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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2013-1024; Directorate Identifier 2013-NM-140-AD; Amendment 39-17909; AD 2014-15-07]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc. Airplanes**

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

**ACTION:** Final rule.

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**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 reports of a fractured wing-to-fuselage strut attachment joint bolt. This AD requires a torque check of all wing-to-fuselage strut attachment joint bolts, and repair or replacement if necessary. For certain airplanes, this AD also requires a detailed inspection for corrosion, damage, and wear of each wing-to-fuselage strut attachment joint bolt and associated hardware, and replacement if necessary; and a borescope inspection for corrosion and damage of the bore hole and barrel nut threads, and repair or replacement if necessary. We are issuing this AD to detect and correct fractured strut attachment joint bolts, which could result in reduced structural integrity of the wing-to-fuselage strut attachment joint and subsequent loss of the wing.

**DATES:** This AD becomes effective September 2, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of September 2, 2014.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-1024-0002> or in person at the 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.

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](mailto: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.

**FOR FURTHER INFORMATION CONTACT:** Jeffrey Zimmer, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone (516) 228-7306; fax (516) 794-5531.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) 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 NPRM published in the Federal Register on December 6, 2013 (78 FR 73462).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2013-17R1, dated June 27, 2013 (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:

There have been two in-service reports of a wing-to-fuselage strut attachment joint bolt found fractured during routine maintenance. Laboratory examination of one fractured bolt revealed that the fracture was attributed to stress corrosion cracking.

Failure of the bolts could compromise the structural integrity of the wing-to-fuselage strut attachment joint and could lead to a subsequent loss of the wing.

This [Canadian] AD mandates the inspection and rectification, as required, of the wing-to-fuselage strut attachment joint bolts and associated hardware.

\* \* \* \* \*

Required actions include a torque check of wing-to-fuselage strut attachment joint bolts, and repair or replacement if necessary. For certain airplanes, required actions include a detailed inspection for corrosion, damage (including but not limited to scratching, cracking, pitting, cross threads), and wear of each wing-to-fuselage strut attachment joint bolt and associated hardware, and replacement if necessary; and a borescope inspection for corrosion and damage of the bore hole and barrel nut threads, and repair or replacement if necessary. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-1024-0002>.

**Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (78 FR 73462, December 6, 2013) and the FAA's response to each comment.

**Request To Extend Compliance Time**

An anonymous commenter requested that we extend the compliance times from 2,000 flight cycles or 12 months, to 4,000 flight cycles or 24 months, after the effective date of the AD, in order to coincide with their scheduled "C" checks.

We do not agree with the commenter's request to extend the compliance time. We have determined that the compliance time, as proposed, represents the maximum interval of time allowable

for the affected airplanes to continue to safely operate before the modification is done. We have not changed this AD in this regard.

### **Request To Give Credit for Previous Compliance**

An anonymous commenter requested that we allow credit for actions accomplished using deHavilland Dash 8 Series 100 Task Card Number 5730/04B, dated February 6, 2012, if the actions were done before the date the final rule becomes effective.

We agree with the request. We have redesignated paragraph (j) of the proposed AD (78 FR 73462, December 6, 2013) as paragraph (j)(1) of this AD, and have added new paragraph (j)(2) to this AD to allow credit for actions accomplished prior to the effective date of this AD using deHavilland Dash 8 Series 100 Task Card Number 5730/04B, dated February 6, 2012.

### **"Contacting the Manufacturer" Paragraph in This AD**

Since late 2006, we have included a standard paragraph titled "Airworthy Product" in all MCAI ADs in which the FAA develops an AD based on a foreign authority's AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In the NPRM (78 FR 73462, December 6, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to this FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, proposed to change the phrase "its delegated agent" to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the NPRM.

No comments were provided to the NPRM (78 FR 73462, December 6, 2013) about these proposed changes. However, a comment was provided for an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013). The commenter stated the following: "The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin."

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it "Contacting the Manufacturer." This paragraph now clarifies that for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the FAA, TCCA, or Bombardier's TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer's message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers' service instructions that are "Required for Compliance" with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

Other commenters to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) pointed out that in many cases the foreign manufacturer's service bulletin and the foreign authority's MCAI might have been issued some time before the FAA AD. Therefore, the DOA might have provided U.S. operators with an approved repair, developed with full awareness of the unsafe condition, before the FAA AD is issued. Under these circumstances, to comply with the FAA AD, the operator would be required to go back to the manufacturer's DOA and obtain a new approval document, adding time and expense to the compliance process with no safety benefit.

Based on these comments, we removed the requirement that the DAH-provided repair specifically refer to this AD. Before adopting such a requirement, the FAA will coordinate with affected DAHs and verify they are prepared to implement means to ensure that their repair approvals consider the unsafe condition addressed in this AD. Any such requirements will be adopted through the normal AD rulemaking process, including notice-and-comment procedures, when appropriate. We also have decided not to include a generic reference to either the "delegated agent" or "DAH with State of Design Authority design organization approval," but instead we have provided the specific delegation approval granted by the State of Design Authority for the DAH throughout this AD.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 73462, December 6, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 73462, December 6, 2013).

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

## **Costs of Compliance**

We estimate that this AD affects 94 airplanes of U.S. registry. We estimate the following costs to comply with this AD.

We also estimate that it would take about 107 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$5,476 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$1,369,674, or \$14,571 per product.

We have received no definitive data that would enable us to provide a cost estimate for the repairs or replacements 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.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-1024>; 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 Operations office (telephone 800-647-5527) is in the ADDRESSES section.

## **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):



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**2014-15-07 Bombardier, Inc.:** Amendment 39-17909. Docket No. FAA-2013-1024; Directorate Identifier 2013-NM-140-AD.

**(a) Effective Date**

This AD becomes effective September 2, 2014.

**(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 57, Wings.

**(e) Reason**

This AD was prompted by reports of a fractured wing-to-fuselage strut attachment joint bolt. We are issuing this AD to detect and correct fractured strut attachment joint bolts, which could result in reduced structural integrity of the wing-to-fuselage strut attachment joint and subsequent loss of the wing.

**(f) Compliance**

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

**(g) Torque Check**

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD: Do a torque check of the wing-to-fuselage strut attachment joint bolts, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013.

(1) For airplanes that have accumulated fewer than 40,000 total flight cycles, and have less than 15 years in service since new, as of the effective date of this AD: Do the torque check before the accumulation of 42,000 total flight cycles, or within 16 years in service since new, whichever occurs first.

(2) For airplanes that have accumulated 40,000 total flight cycles or more, or have 15 years or more in service since new, as of the effective date of this AD: Do the torque check within 2,000 flight cycles or 12 months after the effective date of this AD, whichever occurs first.

## **(h) Inspection and Corrective Actions**

(1) If only one bolt fails the torque check required by paragraph (g) of this AD, before further flight, replace the bolt, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013; and before further flight do the actions specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD.

(2) If more than one bolt fails the torque check required by paragraph (g) of this AD, before further flight, repair using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, 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.

(3) If all bolts pass the torque check required by paragraph (g) of this AD, before further flight, do the actions specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD, as applicable.

(i) Do a detailed inspection for corrosion, damage (including but not limited to scratching, cracking, pitting, and cross threads, etc.), and wear, of each wing-to-fuselage strut attachment joint bolt and associated hardware, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013. If any bolt or hardware has corrosion, damage, or wear, before further flight, replace the affected part, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013.

(ii) Do a borescope inspection for corrosion and damage (including but not limited to scratching, cracking, pitting, and cross threads, etc.) of the bore hole and barrel nut threads, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, except as provided by paragraph (i) of this AD.

(A) If any corrosion or damage is found in the barrel nut threads, before further flight, replace the barrel nut, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, except as provided by paragraph (i) of this AD.

(B) If any corrosion or damage is found in the bore of the hole, before further flight, repair using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

## **(i) Exception to Service Information**

Where Bombardier Service Bulletin 8-57-47, Revision A, dated May 29, 2013, specifies to contact the manufacturer for repair information, this AD requires repairing before further flight using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO; and, if approved by the DAO, the approval must include the DAO-authorized signature.

## **(j) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-57-47, dated March 16, 2012, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD if those actions were performed before the effective date of this AD using de Havilland Inc. Dash 8 Series 100 Maintenance Task Card Number 5730/04B, dated February 6, 2012, which is not incorporated by reference in this AD.

## **(k) 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, Engine and Propeller Directorate, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

## **(l) Special Flight Permits**

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), are not allowed.

## **(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-17R1, dated June 27, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-1024-0002>.

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

## **(n) 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 8-57-47, Revision A, dated May 29, 2013.

(ii) Reserved.

(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](mailto: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 July 15, 2014.  
John P. Piccola,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.