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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0722; Directorate Identifier 2011-NM-188-AD; Amendment 39-17214; AD 2012-20-08]

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 DHC-8-400 series airplanes. This AD was prompted by reports of alternating current (AC) generator failures in-service due to incomplete fusion in the weld joint of the rotor band assembly. This AD requires inspecting the AC generator to determine the part number, and replacing the AC generator if necessary. We are issuing this AD to prevent rotor windings from coming in contact with the generator housing, which could result in debris contaminating and potentially blocking the engine oil scavenge system, leading to loss of oil pressure and an in-flight shutdown of the engine.

DATES: This AD becomes effective November 21, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 21, 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: Mazdak Hobbi, Aerospace Engineer, Propulsion and Services Branch, ANE-173, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7330; 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 July 24, 2012 (77 FR 43176). That NPRM proposed to correct an unsafe condition for the specified products. The Mandatory Continuing Airworthiness Information (MCAI) states:

There have been several reports of AC Generator failures in-service. The root cause has been attributed to an incomplete fusion in the weld joint of the AC Generator rotor band assembly. If not rectified, the rotor band may fail allowing the rotor windings to come in contact with the generator housing. The resulting debris could contaminate and potentially block the engine oil scavenge system, leading to loss of oil pressure and an in-flight shutdown of the engine.

Bombardier has issued Service Bulletin (SB) 84-24-45 to inspect, [replace with modified or new AC generator] and re-identify the affected AC generators to a new part number (P/N) 1152218-6 unit in order to rectify the problem and ensure integrity of the affected units.

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 received no comments on the NPRM (77 FR 43176, July 24, 2012) or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed—except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 43176, July 24, 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 43176, July 24, 2012).

Costs of Compliance

We estimate that this AD will affect 83 products of U.S. registry. We also estimate that it will take about 2 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 \$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 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 \$14,110 or \$170 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 (77 FR 43176, July 24, 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:



2012-20-08 Bombardier, Inc.: Amendment 39-17214. Docket No. FAA-2012-0722; Directorate Identifier 2012-NM-188-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective November 21, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes; certificated in any category; serial numbers 4001 through 4338 inclusive, with Honeywell alternating current (AC) generator part number (P/N) 1152218-3, 1152218-4 or 1152218-5 installed.

(d) Subject

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

(e) Reason

This AD was prompted by reports of AC generator failures in-service due to incomplete fusion in the weld joint of the rotor band assembly. We are issuing this AD to prevent rotor windings from coming in contact with the generator housing, which could result in debris contaminating and potentially blocking the engine oil scavenge system, leading to loss of oil pressure and an in-flight shutdown of the engine.

(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

Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first: Inspect the left and right AC generators to determine if the AC generator has a part number identified in step 3.B.(2) of the Accomplishment Instructions of Bombardier Service Bulletin 84-24-45, dated January 13, 2011, or has P/N 1152218-3. If an AC generator has a part number identified in Bombardier Service Bulletin 84-24-45, dated January 13, 2011, or has P/N 1152218-3, before further flight, replace the AC generator with a modified or new AC generator having P/N 1152218-6, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-24-45, dated January 13, 2011.

(h) Parts Installation Prohibition

After the effective date of this AD, no person may install an AC generator having P/N 1152218-5, 1152218-4, or 1152218-3 on any airplane.

(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 (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.

(j) Related Information

Refer to MCAI Canadian Airworthiness Directive CF-2011-22, dated July 13, 2011; and Bombardier Service Bulletin 84-24-45, dated January 13, 2011; for related information.

(k) 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 the AD specifies otherwise.

(i) Bombardier Service Bulletin 84-24-45, dated January 13, 2011.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@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, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) 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/index.html>.

Issued in Renton, Washington, on October 4, 2012.

Dionne Palermo,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.