

# 2009-06-05 R1

## BOMBARDIER, INC.

Amendment 39-16217

Docket No. FAA-2009-1021; Directorate Identifier 2009-NM-054-AD

### PREAMBLE

#### Effective Date

(a) This airworthiness directive (AD) becomes effective April 1, 2010.

#### Affected ADs

(b) This AD revises AD 2009-06-05, Amendment 39-15841.

#### Applicability

(c) This AD applies to the airplanes identified in Table 1, paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD, certificated in any category.

**Table 1 - Airplanes affected by this AD**

<b>Bombardier, Inc. Model</b>	<b>Serial numbers</b>
(1) CL-600-1A11 (CL-600) airplanes	1004 through 1085 inclusive
(2) CL-600-2A12 (CL-601) airplanes	3001 through 3066 inclusive
(3) CL-600-2B16 (CL-601-3A & CL-601-3R) airplanes	5001 through 5194 inclusive
(4) CL-600-2B16 (CL-604) airplanes	5301 through 5635 inclusive

#### Subject

(d) Air Transport Association (ATA) of America Code 30: Ice and Rain Protection.

#### Reason

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

There have been several cases of wing anti-ice piccolo duct failure reported on CL-600-2B19 (CRJ) aircraft. Although there have been no failures reported on Challenger aircraft, similar ducts are installed on the \* \* \* [other] Challenger models.

Upon investigation, it has been determined that ducts manufactured since June 2000, and installed since 1 August 2000, are susceptible to cracking due to the process used to drill the holes in the ducts. These ducts were installed on CL-600-2B16 aircraft, serial numbers 5469 through 5635 in production, but may also have been installed as replacements on CL-600-1A11, CL-600-2A12 and other CL-600-2B16 aircraft.

Cracking of the wing anti-ice piccolo ducts could result in air leakage, with an adverse effect on the anti-ice air distribution pattern and a possible unannounced insufficient heat condition. As a result, the airplane flight manual (AFM) instructions have been revised to provide proper annunciation of an insufficient heat condition, utilizing existing messages and indications, with instructions, to the pilot, to leave icing conditions if sufficient heat cannot be achieved or maintained.

This directive mandates the amendment of the AFM procedures, in addition to checking the part numbers and serial numbers of the installed wing anti-ice piccolo ducts and replacing them as necessary.

The unsafe condition is anti-ice system air leakage with a possible adverse effect on the anti-ice air distribution pattern and anti-ice capability without annunciation to the flightcrew, and consequent reduced controllability of the airplane.

### Actions and Compliance

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

(1) For airplanes identified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD: Within 30 days after the effective date of this AD, revise the Normal and Abnormal Procedures sections of the applicable Canadair Challenger Airplane Flight Manual (AFM) by inserting a copy of the applicable temporary revision (TR) listed in Table 2 of this AD. When the information in the applicable TR is included in the general revisions of the AFM, the general revisions may be inserted in the AFM, as applicable, and the TR may be removed.

**Table 2 - Temporary revisions**

<b>Canadair TR -</b>	<b>Dated -</b>	<b>To the -</b>
(i) 600/22	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM
(ii) 600-1/17	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM (Winglets)
(iii) 601/14	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, Product Support Publication (PSP) 601-1B-1
(iv) 601/15	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1A-1
(v) 601/19	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1B
(vi) 601/26	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1
(vii) 601/27	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM
(viii) 601/27	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1-1
(ix) 604/20	April 17, 2006	Canadair Challenger Model CL-604 AFM, PSP 604-1

(2) For airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, and for Model CL-600-2B16 (CL-604) airplanes, serial numbers 5301 through 5468 inclusive: Within 2,000 flight hours or 60 months after the effective date of this AD, whichever occurs first, review the airplane

maintenance records to determine if any anti-ice piccolo ducts or complete leading edge sections were replaced on or after August 1, 2000.

(3) For airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, and for Model CL-600-2B16 (CL-604) airplanes, serial numbers 5301 through 5468 inclusive: If, during the accomplishment of the action required by paragraph (f)(2) of this AD, it is determined that any anti-ice piccolo duct has been replaced on or after August 1, 2000, before further flight, inspect to determine if any affected serial number identified in paragraph 2.C. of the applicable service bulletin listed in Table 3 of this AD is installed. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the duct can be conclusively determined from that review. If any affected serial number is installed, before further flight, replace the piccolo duct with a serviceable piccolo duct that does not have a serial number identified in paragraph 2.C. of the applicable service bulletin listed in Table 3 of this AD. Do all actions in accordance with the Accomplishment Instructions of the applicable service bulletin listed in Table 3 of this AD.

**Table 3 - Service bulletins**

<b>Model -</b>	<b>Bombardier Service Bulletin -</b>	<b>Revision -</b>	<b>Dated -</b>
(i) CL-600-1A11 (CL-600) airplanes	600-0734	Original	November 30, 2006
(ii) CL-600-2A12 (CL-601) airplanes	601-0585	Original	November 30, 2006
(iii) CL-600-2B16 (CL-601-3A, CL-601-3R) airplanes	601-0585	Original	November 30, 2006
(iv) CL-600-2B16 (CL-604) airplanes	604-30-003	01	January 21, 2008

(4) For Model CL-600-2B16 (CL-604) airplanes, serial numbers 5469 through 5635 inclusive: Within 2,000 flight hours or 60 months after the effective date of this AD, whichever occurs first, inspect the anti-ice piccolo ducts to determine if any affected serial number identified in paragraph 2.C. of Bombardier Service Bulletin 604-30-003, Revision 01, dated January 21, 2008, is installed. If any affected serial number is installed, before further flight, replace the piccolo duct with a serviceable piccolo duct that does not have a serial number identified in paragraph 2.C. of Bombardier Service Bulletin 604-30-003, Revision 01, dated January 21, 2008. Do all actions in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 604-30-003, Revision 01, dated January 21, 2008.

(5) As of April 28, 2009 (the effective date of AD 2009-06-05), no person may install on any airplane an anti-ice piccolo duct with a serial number identified in paragraph 2.C. of the applicable service bulletin identified in Table 3 of this AD.

(6) Actions done before April 28, 2009, in accordance with Bombardier Service Bulletin 604-30-003, dated November 30, 2006, are acceptable for compliance with the corresponding actions in this AD.

## FAA AD Differences

**NOTE 1**

**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, 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 appropriate 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 (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-2008-18, dated May 9, 2008, and the service information identified in Table 2 and Table 3 of this AD, for related information.

**Material Incorporated by Reference**

(i) You must use the service information specified in Table 4 and Table 5 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

**Table 4 - Service bulletins incorporated by reference**

<b>Bombardier Service Bulletin -</b>	<b>Revision -</b>	<b>Dated -</b>
600-0734	Original	November 30, 2006
601-0585	Original	November 30, 2006
604-30-003	01	January 21, 2008

**Table 5 - Temporary revisions incorporated by reference**

<b>Canadair TR -</b>	<b>Dated -</b>	<b>To the -</b>
600/22	August 16, 2006	Canadair Challenger Model CL-600-1A11 Airplane Flight Manual (AFM)
600-1/17	August 16, 2006	Canadair Challenger Model CL-600-1A11

		AFM (Winglets)
601/14	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1B-1
601/15	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1A-1
601/19	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1B
601/26	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1
601/27	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM
601/27	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1-1
604/20	April 17, 2006	Canadair Challenger Model CL-604 AFM, PSP 604-1

(1) The Director of the Federal Register approved the incorporation by reference of the service information contained in Table 6 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

**Table 6 - New material incorporated by reference**

<b>Canadair TR -</b>	<b>Dated -</b>	<b>To the -</b>
600/22	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM
600-1/17	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM (Winglets)

(2) The Director of the Federal Register previously approved the incorporation by reference of the service information contained in Table 7 and Table 8 of this AD on April 28, 2009 (74 FR 12225, March 24, 2009).

**Table 7 - Service bulletins previously incorporated by reference**

<b>Bombardier Service Bulletin</b>	<b>Revision -</b>	<b>Dated -</b>
-		
600-0734	Original	November 30, 2006
601-0585	Original	November 30, 2006
604-30-003	01	January 21, 2008

**Table 8 - Temporary revisions previously incorporated by reference**

<b>Canadair TR -</b>	<b>Dated -</b>	<b>To the -</b>
601/14	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1B-1
601/15	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1A-1
601/19	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM, PSP 601-1B
601/26	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1
601/27	August 16, 2006	Canadair Challenger Model CL-600-2A12 AFM
601/27	August 16, 2006	Canadair Challenger Model CL-600-2B16 AFM, PSP 601A-1-1

604/20

April 17, 2006

Canadair Challenger Model CL-604 AFM,  
PSP 604-1

(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; e-mail [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 or 425-227-1152.

(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 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).

**FOR FURTHER INFORMATION CONTACT:** Dan Parrillo, Aerospace Engineer, Airframe and Mechanical Systems, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7305; fax (516) 794-5531.

Issued in Renton, Washington, on February 16, 2010.

**Stephen P. Boyd**, *Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

[Federal Register: February 25, 2010 (Volume 75, Number 37)]  
[Rules and Regulations]  
[Page 8461-8465]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr25fe10-1]

---

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2009-1021; Directorate Identifier 2009-NM-054-AD; Amendment 39-16217; AD 2009-06-05 R1]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604) Airplanes**

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

**ACTION:** Final rule.

---

**SUMMARY:** We are revising 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:

[S]everal cases of wing anti-ice piccolo duct failure reported on CL-600-2B19 (CRJ) aircraft. Although there have been no failures reported on Challenger aircraft, similar ducts are installed on the \* \* \* [other] Challenger models.

\* \* \* \* \*

Cracking of the wing anti-ice piccolo ducts could result in air leakage, with an adverse effect on the anti-ice air distribution pattern and a possible unannounced insufficient heat condition. \* \* \*

The unsafe condition is anti-ice system air leakage with a possible adverse effect on the anti-ice air distribution pattern and anti-ice capability without annunciation to the flightcrew, and consequent reduced controllability of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective April 1, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 1, 2010.

On April 28, 2009 (74 FR 12225, March 24, 2009), the Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD.

**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:** Dan Parrillo, Aerospace Engineer, Airframe and Mechanical Systems, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7305; fax (516) 794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to revise an existing AD that applies to certain Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604) airplanes. That NPRM was published in the Federal Register on November 5, 2009 (74 FR 57273), and proposed to revise AD 2009-06-05, Amendment 39-15841 (74 FR 12225, March 24, 2009). That AD required actions intended to address an unsafe condition for the products listed above.

### **Actions Since Issuance of AD 2009-06-05**

Since we issued AD 2009-06-05, Bombardier requested that we change paragraphs (f)(2) and (f)(4) of AD 2009-06-05 to allow compliance within 2,000 flight hours or 60 months after the effective date of the AD, whichever occurs first, instead of prior to the accumulation of 2,000 total flight hours or within 60 months after the effective date of the AD, whichever occurs first. We agreed and proposed to revise paragraphs (f)(2) and (f)(4) of AD 2009-06-05 accordingly in the NPRM. The compliance time matches the intent of Transport Canada Civil Aviation (TCCA) AD CF-2008-18, dated May 9, 2008, and represents the maximum interval of time allowable for the affected airplanes to operate safely.

Bombardier also requested that we change Table 2 of AD 2009-06-05 to replace references to two temporary revisions (TRs): Canadair TR 600/23, dated August 16, 2006, to the Canadair Challenger Model CL-600-1A11 Airplane Flight Manual (AFM); and Canadair TR 600-1/19, dated August 16, 2006, to the Canadair Challenger Model CL-600-1A11 AFM (Winglets). These two TRs are approved by TCCA, and should be replaced in AD 2009-06-05 with references to the following FAA-approved TRs: Canadair TR 600/22, dated August 16, 2006, to the Canadair Challenger Model CL-600-1A11 AFM; and Canadair TR 600-1/17, dated August 16, 2006, to the Canadair Challenger Model CL-600-1A11 AFM (Winglets). We agreed and proposed to revise Table 2 of AD 2009-06-05 accordingly in the NPRM.

### **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.

### **Explanation of Change Made to the Manufacturer Name**

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.

## **Explanation of Change to the Alternative Methods of Compliance**

We have revised the "Alternative Methods of Compliance (AMOCs)" paragraph (g)(1) in this AD to specify the current contact information.

## **Conclusion**

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.

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

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from \$80 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

## **Costs of Compliance**

We estimate that this AD will affect about 108 products of U.S. registry.

The actions that are required by AD 2009-06-05 and retained in this AD take about 37 work-hours per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the currently required actions is \$339,660, or \$3,145 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 39-15841 (74 FR 12225, March 24, 2009) and adding the following new AD: