



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1985; Directorate Identifier 2014-NM-214-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. This proposed AD was prompted by reports of un-announced failures of the direct current (DC) starter generator, which caused caution indicators of the affected systems to illuminate and prompted emergency descents and landings. This proposed AD would require, for certain airplanes, replacing the DC generator control units (GCUs) with new GCUs and replacing the GCU label. We are proposing this AD to prevent a low voltage condition on the left main DC bus which, during critical phases of flight, could result in the loss of flight management, navigation, and transponder systems, and could affect continued safe flight.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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>. 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.

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-2015-1985; 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 proposed 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. Comments will be available in the AD docket shortly after receipt.

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:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-1985; Directorate Identifier 2014-NM-214-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-31R2, dated November 11, 2014 (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:

Four occurrences of un-announced failure of the No. 1 Direct Current (DC) Starter Generator prompted emergency descents and landings resulting from the illumination of numerous caution indications of the affected systems. The functionality of the affected systems such as Flight Management System, Navigation, and transponder systems, were reportedly reduced or lost. Investigation determined the failure was a result of a low voltage condition of the Left Main DC Bus. During critical phases of flight, the loss of these systems could affect continued safe flight.

The original issue of this [Canadian] AD mandated the modification [replacing certain DC GCUs with new GCUs and replacing labels] which introduces generator control unit (GCU) undervoltage protection.

Revision 1 of this [Canadian] AD added a GCU part number to the applicability of Part III of this [Canadian] AD, in order to ensure that all units are fitted with a warning label.

Revision 2 of this [Canadian] AD corrects the GCU part number in the applicability of Part III of 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-2015-1985.

Related Service Information under 1 CFR part 51

Bombardier has issued the following service bulletins.

- Service Bulletin 8-24-84, Revision D, dated April 10, 2014. This service information describes incorporating Bombardier modification summary (ModSum) 8Q101710 by replacing the GCU with a new GCU, and replacing the GCU label for airplanes having certain Phoenix DC power GCU part numbers.
- Service Bulletin 8-24-89, Revision C, dated November 4, 2014. This service information describes incorporating Bombardier ModSum 8Q101925 by replacing the GCU with a new GCU, and replacing the GCU label for airplanes having certain Goodrich DC power GCU part numbers.

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 of this NPRM.

FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD affects 92 airplanes of U.S. registry.

We also estimate that it would take about 3 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost up to \$12,098 per product. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be up to \$1,136,476, or up to \$12,353 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

Bombardier, Inc.: Docket No. FAA-2015-1985; Directorate Identifier

2014-NM-214-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(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 reports of un-announced failures of direct current (DC) starter generator, which caused caution indicators of the affected systems to illuminate and prompted emergency descents and landings. We are issuing this AD to prevent a low voltage condition on the left main DC bus which, during critical phases of flight, could result in the loss of flight management, navigation, and transponder systems, and could affect continued safe flight.

(f) Compliance

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

(g) For Airplanes Having Certain Generation Control Units (GCUs) Installed: Replacement of DC GCUs and GCU labels

Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, accomplish the actions specified in paragraphs (g)(1) and (g)(2) of this AD as applicable.

(1) For airplanes having Goodrich DC GCU part number 51539-008B, 51539-008C, or 51539-008D installed: Incorporate Bombardier ModSum 8Q101925 by replacing the GCU with a new GCU, and replacing the GCU label, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-24-89, Revision C, dated November 4, 2014.

(2) For airplanes having Phoenix DC GCU part number GC-1010-24-5DIII or GC-1010-24-5DII installed: Incorporate Bombardier ModSum 8Q101710 by replacing the GCU with a new GCU, and replacing the GCU label, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-24-84, Revision D, dated April 10, 2014.

(h) For Airplanes Having Certain Other GCUs Installed: Replacement of DC GCU Label

For airplanes having Phoenix DC GCU part number GC-1010-24-5DIV or GC-1010-24-5DV installed: Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, replace the DC GCU label with a new GCU label, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-24-84, Revision D, dated April 10, 2014.

(i) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraphs (i)(1)(i) through (i)(1)(iii) of this AD, as applicable. This service information is not incorporated by reference in this AD.

(i) Bombardier Service Bulletin 8-24-89, dated November 12, 2011.

(ii) Bombardier Service Bulletin 8-24-89, Revision A, dated August 8, 2012.

(iii) Bombardier Service Bulletin 8-24-89, Revision B, dated April 9, 2014.

(2) This paragraph provides credit for actions required by paragraphs (g)(2) and (h) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraphs (i)(2)(i) through (i)(2)(iv) of this AD, as applicable. This service information is not incorporated by reference in this AD.

(i) Bombardier Service Bulletin 8-24-84, dated August 22, 2008.

(ii) Bombardier Service Bulletin 8-24-84, Revision A, dated August 23, 2008.

(iii) Bombardier Service Bulletin 8-24-84, Revision B, dated
October 15, 2008.

(iv) Bombardier Service Bulletin 8-24-84, Revision C, dated July 7, 2009.

(j) 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, 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.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-31R2, dated November 14, 2014, 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-2015-1985.

(2) 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>. 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.

Issued in Renton, Washington, on June 17, 2015.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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