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase "its delegated agent" to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

No comments were provided to the NPRM (79 FR 17453, March 28, 2014) about these proposed changes. However, a comment was provided for an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013). The commenter stated the following: "The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable

for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin."

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it "Contacting the Manufacturer." This paragraph now clarifies that for any requirement in this AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, TCCA, or Bombardier, Inc.'s TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer's message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers' service instructions that are "Required for Compliance" with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

Other commenters to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) pointed out that in many cases the foreign manufacturer's service bulletin and the foreign authority's MCAI might have been issued some time before the FAA AD. Therefore, the DOA might have provided U.S. operators with an approved repair, developed with full awareness of the unsafe condition, before the FAA AD is issued. Under these circumstances, to comply with the FAA AD, the operator would be required to go back to the manufacturer's DOA and obtain a new approval document, adding time and expense to the compliance process with no safety benefit.

Based on these comments, we removed the requirement that the DAH-provided repair specifically refer to this AD. Before adopting such a requirement, the FAA will coordinate with affected DAHs and verify they are prepared to implement means to ensure that their repair approvals consider the unsafe condition addressed in this AD. Any such requirements will be adopted through the normal AD rulemaking process, including notice-and-comment procedures, when appropriate.

We also have decided not to include a generic reference to either the "delegated agent" or "DAH with State of Design Authority design organization approval," but instead we have provided the specific delegation approval granted by the State of Design Authority for the DAH throughout this AD.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 17453, March 28, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 17453, March 28, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## **Costs of Compliance**

We estimate that this AD affects 575 airplanes of U.S. registry.

We also 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 \$85 per work-hour. Required parts will cost about \$41 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$219,075, or \$381 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 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.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0175>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, 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.

### **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 airworthiness directive (AD):



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**2014-17-04 Bombardier, Inc.:** Amendment 39-17957. Docket No. FAA-2014-0175; Directorate Identifier 2014-NM-014-AD.

**(a) Effective Date**

This AD becomes effective October 1, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, serial numbers 7003 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 55, Stabilizers.

**(e) Reason**

This AD was prompted by reports that elevator power control unit (PCU) shear pins may fail prematurely. We are issuing this AD to prevent premature elevator PCU shear pin failure. If all pins fail on one elevator, the elevator surface would become inoperative, which could reduce the controllability of the airplane and could result in a loss of redundancy for flutter prevention.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Repetitive Replacements**

Within 6,600 flight hours or 48 months after the effective date of this AD, whichever occurs first: Replace the elevator PCU shear pins, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-55-008, Revision B, dated March 12, 2014. Repeat the replacement thereafter at intervals not to exceed 6,600 flight hours or 48 months from the most recent replacement, whichever occurs first.

**(h) Optional Method for Replacement**

Replacing the elevator PCU shear pins, using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO); is a method of

compliance for any replacement required by paragraph (g) of this AD. If approved by the DAO, the approval must include the DAO-authorized signature.

Note 1 to paragraph (h) of this AD: Guidance for doing replacements specified in paragraph (h) of this AD may be found in Task 5-21-27-960-802 of the Canadair Regional Jet Model CL-600-2B19 Aircraft Maintenance Manual, CSP A-001, Revision 49, dated May 10, 2014.

**(i) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraph (i)(1), (i)(2), or (i)(3) of this AD, which are not incorporated by reference in this AD.

(1) Bombardier Service Bulletin 601R-55-008, dated July 12, 2013.

(2) Bombardier Service Bulletin 601R-55-008, Revision A, dated January 8, 2014.

(3) Task 55-21-27-960-802 of the Canadair Regional Jet Model CL-600-2B19 Aircraft Maintenance Manual, CSP A-001, Revision 49, dated May 10, 2014.

**(j) 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), 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, NY 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) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-04, dated January 13, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0175-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

**(l) 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 this AD specifies otherwise.

(i) Bombardier Service Bulletin 601R-55-008, Revision B, dated March 12, 2014.

(ii) Reserved.

(3) 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](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>.

(4) You may view this 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 August 15, 2014.

Michael Kaszycki,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.