

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2008-0888; Directorate Identifier 2008-NM-084-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) Airplanes

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. 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:

Bombardier Aerospace has completed a system safety review of the CL-600-2B19 aircraft fuel system against new fuel tank safety standards, * * *.

This assessment showed that there is insufficient electrical bonding for lightning protection at certain locations inside the fuel tanks. In addition, the assessment also revealed that existing bonding jumpers across self-bonded couplings are not required. Insufficient electrical bonding, if not corrected, could result in arcing and potential ignition source inside the fuel tank during lightning strikes and consequent fuel tank explosion.

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 September 18, 2008.

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.

- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

- *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.

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: Mazdak Hobbi, 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) 228-7330; fax (516) 794-5531.

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-2008-0888; Directorate Identifier 2008-NM-084-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 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-2007-34, dated December 21, 2007 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Bombardier Aerospace has completed a system safety review of the CL-600-2B19 aircraft fuel system against 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 is required.

This assessment showed that there is insufficient electrical bonding for lightning

protection at certain locations inside the fuel tanks. In addition, the assessment also revealed that existing bonding jumpers across self-bonded couplings are not required. Insufficient electrical bonding, if not corrected, could result in arcing and potential ignition source inside the fuel tank during lightning strikes and consequent fuel tank explosion.

To correct the unsafe condition, this directive mandates the modification of certain bonding jumpers inside the fuel tanks.

Corrective actions include, for certain airplanes, a general visual inspection to determine if the modification has been done on both sides of the airplane. You may obtain further information by examining the MCAI in the AD docket.

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a regulation titled "Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements" (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, this rule included Special Federal Aviation Regulation No. 88 ("SFAR 88," Amendment 21-78, and subsequent Amendments 21-82 and 21-83).

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation:

Single failures, single failures in combination with a latent condition(s), and in-service failure experience. For all four criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

We have determined that the actions identified in this AD are necessary to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

Relevant Service Information

Bombardier has issued Service Bulletin 601R-28-055, Revision E, dated March 17, 2008. 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 686 products of U.S. registry. We also estimate that it would take about 18 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$80 per work-hour. Required

parts would cost about \$0 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 costs. 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 the proposed AD on U.S. operators to be \$987,840, or \$1,440 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, 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:

Bombardier, Inc. (Formerly Canadair):

Docket No. FAA-2008-0888; Directorate Identifier 2008-NM-084-AD.

Comments Due Date

- (a) We must receive comments by September 18, 2008.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, serial numbers 7003 through 7067, and 7069 through 7929, certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 28: Fuel.

Reason

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

Bombardier Aerospace has completed a system safety review of the CL-600-2B19 aircraft fuel system against 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 is required.

This assessment showed that there is insufficient electrical bonding for lightning protection at certain locations inside the fuel tanks. In addition, the assessment also revealed that existing bonding jumpers across self-bonded couplings are not required. Insufficient electrical bonding, if not corrected, could result in arcing and potential ignition source inside the fuel tank during lightning strikes and consequent fuel tank explosion.

To correct the unsafe condition, this directive mandates the modification of certain bonding jumpers inside the fuel tanks.

Corrective actions include, for certain airplanes, a general visual inspection to determine if the modification has been done on both sides of the airplane.

Actions and Compliance

- (f) Unless already done: Within 5,000 flight hours after the effective date of this AD, do the following actions.

(1) For airplanes on which none of the Bombardier service bulletins identified in Table 1 of this AD have been incorporated as

of the effective date of this AD: Modify the fuel tank bonding jumpers inside the wing and center fuel tanks in accordance with Part

A of the Accomplishment Instructions of Bombardier Service Bulletin 601R-28-055, Revision E, dated March 17, 2008.

TABLE 1—SERVICE BULLETINS

Bombardier Service Bulletin	Revision	Date
601R-28-055	Original	May 4, 2004.
601R-28-055	A	February 14, 2005.
601R-28-055	B	September 14, 2005.
601R-28-055	C	January 9, 2006.
601R-28-055	D	July 17, 2006.

(2) For airplanes on which any Bombardier service bulletin identified in Table 1 of this AD has been incorporated as of the effective date of this AD: Do a general visual inspection of the inside of the wing and center fuel tanks to determine if the actions in Part A of the Accomplishment Instructions of Bombardier Service Bulletin 601R-28-055, Revision E, dated March 17, 2008, have been done on both sides of the airplane. If Part A of the service bulletin has not been done on either side of the airplane, before further flight, do the actions specified in Part A of the Accomplishment Instructions of Bombardier Service Bulletin 601R-28-055, Revision E, dated March 17, 2008, for the side of the airplane on which Part A of the service bulletin has not been done.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows:

(1) The Accomplishment Instructions of Bombardier Service Bulletin 601R-28-055, Revision E, dated March 17, 2008, do not specify corrective actions if Revision D, dated July 17, 2006, of the service bulletin was incorporated. This AD refers to incorporation of Revision E of the service bulletin for the actions specified in paragraph (f)(2) of this AD. Revision E specifies inspecting to determine if the modification is done on both sides of the airplane.

(2) The MCAI specifies that the modification must be done on all airplanes in accordance with Bombardier Service Bulletin 601R-28-055, Revision D, dated July 17, 2006, and that accomplishing the original issue, dated May 4, 2004; Revision A, dated February 14, 2005; and Revision B, dated September 14, 2005; of the service bulletin does not satisfy the requirements. This AD requires doing the modification on airplanes on which Revision D or any earlier issue of the service bulletin has not been done. For airplanes on which Revision D or any earlier issue of the service bulletin has been done, this AD requires inspecting to determine if the modification is done on both sides of the airplane and modifying the airplane if the modification was not done on both sides.

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: Mazdak Hobbi, 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) 228-7330; fax (516) 794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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-2007-34, dated December 21, 2007; and Bombardier Service Bulletin 601R-28-055, Revision E, dated March 17, 2008; for related information.

Issued in Renton, Washington, on August 6, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0892; Directorate Identifier 2008-CE-049-AD]

RIN 2120-AA64

Airworthiness Directives; Maule Aerospace Technology, Inc. Models M-4, M-5, M-6, M-7, and M-8 Series Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Maule Aerospace Technology, Inc. Models M-4, M-5, M-6, M-7, and M-8 series airplanes. This proposed AD would require you to paint the top of the rear elevator control horn, the elevator control cable end attached to the top of the rear control horn, the bottom of the forward elevator control horn, and the elevator control cable end attached to the bottom of the forward control. This proposed AD would also require you to insert a supplement into your maintenance program (maintenance manual). This proposed AD results from two reports of accidents where reversed elevator control rigging was a factor. We are proposing this AD to reduce the likelihood of a mechanic rigging the elevator controls backwards, which could result in elevator movement in the opposite direction from control input. This condition could lead to loss of control.

DATES: We must receive comments on this proposed AD by October 20, 2008.

ADDRESSES: Use one of the following addresses to comment on this proposed AD:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* (202) 493-2251.