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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1199; Directorate Identifier 2014-NM-008-AD; Amendment 39-18351; AD 2015-26-03]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2011-07-10 for certain Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes. AD 2011-07-10 required revising the Airworthiness Limitations section of the Instructions for Continued Airworthiness; doing detailed visual inspections; removing discrepant material; cleaning the surfaces of the valves, the plug of the sensing port, and the cabin pressure-sensing port plug; securing the insulation; installing a new safety valve, and replacing certain cabin pressure-sensing port plugs. This new AD retains all requirements of AD 2011-07-10, and requires a detailed visual inspection of both safety valves and the surrounding area for foreign material, room temperature vulcanizing (RTV) silicone, contamination, foam on the bulkhead structure, tape or insulation, and loose material; and corrective actions if necessary. This AD was prompted by reports of in-flight loss of cabin pressurization that was attributed to partial blockage of a safety valve cabin pressure-sensing port in conjunction with a failed safety valve manometric capsule. We are issuing this AD to detect and correct blockage of a safety valve cabin pressure-sensing port, which could result in loss of cabin pressure.

DATES: This AD becomes effective February 2, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 2, 2016.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of May 5, 2011 (76 FR 17758, March 31, 2011).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-1199>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1199.

FOR FURTHER INFORMATION CONTACT: Luke Walker, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7363; fax 516-794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011). AD 2011-07-10 applied to certain Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes. The NPRM published in the Federal Register on April 15, 2015 (80 FR 20181) ("the NPRM").

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2010-06R1, dated August 8, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes. The MCAI states:

Investigation of a high altitude loss of cabin pressurization on a BD-100-1A10 aeroplane determined that it was caused by a partial blockage of a safety valve cabin pressure-sensing port, in conjunction with a dormant failure/leakage of the safety valve manometric capsule. The blockage, caused by accumulation of lint/dust on the grid of the port plug, did not allow sufficient airflow through the cabin pressure-sensing port to compensate for the rate of leakage from the manometric capsule, resulting in the opening of the safety valve. It was also determined that failure of the manometric capsule alone would not result in the opening of the safety valve.

The original issue of this [Canadian] AD mandated a revision of the maintenance schedule, the cleaning of the safety valves, the removal of material from the area surrounding the safety valves and the modification of the safety valves with a gridless cabin pressure-sensing port plug.

Since the original issue of this [Canadian] AD, there have been two additional reported events of in-flight loss of cabin pressurization that were attributed to partial blockage of a safety valve cabin pressure-sensing port in conjunction with a failed safety valve manometric capsule.

Bombardier Aerospace has determined that aeroplanes with a particular interior installation require improved instructions to clean the safety valves and their surrounding area. In addition, Aircraft Maintenance Manual tasks have been updated to ensure that inspection of the safety valves and their surrounding is carried out after any maintenance action.

Revision 1 of this [Canadian] AD is issued to mandate inspection and cleaning of the safety valves and their surrounding area on the affected aeroplanes.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2015-1199-0002>.

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.

Revised Docket Number

We have changed the docket number specified in the NPRM from "Docket No. FAA-2015-0827" to "Docket No. FAA-2015-1199" in this final rule.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting this AD with the change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

Bombardier has issued Service Bulletin 100-25-21, Revision 02, dated July 25, 2013. The service information describes procedures for a detailed visual inspection of both safety valves and the surrounding area for foreign material, RTV silicone, contamination, foam on the bulkhead structure, tape or insulation, and loose material, and applicable corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 67 airplanes of U.S. registry.

The actions required by AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), and retained in this AD take about 10 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 actions that were required by AD 2011-07-10 is \$850 per product.

We also estimate that it will take about 4 work-hours per product to comply with the new basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$22,780, or \$340 per product.

According to the manufacturer, all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-1199>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this 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.

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 Airworthiness Directive (AD) 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), and adding the following new AD:



2015-26-03 Bombardier, Inc.: Amendment 39-18351. Docket No. FAA-2015-1199; Directorate Identifier 2014-NM-008-AD.

(a) Effective Date

This AD becomes effective February 2, 2016.

(b) Affected ADs

This AD replaces AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011).

(c) Applicability

This AD applies to Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes, certificated in any category, serial numbers 20001 through 20274.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/Furnishings.

(e) Reason

This AD was prompted by reports of in-flight loss of cabin pressurization that were attributed to partial blockage of a safety valve cabin pressure-sensing port in conjunction with a failed safety valve manometric capsule. We are issuing this AD to detect and correct blockage of a safety valve cabin pressure-sensing port, which could result in loss of cabin pressure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Revision with No Changes

This paragraph restates the requirements of paragraph (g) of AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), with no changes. For all airplanes: Within 30 days after June 1, 2010 (the effective date of AD 2010-10-18, Amendment 39-16297 (75 FR 27406, May 17, 2010)), revise the Airworthiness Limitations section of the Instructions for Continued Airworthiness by incorporating Tasks 21-31-09-101 and 21-31-09-102 in the Bombardier Temporary Revision (TR) 5-2-53, dated October 1, 2009, to Section 5-10-40, "Certification Maintenance Requirements," in Part 2 of Chapter 5 of Bombardier Challenger 300 BD-100 Time Limits/Maintenance Checks.

(1) For the new tasks identified in Bombardier TR 5-2-53, dated October 1, 2009: For airplanes identified in the "Phase-in" section of Bombardier TR 5-2-53, dated October 1, 2009, the initial compliance with the new tasks must be carried out in accordance with the phase-in schedule detailed in Bombardier TR 5-2-53, dated October 1, 2009, except where that TR specifies a compliance time

from the date of the TR, this AD requires compliance within the specified time after June 1, 2010 (the effective date of AD 2010-10-18, Amendment 39-16297 (75 FR 27406, May 17, 2010)).

Thereafter, except as provided by paragraph (n)(1) of this AD, no alternative to the task intervals may be used.

(2) When the information in Bombardier TR 5-2-53, dated October 1, 2009, has been included in the general revisions of the applicable Airworthiness Limitations section, that TR may be removed from that Airworthiness Limitations section of the Instructions for Continued Airworthiness.

(h) Retained Inspection, Removal, Cleaning, and Installation With Certain Clarified Compliance Times

This paragraph restates the requirements of paragraph (h) of AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), with certain clarified compliance times. For airplanes having S/Ns 20003 through 20173 inclusive, 20176, and 20177: Within 50 flight hours after June 1, 2010 (the effective date of AD 2010-10-18, Amendment 39-16297 (75 FR 27406, May 17, 2010)), do a detailed visual inspection of the safety valves and surrounding areas for discrepant material (e.g., foreign material surrounding the safety valves, room temperature vulcanizing (RTV) sealant on safety valves, RTV excess on the bulkhead, tape near the safety valve opening, and, on certain airplanes, insulation near the safety valve opening, and foam in the area surrounding the safety valves) and a detailed visual inspection for contamination (e.g., RTV, dust, or lint) in the safety valve pressure ports, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-25-14, dated June 30, 2008 (for airplanes having S/Ns 20124, 20125, 20128, 20134, 20139, 20143, 20146, 20148 through 20173 inclusive, 20176, and 20177); or Bombardier Service Bulletin 100-25-21, dated June 30, 2008 (for airplanes having S/Ns 20003 through 20123 inclusive, 20126, 20127, 20129 to 20133 inclusive, 20135 to 20138 inclusive, 20140 through 20142 inclusive, 20144, 20145, and 20147).

(1) If any discrepant material is found during the detailed visual inspection, before further flight, remove the discrepant material, clean the surfaces of the valves, and secure the insulation, as applicable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-25-14, dated June 30, 2008 (for airplanes having S/Ns 20124, 20125, 20128, 20134, 20139, 20143, 20146, 20148 through 20173 inclusive, 20176, and 20177); or Bombardier Service Bulletin 100-25-21, dated June 30, 2008 (for airplanes having S/Ns 20003 through 20123 inclusive, 20126, 20127, 20129 through 20133 inclusive, 20135 through 20138 inclusive, 20140 through 20142 inclusive, 20144, 20145, and 20147).

(2) If contamination (e.g., RTV, dust, or lint) is found on the safety valve pressure sensing ports, before further flight, do a detailed visual inspection of the outside and inside diameters of the pressure sensing port conduit for the presence of RTV; and before further flight do the actions specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this AD, as applicable; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-25-14, dated June 30, 2008 (for airplanes having S/Ns 20124, 20125, 20128, 20134, 20139, 20143, 20146, 20148 through 20173 inclusive, 20176, and 20177); or Bombardier Service Bulletin 100-25-21, dated June 30, 2008 (for airplanes having S/Ns 20003 through 20123 inclusive, 20126, 20127, 20129 through 20133 inclusive, 20135 through 20138 inclusive, 20140 through 20142 inclusive, 20144, 20145, and 20147).

(i) If no RTV is found, clean the plug of the sensing port.

(ii) If any RTV is found, install a new safety valve.

(i) Retained Cleaning for Certain Airplanes With No Changes

This paragraph restates the requirements of paragraph (i) of AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), with no changes. For airplanes having S/Ns 20174, 20175, 20178 through 20189 inclusive, 20191 through 20228 inclusive, 20230 through 20232 inclusive, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251 inclusive, 20254, 20256 and

20259: Within 50 flight hours after June 1, 2010 (the effective date of AD 2010-10-18, Amendment 39-16297 (75 FR 27406, May 17, 2010)), clean the cabin pressure-sensing port plug in both safety valves, in accordance with Paragraph 2.B., "Part A–Modification–Cleaning," of the Accomplishment Instructions of Bombardier Service Bulletin A100-21-08, dated June 18, 2009.

(j) Retained Cleaning for Certain Other Airplanes With No Changes

This paragraph restates the requirements of paragraph (j) of AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), with no changes. For airplanes having S/Ns 20003 through 20189 inclusive, 20191 through 20228 inclusive, 20230 through 20232 inclusive, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251 inclusive, 20254, 20256, and 20259: Within 50 flight hours after June 1, 2010 (the effective date of AD 2010-10-18, Amendment 39-16297 (75 FR 27406, May 17, 2010)), clean the cabin pressure-sensing port plug in both safety valves, in accordance with Paragraph 2.B., "Part A–Modification–Cleaning," of the Accomplishment Instructions of Bombardier Service Bulletin A100-21-08, dated June 18, 2009. Repeat the cleaning thereafter at intervals not to exceed 50 flight hours until the actions specified by paragraph (k) of this AD are completed.

(k) Retained Replacement With No Changes

This paragraph restates the requirements of paragraph (k) of AD 2011-07-10, Amendment 39-16647 (76 FR 17758, March 31, 2011), with no changes. For airplanes having S/Ns 20003 through 20189 inclusive, 20191 through 20228 inclusive, 20230 through 20232 inclusive, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251 inclusive, 20254, 20256, and 20259: Within 12 months after May 5, 2011 (the effective date of AD 2011-07-10), replace the cabin pressure-sensing port plug having part number (P/N) 2844-060 in both safety valves with a new gridless plug having P/N 2844-19 and re-identify the safety valves, in accordance with Paragraph 2.C., "Part B–Modification–Replacement," of the Accomplishment Instructions of Bombardier Service Bulletin A100-21-08, dated June 18, 2009. Doing the actions in this paragraph terminates the repetitive cleanings required by paragraph (j) of this AD.

(l) New Requirement of This AD: Inspection and Cleaning

For airplanes having S/Ns 20003 through 20123 inclusive, 20126, 20127, 20129 through 20133 inclusive, 20135 through 20138 inclusive, 20140 through 20142 inclusive, 20144, 20145, and 20147: Within 500 flight hours or 15 months after the effective date of this AD, whichever occurs first, do a detailed visual inspection of both safety valves and the surrounding area for foreign material, RTV silicone, contamination, foam on the bulkhead structure, tape or insulation, and loose material, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-25-21, Revision 02, dated July 25, 2013. Do all applicable corrective actions before further flight, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-25-21, Revision 02, dated July 25, 2013.

(m) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (l) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 100-25-21, Revision 01, dated February 26, 2013, which is not incorporated by reference in this AD.

(n) 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 (ACO), 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 New York ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 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) Contacting the Manufacturer: As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(o) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2010-06R1, dated August 8, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1199.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(5) and (p)(6) of this AD.

(p) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on February 2, 2016.

(i) Bombardier Service Bulletin 100-25-21, Revision 02, dated July 25, 2013.

(ii) Reserved.

(4) The following service information was approved for IBR on May 5, 2011, (76 FR 17758, March 31, 2011).

(i) Bombardier Service Bulletin A100-21-08, dated June 18, 2009.

(ii) Bombardier Service Bulletin 100-25-14, dated June 30, 2008.

(iii) Bombardier Service Bulletin 100-25-21, dated June 30, 2008.

(iv) Bombardier Temporary Revision (TR) 5-2-53, dated October 1, 2009, to Section 5-10-40, "Certification Maintenance Requirements," in Part 2 of Chapter 5 of Bombardier Challenger 300 BD-100 Time Limits/Maintenance Checks.

(5) 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; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(6) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 11, 2015.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.