Airworthiness Directives; Bombardier, Inc. Model CL–600–2B19 (Regional Jet Series 100 & 440) Airplanes

14 CFR Part 39


RIN 2120–AA64

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed 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:

There have recently been several in-service occurrences that have highlighted the inability of the existing [wing anti-ice] system to detect a low-heat condition in the wing leading edge at all times, with the potential consequence of unannounced asymmetric ice build-up on the wing. Such a condition, in combination with maneuvers close to stick shaker activation, could possibly result in reduced controllability of the aircraft.

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by June 24, 2010.

ADDRESSES: You may send comments by any of the following methods:

Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

Fax: (202) 493–2251.


Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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.crjaerobombardier.com; Internet http://www.bombardier.com.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

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 this proposed 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. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT:


SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2010–0436; Directorate Identifier 2009–NM–230–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We have lengthened the 30-day comment period for proposed ADs that address MCAI originated by aviation authorities of other countries to provide adequate time for interested parties to submit comments. The comment period for these proposed ADs is now typically 45 days, which is consistent with the comment period for domestic transport ADs.

At present, the Wing Anti-Ice System (WAIS) sufficient heat switches/sensors on CL–600–2B19 aircraft are located at the inboard end of each wing and require a simultaneous low-pressure signal to generate a Low Heat Activation (LH) or Right Wing Anti-Ice (R WING A/ICE) amber caution. However, there have recently been several in-service occurrences that have highlighted the inability of the existing system to detect a low-heat condition in the wing leading edge at all times, with the potential consequence of unannounced asymmetric ice build-up on the wing. These have included partial failure of several piccolo ducts (ref: Airworthiness Directive (AD) CF–2008–30) and partial (not fully closed or open) failure of a modulating and shut-off valve, the latter resulting in unannounced asymmetric ice build-up on the wing leading edge. Such a condition, in combination with maneuvers close to stick shaker activation, could possibly result in reduced controllability of the aircraft.

This directive mandates:

(a) Revision of the Airplane Flight Manual (AFM) to notify the flight crew that, following installation and activation of the low-heat detection switches, certain WAIS mode selection changes may result in a two-minute inhibition of the wing anti-ice message, if posted;

(b) Revision of the approved maintenance schedule to include one revised and three new functional checks that are required following activation of the low-heat detection switches;

(c) Replacement of the Data Concentrator Units (DCUs) with DCUs incorporating a software update that caters for the new outboard low-heat detection switches and generates the appropriate anti-ice message for the flight crew when a low-heat condition is detected;

Note: Although not related to this directive, the software update also corrects the sampling rate of two previously non-compliant Flight Data Recorder (FDR) parameters, normal acceleration and pitch attitude.

(d) Installation of the low-heat detection switches in the wing outboard leading edges, the wing A/ICE box assembly and associated wires; and

(e) Activation of the low-heat detection switches.

You may obtain further information by examining the MCAI in the AD docket.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

DISCUSSION

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF–2009–37, dated September 30, 2009 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

There have recently been several in-service occurrences that have highlighted the inability of the existing system to detect a low-heat condition in the wing leading edge at all times, with the potential consequence of unannounced asymmetric ice build-up on the wing. These have included partial failure of several piccolo ducts (ref: Airworthiness Directive (AD) CF–2008–30) and partial (not fully closed or open) failure of a modulating and shut-off valve, the latter resulting in unannounced asymmetric ice build-up on the wing leading edge. Such a condition, in combination with maneuvers close to stick shaker activation, could possibly result in reduced controllability of the aircraft.

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(b) Revision of the approved maintenance schedule to include one revised and three new functional checks that are required following activation of the low-heat detection switches;

(c) Replacement of the Data Concentrator Units (DCUs) with DCUs incorporating a software update that caters for the new outboard low-heat detection switches and generates the appropriate anti-ice message for the flight crew when a low-heat condition is detected;
The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

**FAA’s Determination and Requirements of This Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

**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 proposed different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a NOTE within the proposed AD.

**Costs of Compliance**

Based on the service information, we estimate that this proposed AD would affect about 599 products of U.S. registry. We also estimate that it would take about 21 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is $85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be $1,069,215, or $1,785 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation: 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 proposed AD and placed it in the AD docket.*

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:


**Comments Due Date**

(a) We must receive comments by June 24, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Bombardier, Inc. Model CL–600–2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, serial numbers 7003 through 8101 inclusive.

**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 (b)(1) 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.

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**Relevant Service Information**

Bombardier has issued the service information in the following table.

<table>
<thead>
<tr>
<th>Service information</th>
<th>Revision</th>
<th>Date</th>
</tr>
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Subject
(d) Air Transport Association (ATA) of America Code 30 and 31; Ice and rain protection, and instruments, respectively.

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

At present, the Wing Anti-Ice System (WAIS) sufficient heat switches/sensors on CL–600–2B19 aircraft are located at the inboard end of each wing and require a simultaneous low-pressure signal to generate a L or R WING A/ICE amber caution. However, there have recently been several in-service occurrences that have highlighted the inability of the existing system to detect a low-heat condition in the wing leading edge at all times, with the potential consequence of unannounced asymmetric ice build-up on the wing. These have included partial failure of several piccolo ducts [ref: Airworthiness Directive (AD) CF–2008–30] and partial (not fully closed or open) failure of a modulating and shut-off valve, the latter resulting in unannounced asymmetric ice build-up on the wing leading edge. Such a condition, in combination with maneuvers close to stick shaker activation, could possibly result in reduced controllability of the aircraft.

This directive mandates:
(a) Revision of the Airplane Flight Manual (AFM) to notify the flight crew that, following installation and activation of the low-heat detection switches, certain WAIS mode selection changes may result in a two-minute inhibition of the wing anti-ice message, if posted;
(b) Revision of the approved maintenance schedule to include one revised and three new functional checks that are required following activation of the low-heat detection switches;
(c) Replacement of the Data Concentrator Units (DCUs) with DCUs incorporating a software update that caters for the new outboard low-heat detection switches and generates the appropriate anti-ice message for the flight crew when a low-heat condition is detected;

Note: Although not related to this directive, the software update also corrects the sampling rate of two previously non-compliant Flight Data Recorder (FDR) parameters, normal acceleration and pitch attitude.

(d) Installation of the low-heat detection switches in the wing outboard leading edges, the wing A/ICE box assembly and associated wires; and
(e) Activation of the low-heat detection switches.

Compliance
(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Actions
(g) Do the following actions.
(1) Within 30 days after the effective date of this AD, revise the Limitations and Normal Procedures sections of the Canadair Regional Jet Airplane Flight Manual (AFM), CSP A–012, to include the information in Canadair (Bombardier) Temporary Revision (TR) RJ/164–2, dated May 14, 2009. This TR introduces procedures for operation in icing conditions. Operate the airplane according to the limitations and procedures in the TR.

Note: This may be done by inserting a copy of Canadair (Bombardier) TR RJ/164–2, dated May 14, 2009, into the AFM. When this TR has been included in general revisions of the AFM, the general revisions may be inserted in the AFM, provided the relevant information in the general revision is identical to that in Canadair (Bombardier) TR RJ/164–2, dated May 14, 2009.

(2) Within 30 days after the effective date of this AD, revise the Airworthiness Limitations Instructions (ALI) of the Certification Maintenance Requirements (IC) by incorporating the inspection requirements contained in Bombardier TR 2A–46, dated July 24, 2009, into Appendix A, “Certification Maintenance Requirements,” of Part 2 of the Bombardier CL–600–2B19 Maintenance Requirements Manual (MRM). The initial compliance times for the tasks identified in Bombardier TR 2A–46, dated July 24, 2009, are specified in Table 1 of this AD.

Note: The actions required by paragraph (g)(2) of this AD may be done by inserting a copy of Bombardier TR 2A–46, dated July 24, 2009, into the Bombardier CL–600–2B19 MRM. When this TR has been included in general revisions of the MRM, the general revisions may be inserted into the MRM, provided the relevant information in the general revision is identical to that in Bombardier TR 2A–46, dated July 24, 2009.

| Task | Applicability | Initial compliance time (whichever occurs later)
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>C30–10–141–01 .........</td>
<td>All airplanes ...........................................</td>
<td>Before the accumulation of 6,000 total flight hours.</td>
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<td>C30–10–141–03 .........</td>
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<td>Airplanes with outboard sufficient heat switches installed in accordance with Modification Summary TC601R17494 or actions specified in Bombardier Service Bulletin 601R–30–031 have been done.</td>
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<tr>
<td>C30–10–141–07 .........</td>
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(3) For airplanes having S/Ns 7003 through 8095 inclusive: Before or concurrently with accomplishing the actions required by paragraph (g)(5) of this AD: Replace any data concentrator units (DCUs) having part number P/N 622–9820–007, 622–9820–008, or 622–9820–009 with modified DCUs having P/N 622–9820–010, and, if applicable, modify the configuration strapping units (CSUs), in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R–31–034, Revision A, dated April 10, 2008.

(4) Before or concurrently with accomplishing the actions required by paragraph (g)(5) of this AD: Install the outboard low-heat detection switches, wing A/ICE box assembly and associated wires, in accordance with the Accomplishment Instructions of Parts A, C, D, and E of Bombardier Service Bulletin 601R–30–031, Revision D, dated February 3, 2010.

Note: A small number of cases have been reported in which piccolo ducts were found to have been installed in the opposite wing, resulting in the incorrect orientation of the bleed holes. During reinstallation of the piccolo ducts and leading edge assemblies after installing the low-heat detection switches, particular attention should be paid to the correct alignment of the piccolo ducts. Guidance can be found in Task 30–11–41–820–801 of the Bombardier Aircraft Maintenance Manual.

(5) Within 11 months after the effective date of this AD: Activate the outboard low-heat detection switches in accordance with Part F of the Accomplishment Instructions of Service Bulletin 601R–30–031, Revision D, dated February 3, 2010.

TABLE 1—INITIAL COMPLIANCE TIMES FOR TASKS IN BOMBARDIER TR 2A–46

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DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39

RIN 2120–AA64


AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above that would supersede an existing AD. This proposed 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:

Issued in Renton, Washington, on April 28, 2010.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010–10884 Filed 5–7–10; 8:45 am]

BILLING CODE 4910–13–P