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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-1157; Directorate Identifier 2010-NM-137-AD; Amendment 39-16674; AD 2011-09-12]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, -315, -401, and -402 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:

There have been several in-service reports of finding trapped water on the bottom of the cockpit windshield frames (or lower windshield frames) that resulted in either corrosion or water ingress into the cockpit. In one occurrence, the trapped water caused severe corrosion of numerous anchor nuts that secure the windshield to the lower windshield frame, such that the intended fastening function was seriously compromised.

Corrosion of the lower windshield frames, including the anchor nuts that secure the windshield to the aircraft structure, can result in a serious structural degradation possibly leading to the loss of the windshield during flight. Also, water could leak into the cockpit and cause either a malfunction or failure of the electrical and electronics systems in the area of the cockpit instrument panels.

* * * * *

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective June 6, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 6, 2011.

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: Craig Yates, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7355; 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 November 23, 2010 (75 FR 71369). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

There have been several in-service reports of finding trapped water on the bottom of the cockpit windshield frames (or lower windshield frames) that resulted in either corrosion or water ingress into the cockpit. In one occurrence, the trapped water caused severe corrosion of numerous anchor nuts that secure the windshield to the lower windshield frame, such that the intended fastening function was seriously compromised.

Corrosion of the lower windshield frames, including the anchor nuts that secure the windshield to the aircraft structure, can result in a serious structural degradation possibly leading to the loss of the windshield during flight. Also, water could leak into the cockpit and cause either a malfunction or failure of the electrical and electronics systems in the area of the cockpit instrument panels.

The lower windshield frames do not have drain provisions to prevent moisture or water run-off from the condensation of the windshields from being trapped. The consequences of trapped water in the lower windshield frames can result in unsafe conditions, as noted above. This Directive mandates the installation of a drain system for the lower windshield frames.

For Model DHC-8-401 and -402 airplanes, the installation also includes a related investigative action, and corrective actions if necessary. The related investigative action is an inspection for corrosion of the anchor nuts and window frame. Corrective actions include replacing any corroded anchor nut with a new or serviceable anchor nut, or contacting the manufacturer for repair instructions and doing the repair. 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 Reference Revision D of Bombardier Service Bulletin 8-53-78

Hawaii Island Air stated that Bombardier has issued new Revision D, dated July 6, 2010, for Service Bulletin 8-53-78.

We infer that Hawaii Island Air requested that we update our references to include Bombardier Service Bulletin 8-53-78, Revision D, dated July 6, 2010. We agree. This service bulletin was revised for minor changes such as a serial number change and deletion of certain modification kits. We have revised paragraph (g) of this AD to reference Bombardier Service Bulletin 8-53-78, Revision D, dated July 6, 2010. We have also added paragraph (h) of this AD to give credit for Bombardier Service Bulletin 8-53-78, Revision C, dated April 29, 2010.

Revision to Applicability

We have added Model DHC-8-101 airplanes to the applicability of this AD because these airplanes are affected by the identified unsafe condition. There are no Model DHC-8-101 airplanes registered in the United States.

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 determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

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 191 products of U.S. registry. We also estimate that it will take about 20 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 \$1,660 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 \$641,760, or \$3,360 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:



2011-09-12 Bombardier, Inc.: Amendment 39-16674. Docket No. FAA-2010-1157; Directorate Identifier 2010-NM-137-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective June 6, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to the Bombardier, Inc. airplanes, certificated in any category, identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315, serial numbers 003 through 566 inclusive.

(2) Model DHC-8-401, and -402 airplanes, serial numbers 4001, 4003, 4004, 4006, and 4008 through 4274 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 56: Windows.

Reason

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

There have been several in-service reports of finding trapped water on the bottom of the cockpit windshield frames (or lower windshield frames) that resulted in either corrosion or water ingress into the cockpit. In one occurrence, the trapped water caused severe corrosion of numerous anchor nuts that secure the windshield to the lower windshield frame, such that the intended fastening function was seriously compromised.

Corrosion of the lower windshield frames, including the anchor nuts that secure the windshield to the aircraft structure, can result in a serious structural degradation possibly leading to the loss of the windshield during flight. Also, water could leak into the cockpit and cause either a malfunction or failure of the electrical and electronics systems in the area of the cockpit instrument panels.

* * * * *

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Actions

(g) Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, install a drain system in the cockpit windshield lower frames, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-53-78, Revision D, dated July 6, 2010 (for Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes); or 84-53-43, dated April 27, 2010 (for Model DHC-8-401 and -402 airplanes); except where these service bulletins state to contact the manufacturer, contact the New York Aircraft Certification Office or Transport Canada Civil Aviation (TCCA) or its delegated agent. Do all applicable related investigative and corrective actions before further flight.

Credit for Actions Accomplished in Accordance With Previous Service Information

(h) For Models DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes: Modification of the drain system is also acceptable for compliance with the requirements of paragraph (g) of this AD, if done before the effective date of this AD, in accordance with Bombardier Service Bulletin 8-53-78, dated December 23, 1999; Revision A, dated June 7, 2001; Revision B, dated May 2, 2002; or Revision C, dated April 29, 2010.

FAA AD Differences

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

Other FAA AD Provisions

(i) The following provisions also apply to this AD:

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

Related Information

(j) Refer to MCAI Canadian Airworthiness Directive CF-2010-16, dated May 18, 2010; Bombardier Service Bulletin 8-53-78, Revision D, dated July 6, 2010; and Bombardier Service Bulletin 84-53-43, dated April 27, 2010; for related information.

Material Incorporated by Reference

(k) You must use Bombardier Service Bulletin 8-53-78, Revision D, dated July 6, 2010; or Bombardier Service Bulletin 84-53-43, dated April 27, 2010; 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., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; 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.

(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 April 12, 2011.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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