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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0792; Directorate Identifier 2009-NM-057-AD; Amendment 39-16300; AD 2010-10-21]**

**RIN 2120-AA64**

**Airworthiness Directives; 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**

**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 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:

Bombardier Aerospace has completed a system safety review of the CL-600-2C10/CL600-2D15/CL-600-2D24 aircraft fuel system against the new fuel tank safety standards, introduced in Chapter 525 of the Airworthiness Manual through Notice of Proposed Amendment (NPA) 2002-043. The identified non-compliances were assessed using Transport Canada Policy Letter No. 525-001 to determine if mandatory corrective action was required.

The assessment showed that certain hydraulic system failure scenarios could lead to a rapid overheat in the hydraulic lines without giving flight crew sufficient time to react before the No. 1 and No. 2 hydraulic system tubing inside the fuel tank reaches the fuel auto ignition temperature. This could result in a fuel tank explosion. \* \* \* \* We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective June 21, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 21, 2010.

**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 Propulsion 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 September 28, 2009 (74 FR 49346). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Bombardier Aerospace has completed a system safety review of the CL-600-2C10/CL600-2D15/CL-600-2D24 aircraft fuel system against the new fuel tank safety standards, introduced in Chapter 525 of the Airworthiness Manual through Notice of Proposed Amendment (NPA) 2002-043. The identified non-compliances were assessed using Transport Canada Policy Letter No. 525-001 to determine if mandatory corrective action was required.

The assessment showed that certain hydraulic system failure scenarios could lead to a rapid overheat in the hydraulic lines without giving flight crew sufficient time to react before the No. 1 and No. 2 hydraulic system tubing inside the fuel tank reaches the fuel auto ignition temperature. This could result in a fuel tank explosion.

To correct the unsafe condition, this [Canadian airworthiness] directive mandates the installation of thermal fuses in the No. 1 and No. 2 hydraulic systems and the introduction of Fuel System Limitations (FSL) and Critical Design Configuration Control Limitations (CDCCL) associated with this design change.

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.

### **Support for the NPRM**

The Air Line Pilots Association (ALPA) supports the proposed AD.

### **Request To Delay Rule Until Updated Service Information Is Released**

American Eagle Airlines (American Eagle) requests that we incorporate updated service information into the NPRM. American Eagle states that during the accomplishment of Bombardier Service Bulletin 670BA-29-005, Revision A, dated January 29, 2009 (which specifies the accomplishment of Mitsubishi Service Bulletin 670MM-29-006, Revision A, dated February 12,

2009) (which was referred to in the NPRM as the appropriate source of service information for the proposed actions), several issues were found, including part numbers called out in these service bulletins that have been superseded by new part numbers included in a kit, an incorrect location specified for bracket installation, and the need for alternate fasteners. American Eagle requests that a revised service bulletin correcting these issues be released and incorporated into the NPRM with credit given for actions accomplished in accordance with earlier versions of the service bulletins. American Eagle states that this will greatly reduce the number of requests for alternative methods of compliance (AMOCs) and possible instances of non-compliance.

We find that clarification is necessary. We contacted Bombardier to inquire as to the status of updating the service information. However, no estimated date for releasing updated service information could be provided at this time. We do not agree that it is necessary to wait to issue this final rule until the manufacturer updates Bombardier Service Bulletin 670BA-29-005. To further delay the issuance of this AD would be inappropriate, since we have determined that an unsafe condition exists and that the required actions must be done to ensure continued safety.

We note that Bombardier has issued Service Non-Incorporated Engineering Order (SNIEO) KMM670-75007, Identifier S01, dated September 3, 2009, which permits installation of certain fasteners, and SNIEO KMM670-75007, Identifier S02, dated September 11, 2009, which permits installation of the left-side bracket on the right (and vice versa). For clarification purposes, we added a new Note 2 to this final rule to specify that guidance for accomplishing the modification required by paragraph (f)(1) of this AD can be found in the SNIEOs.

In addition, paragraph (f)(5) of this AD gives credit for actions accomplished in accordance with Bombardier Service Bulletin 670BA-29-005, dated December 18, 2008.

### **Explanation of Change Made to This AD**

We have revised this AD to identify the legal name of the manufacturer as published in the most recent type certificate data sheet for the affected airplane models.

### **Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD with the change described previously. We also determined that this change 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.

### **Explanation of Change to Costs of Compliance**

After the NPRM was issued, we reviewed the figures we have used over the past several years to calculate AD costs to operators. To account for various inflationary costs in the airline industry, we find it necessary to increase the labor rate used in these calculations from \$80 per work hour to \$85 per work hour. The cost impact information, below, reflects this increase in the specified hourly labor rate.

## **Costs of Compliance**

We estimate that this AD will affect 334 products of U.S. registry. We also estimate that it will take about 45 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 \$6,765 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 \$3,537,060, or \$10,590 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 adding the following new AD:



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**2010-10-21 Bombardier, Inc.:** Amendment 39-16300. Docket No. FAA-2009-0792; Directorate Identifier 2009-NM-057-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective June 21, 2010.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, certificated in any category, having serial numbers 10003 through 10267 inclusive; and Bombardier Model CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900) airplanes, certificated in any category, having serial numbers 15001 through 15199 inclusive, 15202, and 15204.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (g) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Subject**

- (d) Air Transport Association (ATA) of America Code 29: Hydraulic power.

**Reason**

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

Bombardier Aerospace has completed a system safety review of the CL-600-2C10/CL600-2D15/CL-600-2D24 aircraft fuel system against the new fuel tank safety standards, introduced in Chapter 525 of the Airworthiness Manual through Notice of Proposed Amendment (NPA) 2002-043. The identified non-compliances were assessed using Transport Canada Policy Letter No. 525-001 to determine if mandatory corrective action was required.

The assessment showed that certain hydraulic system failure scenarios could lead to a rapid overheat in the hydraulic lines without giving flight crew sufficient time to react

before the No. 1 and No. 2 hydraulic system tubing inside the fuel tank reaches the fuel auto ignition temperature. This could result in a fuel tank explosion.

To correct the unsafe condition, this [Canadian airworthiness] directive mandates the installation of thermal fuses in the No. 1 and No. 2 hydraulic systems and the introduction of Fuel System Limitations (FSL) and Critical Design Configuration Control Limitations (CDCCL) associated with this design change.

## Actions and Compliance

(f) Unless already done, do the following actions.

(1) Within 6,000 flight hours after the effective date of this AD, modify the aircraft hydraulic system by installing thermal fuses according to the Accomplishment Instructions of Bombardier Service Bulletin 670BA-29-005, Revision A, dated January 29, 2009.

Note 2: Guidance for accomplishing the modification required by paragraph (f)(1) of this AD can be found in Bombardier Service Non-Incorporated Engineering Order (SNIEO) KMM670-75007, Identifier S01, dated September 3, 2009, and SNIEO KMM670-75007, Identifier S02, dated September 11, 2009.

(2) Before or concurrently with the actions required by paragraph (f)(1) of this AD, revise the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness to incorporate the tasks identified in Table 1 of this AD as specified in Bombardier Temporary Revision (TR) 2-269, dated December 18, 2008, to Section 3, "Fuel Systems Limitations," of Part 2 of the Bombardier CL-600-2C10, CL-600-2D15, and CL-600-2D24 Maintenance Requirements Manual. The initial compliance time for the task is within 10,000 flight hours after doing the action required by paragraph (f)(1) of this AD, or within 60 days after the effective date of this AD, whichever occurs later, and the limitation task must be accomplished thereafter at the "limiting interval" specified in Bombardier TR 2-269, dated December 18, 2008, except as provided by paragraphs (f)(4) and (g)(1) of this AD.

**Table 1 - Fuel System Limitation Task**

<b>Task Number</b>	<b>Task Description</b>
29-30-00-603	Hydraulic System No. 1 and No. 2 Thermal Fuse: Discard the system No. 1 and No. 2 thermal fuse (Post Modsum 670T112042 or SB 670BA-29-005)

(3) Before or concurrently with the actions required by paragraph (f)(1) of this AD, revise the ALS of the Instructions for Continued Airworthiness to incorporate the CDCCL data specified in Bombardier TR 2-268, dated December 18, 2008, to Section 3, "Fuel System Limitations," of Part 2 of the Bombardier CL-600-2C10, CL-600-2D15 and CL-600-2D24 Maintenance Requirements Manual.

Note 3: The actions required by paragraphs (f)(2) and (f)(3) of this AD may be done by inserting a copy of the TR into the maintenance requirements manual. When the TR has been included in the general revision of the maintenance program, the general revision may be inserted into the maintenance requirements manual, provided the relevant information in the general revision is identical to that in the TR, and the TR may be removed.

(4) After accomplishing the actions specified in paragraphs (f)(2) and (f)(3) of this AD, no alternative limitation tasks, limitation task intervals, or CDCCLs may be used unless the limitation task, limitation task interval, or CDCCL is approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (g)(1) of this AD.

(5) Actions accomplished before the effective date of this AD in accordance with Bombardier Service Bulletin 670BA-29-005, dated December 18, 2008, are considered acceptable for compliance with the corresponding action specified in paragraph (f)(1) of this AD.

Note 4: Notwithstanding any other maintenance or operational requirements, components that have been identified as airworthy or installed on the affected airplanes before the revision of the ALS, as required by paragraphs (f)(2) and (f)(3) of this AD, do not need to be reworked in accordance with the CDCCLs. However, once the ALS has been revised, future maintenance actions on these components must be done in accordance with the CDCCLs.

### **FAA AD Differences**

Note 5: This AD differs from the MCAI and/or service information as follows: No differences.

### **Other FAA AD Provisions**

(g) 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 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. 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: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### **Related Information**

(h) Refer to MCAI Canadian Airworthiness Directive CF-2009-09, dated March 9, 2009; Bombardier Service Bulletin 670BA-29-005, Revision A, dated January 29, 2009; and Bombardier TR 2-268 and Bombardier TR 2-269, both dated December 18, 2008, both to Section 3, "Fuel System Limitations," of Part 2 of the Bombardier CL-600-2C10, CL-600-2D15, and CL-600-2D24 Maintenance Requirements Manual; for related information.

### **Material Incorporated by Reference**

(i) You must use the applicable service information specified in Table 2 of this AD, to do the actions required by this AD, unless the AD specifies otherwise.

**Table 2 – Material incorporated by reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Bombardier Service Bulletin 670BA-29-005	A	January 29, 2009
Bombardier Temporary Revision 2-268 to Section 3, “Fuel System Limitations,” of Part 2 of the Bombardier CL-600-2C10, CL-600-2D15, and CL-600-2D24 Maintenance Requirements Manual	Original	December 18, 2008
Bombardier Temporary Revision 2-269 to Section 3, “Fuel System Limitations,” of Part 2 of the Bombardier CL-600-2C10, CL-600-2D15, and CL-600-2D24 Maintenance Requirements Manual	Original	December 18, 2008

(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](mailto: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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington on May 3, 2010.

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