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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0526; Directorate Identifier 2009-NM-029-AD; Amendment 39-16008; AD 2009-18-12]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model DHC-8-400 Series Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This 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:

Four aircraft have experienced a dual AC [alternating current] generator shutdown, caused by a broken propeller de-ice bus bar which short-circuited with the backplate assembly.

* * * A short circuit can cause a dual AC generator shutdown that, particularly in conjunction with an engine failure in icing conditions, could result in reduced controllability of the aircraft.

* * * * *

Reduced controllability of the airplane in certain operating conditions affects continued safe flight and landing. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective October 14, 2009.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 14, 2009.

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: Wing Chan, Aerospace Engineer, Aerospace Engineer, Systems and Flight Test Branch, ANE-172, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7311; 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 June 10, 2009 (74 FR 27476). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Four aircraft have experienced a dual AC [alternating current] generator shutdown, caused by a broken propeller de-ice bus bar which short-circuited with the backplate assembly.

It was subsequently determined that any friction or contact between a propeller de-ice bus bar and the backplate assembly can cause an intermittent short circuit. Such a short circuit can cause a dual AC generator shutdown that, particularly in conjunction with an engine failure in icing conditions, could result in reduced controllability of the aircraft.

This [Transport Canada Civil Aviation] directive mandates revision of the Airplane Flight Manual (AFM) to introduce a procedure that restores AC power following a failure of No. 1 and No. 2 AC generators with propeller de-ice on. Additionally, in order to prevent similar dual AC generator shutdowns, it mandates the application of sealant as insulation between the propeller de-ice bus bars and the backplate assembly.

Reduced controllability of the airplane in certain operating conditions affects continued safe flight and landing. 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 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.

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 required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a Note within the AD.

Costs of Compliance

We estimate that this AD will affect 62 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 \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$29,760, or \$480 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 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); 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 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, 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:



2009-18-12 Bombardier, Inc. (Formerly de Havilland, Inc.): Amendment 39-16008. Docket No. FAA-2009-0526; Directorate Identifier 2009-NM-029-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective October 14, 2009.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Bombardier Model DHC-8-400, DHC-8-401, and DHC-8-402 series airplanes, certificated in any category, serial numbers 4001, 4003, 4004, 4006, and 4008 through 4154 inclusive.

Subject

- (d) Air Transport Association (ATA) of America Code 61: Propellers/Propulsors.

Reason

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

Four aircraft have experienced a dual AC [alternating current] generator shutdown, caused by a broken propeller de-ice bus bar which short-circuited with the backplate assembly.

It was subsequently determined that any friction or contact between a propeller de-ice bus bar and the backplate assembly can cause an intermittent short circuit. Such a short circuit can cause a dual AC generator shutdown that, particularly in conjunction with an engine failure in icing conditions, could result in reduced controllability of the aircraft.

This [Transport Canada Civil Aviation] directive mandates revision of the Airplane Flight Manual (AFM) to introduce a procedure that restores AC power following a failure of No. 1 and No. 2 AC generators with propeller de-ice on. Additionally, in order to prevent similar dual AC generator shutdowns, it mandates the application of sealant as insulation between the propeller de-ice bus bars and the backplate assembly.

Reduced controllability of the airplane in certain operating conditions affects continued safe flight and landing.

Actions and Compliance

- (f) Unless already done, do the following actions.

(1) Within 30 days after the effective date of this AD, revise the Limitations Section of the Bombardier Dash 8 Q400 AFM, PSM 1-84-1A, by inserting a copy of Bombardier Dash 8 Q400 Temporary Amendment (TA) 14, Issue 1, dated May 10, 2006. When the information in Bombardier TA 14, Issue 1, dated May 10, 2006, is included in the general revisions of the AFM, the general revisions may be inserted in the AFM and the TA may be removed.

(2) Within 5,000 flight hours after the effective date of this AD: Apply sealant between the bus bar assemblies and the backplate assembly by incorporating Bombardier DHC-8-400 Modification Summary 4-163047, Revision B, dated August 22, 2008, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-61-03, Revision 'A,' dated September 18, 2008.

(3) Incorporating Bombardier DHC-8-400 Modification Summary Package 4-163047 before the effective date of this AD in accordance with Bombardier Service Bulletin 84-61-03, dated April 27, 2007, is considered acceptable for compliance with the requirements of paragraph (f)(2) of this AD.

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

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 (ACO), 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: Wing Chan, Aerospace Engineer, Systems and Flight Test Branch, ANE-172, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7311; fax (516) 794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office.

(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-2009-01, dated January 19, 2009; Bombardier Dash 8 Q400 TA 14, Issue 1, dated May 10, 2006; and Bombardier Service Bulletin 84-61-03, Revision 'A,' dated September 18, 2008; for related information.

Material Incorporated by Reference

(i) You must use Bombardier Dash 8 Q400 Temporary Amendment 14, Issue 1, dated May 10, 2006; and Bombardier Service Bulletin 84-61-03, Revision 'A,' dated September 18, 2008; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) 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; e-mail thd.qseries@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 or 425-227-1152.

(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 NARA, 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 August 18, 2009.

Stephen P. Boyd,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.