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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-1216; Directorate Identifier 2008-NM-111-AD; Amendment 39-15841; AD 2009-06-05]

RIN 2120-AA64

Airworthiness Directives; Bombardier 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 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:

> [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 above 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 unannunciated 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 28, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 28, 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: Dan Parrillo, 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) 228-7305; 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 November 17, 2008 (73 FR 67820). That NPRM proposed to correct an unsafe condition for the specified products. The 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 above Challenger models [Bombardier CL-600-1A11, CL-600-2A12, and CL-600-2B16 airplanes].
>
> 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 unannunciated 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. 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 or on the determination of the cost to the public.

Change to Applicability

Since we issued the NPRM, we discovered that we inadvertently designated duplicate models in paragraphs (c)(3) and (c)(4) of Table 1 of the NPRM. Those paragraphs both specified Bombardier Model "CL-600-2B16 (CL-601-3A, CL-601-3R, & CL-604) airplanes." However, paragraph (c)(3) of the AD should have identified Bombardier Model "CL-600-2B16 (CL-601-3A & CL-601-3R) airplanes," and paragraph (c)(4) of the AD should have identified Model "CL-600-2B16 (CL-604) airplanes." The serial numbers that appeared in paragraphs (c)(3) and (c)(4) of the NPRM were identified correctly in the NPRM and remain unchanged in this final rule. We have changed paragraphs (c)(3) and (c)(4) of this AD accordingly.

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.

Costs of Compliance

We estimate that this AD will affect 108 products of U.S. registry. We also estimate that it will take about 37 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 $319,680, or $2,960 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:

2009-06-05 Bombardier, Inc. (Formerly Canadair): Amendment 39-15841. Docket No. FAA-2008-1216; Directorate Identifier 2008-NM-111-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective April 28, 2009.

Affected ADs

(b) None.

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

Bombardier Model	Serial numbers
(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 above 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 unannunciated 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 and the TR may be removed.

Table 2 – Temporary Revisions

Canadair TR –	Dated –	To the –
(i) 600/23	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM
(ii) 600-1/19	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: Prior to the accumulation of 2,000 total flight hours, or within 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 since 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 action

required by paragraph (f)(2) of this AD, it is determined that any anti-ice piccolo duct has been replaced since August 1, 2000, before further flight do a visual inspection to determine if any affected serial number is installed as identified in paragraph 2.C. of the applicable service bulletin identified in Table 3 of this AD. 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 identified 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

Model –	**Bombardier Service Bulletin –**	**Revision Level –**	**Date –**
(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: Prior to the accumulation of 2,000 total flight hours, or within 60 months after the effective date of this AD, whichever occurs first, do a visual inspection of the anti-ice piccolo ducts to determine if any affected serial number identified in paragraph 2.C. of the 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 the effective date of this AD, 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 the effective date of this AD 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, 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: Dan Parrillo, 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) 228-7305; 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, 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 contained in Tables 4 and 5 of this AD to do the actions required by this AD, as applicable, unless the AD specifies otherwise.

(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; 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.

Table 4 – Service bulletins incorporated by reference

Bombardier Service Bulletin –	Revision –	Dated –
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

Canadair TR –	Dated –	To the –
600/23	August 16, 2006	Canadair Challenger Model CL-600-1A11 AFM
600-1/19	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

Issued in Renton, Washington, on February 27, 2009.
Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.