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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0703; Directorate Identifier 2013-NM-004-AD; Amendment 39-18518; AD 2016-10-07]

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-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. This AD was prompted by a report of a pilot commanding an in-flight engine shut down in response to a low oil pressure warning indication. Further investigation revealed the mounting studs in the engine mounted alternating current (AC) generator mounting plate were pulled out of position and the threaded interface in the plate was corroded. This AD requires repetitive inspections for discrepancies on certain AC generator mounting adapters, and replacing discrepant adapters with serviceable ones. This AD also requires revising the maintenance program to incorporate a repetitive task specified in certain temporary revisions. We are issuing this AD to detect and correct corrosion in the AC generator mounting plate, which could result in a gap between the AC generator and the generator mounting plate, and cause loss of engine oil and consequent engine failure.

DATES: This AD is effective June 23, 2016.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 23, 2016.

ADDRESSES: For service information identified in this final rule, 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>. 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-2013-0703.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2013-0703; 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 Office (telephone 800-647-5527) is 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 20590.

FOR FURTHER INFORMATION CONTACT: Assata Dessaline, Aerospace Engineer, Avionics and Services Branch, ANE-172, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7301; fax: 516-794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. The SNPRM published in the Federal Register on January 13, 2016 (81 FR 1563), ("the SNPRM"). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on August 28, 2013 (78 FR 53080), ("the NPRM"). The NPRM proposed to require repetitive inspections for discrepancies on certain AC generator mounting adapters, and replacing discrepant adapters with serviceable ones. The NPRM also proposed to require revising the maintenance program to incorporate a repetitive task specified in certain temporary revisions. The NPRM was prompted by a report of a pilot commanding an in-flight engine shut down in response to a low oil pressure warning indication. Further investigation revealed the mounting studs in the engine mounted AC generator mounting plate were pulled out of position and the threaded interface in the plate was corroded.

The SNPRM proposed to require the actions specified in the NPRM, and to expand the proposed applicability. We are issuing this AD to detect and correct corrosion in the AC generator mounting plate, which could result in a gap between the AC generator and the generator mounting plate, and cause loss of engine oil and consequent engine failure.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive, CF-2012-29R1, effective April 28, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. The MCAI states:

An incident has been reported, on the DHC-8 aeroplane, where a pilot commanded in-flight engine shut down in response to an engine low oil pressure warning indication.

Further investigation revealed the mounting studs in the engine mounted alternating current (AC) generator mounting plate were pulled out of position and the threaded interface in the plate corroded. This resulted in a gap between the AC generator and the generator mounting plate, leading to the loss of engine oil and the ensuing illumination of the associated engine low oil pressure warning indication.

To ensure the integrity of the affected units, Part I of this [Canadian] AD mandates an inspection of the affected AC generator mounting adapters part numbers (P/N) 31708-

500 or 31708-501, and, as applicable, replacement with new or serviceable mounting plates.

Part II of this [Canadian] AD mandates the incorporation of a repeat Maintenance Review Board (MRB) inspection applicable to the replacement of the AC generator mounting adapters P/Ns 31708-510 or 31708-511 only.

Revision 1 of this [Canadian] AD is issued to include additional aeroplane serial numbers (003 through 018) to the Applicability section, and to clarify the compliance schedules in Part I B. and Part II below [in this Canadian AD].

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2013-0703.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this 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 SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

Related Service Information Under 1 CFR Part 51

Bombardier, Inc. has issued Service Bulletin 8-24-88, Revision A, dated September 23, 2014. This service information describes repetitive inspections for discrepancies on certain AC generator mounting adapters, and replacing discrepant adapters with serviceable ones.

Bombardier, Inc. has also issued the following de Havilland service information, which introduces MRB Report Task 2420/14, "Functional Check (pull test) of the AC generator adapter kit."

- de Havilland Dash 8 Series 100 MRB Report Temporary Revision MRB-153, dated July 10, 2012, to Section 2–Systems, in Part 1 of the de Havilland Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7.
- de Havilland Dash 8 Series 200 MRB Report Temporary Revision MRB 2-31, dated July 10, 2012, to Section 2–Systems, in Part 1 of the de Havilland Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7.
- de Havilland Dash 8 Series 300 MRB Report Temporary Revision MRB 3-162, dated July 10, 2012, to Section 2–Systems, in Part 1 of the de Havilland Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7.

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 88 airplanes of U.S. registry.

We also estimate that it takes 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 cost about \$4,000 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$396,880, or \$4,510 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions 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.

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 airworthiness directive (AD):



2016-10-07 Bombardier, Inc.: Amendment 39-18518. Docket No. FAA-2013-0703; Directorate Identifier 2013-NM-004-AD.

(a) Effective Date

This AD is effective June 23, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes; certificated in any category; serial numbers 003 through 672 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical power.

(e) Reason

This AD was prompted by a report of a pilot commanding an in-flight engine shut down in response to a low oil pressure warning indication. Further investigation revealed the mounting studs in the engine mounted alternating current (AC) generator mounting plate were pulled out of position and the threaded interface in the plate corroded. We are issuing this AD to detect and correct corrosion in the AC generator mounting plate, which could result in a gap between the AC generator and the generator mounting plate, and cause loss of engine oil and consequent engine failure.

(f) Compliance

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

(g) Inspection of AC Generator Mounting Adaptor and Corrective Action

Within 6,000 flight hours, or 36 months, or when the AC generator is removed for service, whichever occurs first, after the effective date of this AD: Do a general visual inspection and a mechanical inspection for discrepancies (i.e., damage, corrosion, and failed mechanical inspection) on AC generator mounting adaptors having part number (P/N) 31708-500 and P/N 31708-501, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-24-88, Revision A, dated September 23, 2014. If any discrepancy (i.e., damage, corrosion, or failed mechanical inspection) is found, before further flight, replace the AC generator mounting adaptor with a serviceable mounting adapter having P/N 31708-510, P/N 31708-511, P/N 31708-500, or P/N 31708-501, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-24-88, Revision A, dated September 23, 2014.

(h) Repetitive Inspections

For in-service mounting adapters that have P/N 31708-500 or P/N 31708-501: Repeat the general visual and mechanical inspection required by paragraph (g) of this AD thereafter at intervals not to exceed 6,000 flight hours, or 36 months after the most recent inspection, or when the AC generator is removed for service, whichever occurs first.

(i) Replacement of Certain AC Generator Mounting Adaptors

For airplanes having AC generator mounting adapters that have P/N 31708-500 or P/N 31708-501: Within the later of the times specified in paragraphs (i)(1) and (i)(2) of this AD, replace the AC generator mounting adapter with a new AC generator mounting adapter having P/N 31708-510 or P/N 31708-511.

(1) Before the accumulation of 120 months on the AC generator mounting adapter.

(2) Within 12 months, or 2,000 flight hours, or when the generator is removed from service, whichever occurs first after the effective date of this AD.

(j) Airplane Maintenance Program Revision

For airplanes having AC generator mounting adapters that have P/N 31708-510 or P/N 31708-511: Within 30 days after the effective date of this AD, revise the airplane maintenance or inspection program, as applicable, by incorporating maintenance review board (MRB) Report Task 2420/14, "Functional Check (pull test) of the AC generator adapter kit," in the applicable maintenance program manual specified in paragraph (j)(1), (j)(2), or (j)(3) of this AD. The initial compliance time for MRB Task 2420/14 is prior to the accumulation of 10,000 total flight hours or within 60 months since installation of the part, whichever occurs first.

(1) For Model DHC-8-102, -103, and -106 airplanes: de Havilland Dash 8 Series 100 MRB Report Temporary Revision MRB-153, dated July 10, 2012, to Section 2–Systems, of the de Havilland Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7.

(2) For Model DHC-8-201 and -202 airplanes: de Havilland Dash 8 Series 200 MRB Report Temporary Revision MRB 2-31, dated July 10, 2012, to Section 2–Systems, of the de Havilland Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7.

(3) For Model DHC-8-301, -311, and -315 airplanes: de Havilland Dash 8 Series 300 MRB Report Temporary Revision MRB 3-162, dated July 10, 2012, to Section 2–Systems, of the de Havilland Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7.

(k) No Alternative Actions or Intervals

After the maintenance or inspection program has been revised as required by paragraph (j) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (m)(1) of this AD.

(l) 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 8-24-88, dated December 13, 2011, which is not incorporated by reference in this AD.

(m) 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, 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: 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.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2012-29R1, dated April 28, 2015, 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-2013-0703.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (o)(3) and (o)(4) of this AD.

(o) 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.

(i) Bombardier Service Bulletin 8-24-88, Revision A, dated September 23, 2014.

(ii) de Havilland Dash 8 Series 100 Maintenance Review Board (MRB) Report Temporary Revision MRB-153, dated July 10, 2012, to Section 2–Systems, of Part 1 of the de Havilland Dash 8 Series 100 Maintenance Program Manual PSM 1-8-7.

(iii) de Havilland Dash 8 Series 200 MRB Report Temporary Revision MRB 2-31, dated July 10, 2012, to Section 2–Systems, of Part 1 of the de Havilland Dash 8 Series 200 Maintenance Program Manual PSM 1-82-7.

(iv) de Havilland Dash 8 Series 300 MRB Report Temporary Revision MRB 3-162, dated July 10, 2012, to Section 2–Systems, of Part 1 of the de Havilland Dash 8 Series 300 Maintenance Program Manual PSM 1-83-7 MRB Report.

(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 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.

(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/ibr-locations.html>.

Issued in Renton, Washington, on May 6, 2016.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.