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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0146; Directorate Identifier 2011-NM-115-AD; Amendment 39-17227; AD 2012-21-11]

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-601-3A, CL-601-3R, and CL-604 Variants) airplanes. This AD was prompted by reports of deformation at the neck of the pressure regulator body on the oxygen cylinder and regulator assemblies (CRAs), and an electrical wiring harness in the area of the oxygen cylinder with no protective conduit sleeving. This AD requires inspecting to determine if certain oxygen pressure regulators are installed and replacing oxygen CRAs containing pressure regulators that do not meet the required material properties. This AD also requires inspecting for damaged wiring, and repairing or replacing wiring if necessary. We are issuing this AD to prevent rupture of the oxygen cylinder, which in the case of cabin depressurization, would lead to oxygen not being available when required; and to detect and correct unprotected wiring that could chafe against the oxygen system components or surrounding structure in the area, and lead to electrical arcing and an oxygen-fed fire.

DATES: This AD becomes effective December 4, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 4, 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: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7318; 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 February 22, 2012 (77 FR 10413). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During a routine inspection, deformation was found at the neck of the pressure regulator body on the oxygen Cylinder and Regulator Assemblies (CRA) of a BD-700-1A11 aeroplane.

An investigation by the vendor, Avox Systems Inc., revealed that the deformation was attributed to two (2) batches of raw material that did not meet the required tensile strength. This may cause elongation of the pressure regulator neck, which could result in rupture of the oxygen cylinder, and in the case of cabin depressurization, oxygen would not be available when required.

Although there have been no reported failures to date on any CL-600-2B16 aeroplanes, oxygen pressure regulators, Part Numbers (P/N) 806370-12, could be part of the affected batches.

It has also been found that the electrical wiring harness in the area of the oxygen cylinder has been installed without protection. Unprotected wiring could chafe against the oxygen system components or surrounding structure in the area, which could lead to electrical arcing and an oxygen fed fire.

This [Transport Canada Civil Aviation (TCCA)] directive mandates [an inspection to determine if a certain oxygen CRA is installed and] the replacement of oxygen CRAs containing pressure regulators that do not meet the required material properties and to [do a general visual inspection of] and protect the affected wiring.

Corrective actions include repairing or replacing any damaged wiring. 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 Limit Applicability

Bombardier requested that we remove the CL-601-3A and -3R Variants of Model CL-600-2B16 airplanes from the applicability of the NPRM (77 FR 10413, February 22, 2012), because the serial numbers identified in the MCAI include only the CL-604 Variant of Model CL-600-2B16 airplanes.

We do not agree to remove the CL-601-3A and -3R Variants of Model CL-600-2B16 airplanes from the applicability of this AD. The commenter is correct that the serial number range captures only the CL-604 Variant. However, we included the other variants in the applicability of this AD to prevent someone from installing the affected parts on those other variants in the future. We have coordinated this difference with TCCA.

To make this intent more visible, we have added "CL-604 Variant" to the heading and first sentence of paragraphs (g) and (h) of this AD, and "All Airplanes" and "CL-601-3A, CL-601-3R, and CL-604 Variants" to the heading and first sentence respectively of paragraph (j) of this AD.

Explanation of Additional Change Made to This AD

We have revised the heading for and the wording in paragraph (i) of this AD; this change has not affected the intent of that paragraph.

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 changes described previously. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 10413, February 22, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 10413, February 22, 2012).

Costs of Compliance

We estimate that this AD will affect about 72 products of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with the 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 to the U.S. operators to be \$6,120, or \$85 per product.

In addition, we estimate that certain follow-on actions (wiring protection) would take about 2 work-hours and require parts costing \$0, for a cost of \$170 per product. We have no way of determining the number of products that may need these actions.

We have received no definitive data that would enable us to provide cost estimates for certain other on-condition actions (repairing or replacing damaged wiring) specified in this AD.

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 (77 FR 10413, February 22, 2012), 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:



2012-21-11 Bombardier, Inc.: Amendment 39-17227. Docket No. FAA-2012-0146; Directorate Identifier 2011-NM-115-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 4, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes, certificated in any category; serial numbers 5701 through 5802 inclusive, 5804 through 5808 inclusive, 5810 through 5816 inclusive, 5819, 5822, and 5823 and subsequent.

(d) Subject

Air Transport Association (ATA) of America Codes 24, Electrical power; and 35, Oxygen.

(e) Reason

This AD was prompted by reports of deformation at the neck of the pressure regulator body on the oxygen cylinder and regulator assemblies (CRAs), and an electrical wiring harness in the area of the oxygen cylinder with no protective conduit sleeving. We are issuing this AD to prevent rupture of the oxygen cylinder, which in the case of cabin depressurization, would lead to oxygen not being available when required; and to detect and correct unprotected wiring that could chafe against the oxygen system components or surrounding structure in the area, and lead to electrical arcing and an oxygen-fed fire.

(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) Inspection and Replacement of Oxygen CRA, CL-604 Variant

For CL-604 Variant airplanes with serial numbers 5701 through 5802 inclusive, 5804 through 5808 inclusive, 5810 through 5816 inclusive, 5819, 5822, and 5823: Within 750 flight hours after the effective date of this AD, but no later than 6 months after the effective date of this AD, inspect the serial number of oxygen pressure regulators having part number (P/N) 806370-12, in accordance with the Accomplishment Instructions, paragraph 2.B.(3), of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011. A review of airplane maintenance records is acceptable in lieu

of this inspection if the part number of the oxygen pressure regulator can be conclusively determined from that review.

(1) If any serial number is found that is listed in table 2 of Section 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, before further flight, replace the affected oxygen CRA, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011.

(2) If any serial number is found that is not listed in table 2 of Section 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, no further action is required by this paragraph.

(h) Inspection and Corrective Action of the Oxygen CRA Wiring Harness, CL-604 Variant

For CL-604 Variant airplanes with serial numbers 5701 through 5778 inclusive, 5780 through 5796 inclusive, 5798, 5800 through 5802 inclusive, 5804, 5805, 5808, 5811, and 5813: At the applicable compliance time specified in paragraph (h)(1) or (h)(2) of this AD, do a detailed inspection for damaged wiring (i.e., signs of damaged insulation, abrasion, or chafing) of the electrical wiring harness for the oxygen CRA, and protect the electrical wiring harness, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-24-005, dated January 31, 2011. If any damaged wiring is found, before further flight, repair or replace any damaged wiring, in accordance with a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent).

(1) For airplanes on which the oxygen CRA must be replaced, as required by paragraph (g)(1) of this AD: At the time the oxygen CRA is replaced.

(2) For airplanes other than those identified in paragraph (h)(1) of this AD: Within 800 flight hours after the effective date of this AD.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 605-35-001, dated January 31, 2011.

(j) Parts Installation Limitation, All Airplanes

For all airplanes (CL-601-3A, CL-601-3R, and CL-604 Variants): As of the effective date of this AD, no person may install an oxygen pressure regulator (P/N 806370-12) having any serial number listed in table 2 of Section 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011, on any airplane, unless a suffix "-A" is beside the serial number.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York 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 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.

(l) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2011-11, dated May 25, 2011, and the service bulletins identified in paragraphs (l)(1) and (l)(2) of this AD, for related information.

(1) Bombardier Service Bulletin 605-24-005, dated January 31, 2011.

(2) Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011.

(m) Material Incorporated by Reference

(1) 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.

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

(i) Bombardier Service Bulletin 605-24-005, dated January 31, 2011.

(ii) Bombardier Service Bulletin 605-35-001, Revision 01, dated February 28, 2011.

(3) 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>.

(4) 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.

(5) 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on October 11, 2012.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.