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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0910; Directorate Identifier 2011-NM-151-AD; Amendment 39-16797; AD 2011-18-15]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Model DHC-8-400 Series Airplanes

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

ACTION: Final rule; request for comments.

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 three in-service reports of cracked barrel nuts found at the front spar locations of the wing-to-fuselage attachment joints. Additionally, three operators have reported finding a loose washer in the barrel nut assembly. Failure of the barrel nuts could compromise the structural integrity of the wing-to-fuselage attachments.

* * * * *

The unsafe condition could result in separation of the wing from the airplane during flight. This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective September 15, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of September 15, 2011.

We must receive comments on this AD by October 17, 2011.

ADDRESSES: You may send comments 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.

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 this 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: Aziz Ahmed, 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) 228-7329; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Emergency Airworthiness Directive CF-2011-24, dated July 21, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

There have been three in-service reports of cracked barrel nuts found at the front spar locations of the wing-to-fuselage attachment joints. Additionally, three operators have reported finding a loose washer in the barrel nut assembly. Failure of the barrel nuts could compromise the structural integrity of the wing-to-fuselage attachments.

Preliminary investigation determined that these cracks are due to hydrogen embrittlement.

This [TCCA airworthiness] directive mandates an initial and repetitive [torque checks to determine if the bolt pre-load is correct and, if necessary], detailed inspection of the barrel nuts [and cradle for cracking, pitting, and corrosion; and replacement of hardware if necessary].

The unsafe condition could result in separation of the wing from the airplane during flight.

Relevant Service Information

Bombardier has issued Alert Service Bulletin A84-57-25, dated July 20, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This 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 issuing this AD because we evaluated all pertinent information and

determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between the 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 FAA policies. Any such differences are highlighted in a Note within the AD.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because failure of the wing-to-fuselage attachments could result in separation of the wing from the airplane during flight. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2011-0910; Directorate Identifier 2011-NM-151-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of 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 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 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.

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:



2011-18-15 Bombardier, Inc.: Amendment 39-16797. Docket No. FAA-2011-0910; Directorate Identifier 2011-NM-151-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective September 15, 2011.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001 and subsequent.

Subject

- (d) Air Transport Association (ATA) of America Code 57: Wings.

Reason

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

There have been three in-service reports of cracked barrel nuts found at the front spar locations of the wing-to-fuselage attachment joints. Additionally, three operators have reported finding a loose washer in the barrel nut assembly. Failure of the barrel nuts could compromise the structural integrity of the wing-to-fuselage attachments.

The unsafe condition could result in separation of the wing from the airplane during flight.

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.

Initial and Repetitive Inspections

(g) At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD: Do a torque check to determine if the bolt preload is correct, and if the preload is correct, before further flight, do a detailed inspection of each barrel nut and cradle for cracking, pitting or corrosion, in accordance with paragraph 3.B., part A, of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-57-25, dated July 20, 2011. Repeat the torque check and, as applicable, the inspection thereafter at intervals not to exceed 2,000 flight hours or 12 months, whichever occurs first.

(1) For airplanes that have accumulated 1,900 or more total flight hours as of the effective date of this AD, or for which it has been 12 months or more since the date of issuance of the original Canadian airworthiness certificate or the date of issuance of the original Canadian export certificate of airworthiness as of the effective date of this AD: Within 100 flight hours or 10 days after the effective date of this AD, whichever occurs first.

(2) For airplanes that have accumulated less than 1,900 total flight hours as of the effective date of this AD, and for which it has been less than 12 months since the date of issuance of the original Canadian airworthiness certificate or the date of issuance of the original Canadian export certificate of airworthiness as of the effective date of this AD: Prior to the accumulation of 2,000 total flight hours or within 12 months since the date of issuance of the original Canadian standard airworthiness certificate or the date of issuance of the original Canadian export certificate of airworthiness, whichever occurs first.

Corrective Actions

(h) If any bolt preload is found to be incorrect (i.e., the ring can be rotated during any torque check required by this AD), before further flight, replace all hardware at that location (except the saddle washer and retainer) in accordance with paragraph 3.B., part B, of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-57-25, dated July 20, 2011.

(i) If any crack, pitting, or corrosion of the barrel nut or cradle is found during any inspection required by this AD, before further flight, replace all hardware at that location (except the saddle washer and retainer) in accordance with paragraph 3.B., part B, of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-57-25, dated July 20, 2011.

Credit for Actions Accomplished in Accordance With Previous Service Information

(j) Accomplishment of torque checks, initial inspections, or replacements before the effective date of this AD, in accordance with Bombardier Alert Service Bulletin A84-57-19, dated February 1, 2008; Revision A, dated February 6, 2008; Revision B, dated March 6, 2008; or Revision C, dated August 20, 2008; is acceptable for compliance with the corresponding requirements of paragraphs (g) and (h) of this AD. However, the repetitive inspections required by paragraph (g) of this AD must be continued at the time specified.

FAA AD Differences

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

Special Flight Permits

(k) Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), may be issued to operate the airplane to a location where the requirements of this AD can be accomplished, but concurrence by the Manager, New York Aircraft Certification Office (ACO), FAA, is required prior to issuance of the special flight permit. Before using any approved special flight permits, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office (FSDO). Operators must request a repair drawing from Bombardier which provides recommendations for a one-time special flight permit. The repair drawing will be applicable to the operator's aircraft serial number only. Special flight permits may be permitted provided that the conditions specified in paragraphs (k)(1), (k)(2), (k)(3), (k)(4), and (k)(5) of this AD are met.

(1) Only one barrel nut out of four is cracked, one cradle is cracked, or one washer is loose; all other strut bolt locations must be free of damage.

- (2) The airplane must operate with reduced airspeed not to exceed 180 KIAS [knots indicated air speed]. No passengers and no cargo are onboard.
- (3) The airplane must not operate in known or forecast turbulence, other than light turbulence.
- (4) The airplane descent rate on landing flare-out is not to exceed 5 feet per second.
- (5) Heavy braking or hard turning of the airplane upon landing is to be avoided if possible.

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANE-170, 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. 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

(m) Refer to MCAI Canadian Emergency Airworthiness Directive CF-2011-24, dated July 21, 2011; and Bombardier Alert Service Bulletin A84-57-25, dated July 20, 2011; for related information.

Material Incorporated by Reference

(n) You must use Bombardier Alert Service Bulletin A84-57-25, dated July 20, 2011, 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 August 19, 2011.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.