

[Federal Register Volume 77, Number 117 (Monday, June 18, 2012)]  
[Rules and Regulations]  
[Pages 36129-36131]  
From the Federal Register Online via the Government Printing Office [www.gpo.gov]  
[FR Doc No: 2012-14042]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2012-0293; Directorate Identifier 2012-NM-034-AD; Amendment 39-17081; AD 2012-12-02]**

**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-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes. This AD was prompted by reports of a bleed air leak from the high pressure ducts which was not immediately detected by the bleed leak detection system. This AD requires installing new sensing elements in the main landing gear wheel well and the overwing area, protective blankets on the upper surface of the wing box and fuel tubes, and protective shields on the rudder quadrant support-beam in the aft equipment compartment. We are issuing this AD to prevent an undetected bleed air leak which can cause loss of rudder control, can lead to degradation of structural integrity, and could be a potential heat source that can lead to fuel being ignited.

**DATES:** This AD becomes effective July 23, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of July 23, 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.

## **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 published in the Federal Register on March 21, 2012 (77 FR 16490). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

There have been multiple events reported where a bleed air leak from the high pressure ducts was not immediately detected by the Bleed Leak Detection System (BLDS).

An investigation revealed that if a bleed air leak develops due to a cracked or ruptured duct, the duct shroud may not channel sufficient bleed air to the sensing loop elements to enable an automatic shutdown of the bleed air system. The inability to detect a bleed air leak could result in the rudder quadrant bracket, pressure floor, pressure floor beam, fuel vent boot or fuel tubes being exposed to high temperatures. This could potentially lead to the loss of rudder control, degrade the structural integrity of primary structure or fuel ignition.

This [Canadian] Airworthiness Directive (AD) mandates the installation of newly designed sensing elements in the main landing gear wheel well and the overwing area, protective blankets on the upper surface of the wing box and fuel tubes, as well as protective shields on the rudder quadrant support-beam in the aft equipment compartment.

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 16490, March 21, 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.

### **Costs of Compliance**

We estimate that this AD will affect 409 products of U.S. registry. We also estimate that it will take about 78 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 \$21,353 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 \$11,445,047, or \$27,983 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.

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 16490, March 21, 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:



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**2012-12-02 Bombardier, Inc.:** Amendment 39-17081. Docket No. FAA-2012-0293; Directorate Identifier 2012-NM-034-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective July 23, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the airplanes specified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10003 through 10331 inclusive.

(2) Bombardier, Inc. Model CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 through 15279 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 36: Pneumatic.

**(e) Reason**

This AD was prompted by reports of a bleed air leak from the high pressure ducts which was not immediately detected by the bleed leak detection system. We are issuing this AD to prevent an undetected bleed air leak which can cause loss of rudder control, can lead to degradation of structural integrity, and could be a potential heat source that can lead to fuel being ignited.

**(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) Install Protective Shields**

For Model CL-600-2C10 airplanes having serial numbers 10003 through 10326 inclusive, and Model CL-600-2D15 and CL-600-2D24 airplanes having serial numbers 15001 through 15267 inclusive: Within 6,600 flight hours or 24 months after the effective date of this AD, whichever occurs first, install protective shields on the rudder quadrant support-beam in the aft equipment compartment, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-36-014, Revision A, dated October 11, 2011.

## **(h) Install Protective Blankets and Sensing Elements**

For Model CL-600-2C10 airplanes having serial numbers 10003 through 10331 inclusive and Models CL-600-2D15 and CL-600-2D24 airplanes having serial numbers 15001 through 15279 inclusive: Within 6,600 flight hours or 24 months after the effective date of this AD, whichever occurs first, install protective blankets on the upper surface of the wing box and fuel components, and install new sensing elements in the wheel well of the main landing gear and the overwing area, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-36-016, Revision A, dated October 11, 2011.

## **(i) Credit for Previous Actions**

This paragraph provides credit for installations, required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 670BA-36-014 or 670BA-36-016, both dated April 7, 2011, as applicable.

## **(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, 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.

## **(k) Related Information**

Refer to MCAI Canadian Airworthiness Directive CF-2012-06, dated January 26, 2012, and the service bulletins specified in paragraphs (k)(1) and (k)(2) of this AD, for related information.

(1) Bombardier Service Bulletin 670BA-36-014, Revision A, dated October 11, 2011.

(2) Bombardier Service Bulletin 670BA-36-016, Revision A, dated October 11, 2011.

## **(l) Material Incorporated by Reference**

(1) 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.

(2) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bombardier Service Bulletin 670BA-36-014, Revision A, dated October 11, 2011.

(ii) Bombardier Service Bulletin 670BA-36-016, Revision A, dated October 11, 2011.

(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 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.

(5) 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 an NARA facility, call 202-741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on May 31, 2012.

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