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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1095; Directorate Identifier 2010-NM-241-AD; Amendment 39-17032; AD 2012-08-15]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model CL-600-2B16 (CL-604 Variant) airplanes. This AD was prompted by multiple reports of short circuit events during pre-delivery inspections and test flights, one of which resulted in smoke in the cockpit. This AD requires replacing or relocating of certain circuit breaker panel (CBP) bus bars on certain airplanes, inspecting for any loose or improperly crimped lugs in certain electrical panel locations and replacement if necessary, and inspection for foreign object damage in certain areas and removal if necessary. We are issuing this AD to prevent arcing, damage to adjacent structure, smoke in the cockpit, or loss of system redundancies.

DATES: This AD becomes effective May 29, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of May 29, 2012.

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: Assata Dessaline, Aerospace Engineer, Avionics and Flight Test Branch, ANE-172, New York Aircraft Certification Office (ACO), FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7301; 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 October 26, 2011 (76 FR 66203). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During pre-delivery inspections and test flights, several short circuit events were reported, one of which resulted in smoke in the cockpit. There were no in-service incidents.

Investigations have identified three conditions affecting the wiring of Circuit Breaker Panels 1, 2, 3 and 4 (CBP-1, CBP-2, CBP-3, and CBP-4) and Junction Boxes 17 and 18 (JB17 and JB18), which would lead to short circuiting:

1. In CBP-1, there may be low clearance between specific bus bars and the circuit breaker panel structure.
2. Some nickel-plated terminal lugs, size number 22-20 with a green insulating sleeve, may not have been manufactured to applicable standards. These terminal lugs may have been installed in CBP-1, CBP-2, CBP-3, CBP-4, JB17 and JB18. This manufacturing defect affects the mechanical hold of the wire in the crimped lug barrel.
3. In JB17, JB18 and the above-mentioned CBPs, foreign object debris (FOD) may be found.

If not corrected, these conditions could result in arcing, damage to adjacent structure, smoke in the cockpit, or loss of system redundancies.

This TCCA directive is issued to mandate the replacement or relocation of the specific CBP-1 bus bars, the [detailed] inspection, and rework if necessary, of any loose or improperly crimped lugs in CBP-1, CBP-2, CBP-3, CBP-4, JB17 and JB18, and to ensure there is no FOD in the affected areas [via a general visual inspection for FOD, and removal if necessary].

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 comment received.

Request To Change Applicability

Bombardier, Inc. requested the applicability be revised to remove the CL-601-3A and CL-601-3R Variant airplanes, since only the CL-604 Variant is affected.

We agree because only the CL-604 Variant is affected. We have changed the preamble and paragraph (c) of this final rule to specify only the CL-604 Variant.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the change described previously and minor editorial changes to the paragraph identifier format. We determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 69 products of U.S. registry. We also estimate that it will take about 6 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 \$347 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 \$59,133, or \$857 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 that 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);
3. Will not affect intrastate aviation in Alaska; and
4. 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 (76 FR 66203, October 26, 2011), 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:



2012-08-15 Bombardier, Inc.: Amendment 39-17032. Docket No. FAA-2011-1095; Directorate Identifier 2010-NM-241-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective May 29, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model CL-600-2B16 (CL-604 Variant) airplanes, certificated in any category, serial numbers 5701 through 5752 inclusive, 5754 through 5775 inclusive, 5777, 5779 through 5781 inclusive, 5783 through 5790 inclusive, 5792, 5794 through 5796 inclusive, 5798, 5801, and 5804.

(d) Subject

Air Transport Association (ATA) of America Code 24: Electrical Power.

(e) Reason

This AD was prompted by multiple reports of short circuit events during pre-delivery inspections and test flights, one of which resulted in smoke in the cockpit. We are issuing this AD to prevent arcing, damage to adjacent structure, smoke in the cockpit, or loss of system redundancies.

(f) Compliance

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

(g) Inspections, Bus Bar Actions, and Corrective Actions

For airplanes having serial numbers 5701 through 5752 inclusive, 5754 through 5775 inclusive, 5777, 5780 through 5781 inclusive, 5783 through 5790 inclusive, 5792, 5794 through 5796 inclusive, 5798, 5801, and 5804: Within 800 flight hours after the effective date of this AD, do the actions in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-24-004, dated January 18, 2010.

(1) Do a detailed inspection in circuit breaker panel (CBP) CBP-1 for loose lugs and for crimped lugs that have any of the conditions specified in step 2.B.(9)(d) of Bombardier Service Bulletin 605-24-004, dated January 18, 2010. Before further flight, replace all loose lugs and all crimped lugs in CBP-1 that have any of the conditions specified in Step 2.B.(9)(d) of Bombardier Service Bulletin 605-24-004, dated January 18, 2010.

- (2) Relocate or replace the CBP-1 bus bars as applicable.
- (3) Do a general visual inspection for foreign object damage (FOD). If any FOD is found: Before further flight, remove the FOD.

(h) Inspections and Corrective Actions

For airplanes having serial numbers 5701 through 5752 inclusive, 5754 through 5756 inclusive, 5758 through 5775 inclusive, 5779, 5781, 5788, 5789, 5792, 5795, 5798, 5801, and 5804: Within 800 flight hours after the effective date of this AD, do the actions in paragraph (h)(1) and (h)(2) of this AD, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-24-002, dated December 7, 2009.

(1) Do a detailed inspection for loose lugs and for crimped lugs that have any of the conditions specified in step 2.B.(2)(d) of Bombardier Service Bulletin 605-24-002, dated December 7, 2009, in CBP-2, CBP-3, CBP-4, junction box (JB) JB17, and JB18. Before further flight, replace all loose lugs and all crimped lugs that have any of the conditions specified in step 2.B.(2)(d) of Bombardier Service Bulletin 605-24-002, dated December 7, 2009, in CBP-2, CBP-3, CBP-4, JB17, and JB18.

(2) Do a general visual inspection for FOD. If any FOD is found: Before further flight, remove the FOD.

(i) Other FAA AD Provisions

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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it 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, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding 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.

(j) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2010-25, dated August 3, 2010; Bombardier Service Bulletin 605-24-002, dated December 7, 2009; and Bombardier Service Bulletin 605-24-004, dated January 18, 2010; for related information.

(k) Material Incorporated by Reference

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

- (i) Bombardier Service Bulletin 605-24-002, dated December 7, 2009.
- (ii) Bombardier Service Bulletin 605-24-004, dated January 18, 2010.

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; phone: 514-855-5000; fax: 514-855-7401; email: 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 an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on April 13, 2012.

John P. Piccola,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.