



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2020-0200; Product Identifier 2019-NM-185-AD; Amendment 39-21276; AD 2020-21-03]**

**RIN 2120-AA64**

**Airworthiness Directives; De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2015-14-01, which applied to certain Bombardier, Inc., Model DHC-8-400 series airplanes. AD 2015-14-01 required a detailed inspection for loose bolts on the aft translating door crank assembly, and removal and reinstallation of the bolts. This AD retains the inspections of AD 2015-14-01 and adds airplanes to the applicability. For all airplanes, this AD also requires a modification of the door crank handle, which will terminate the inspection requirements. This AD was prompted by reports of loose bolts that are intended to secure the translating door crank assembly to the outside handle shaft, and of sealant missing from these bolts on another translating door. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of August 11, 2015 (80 FR 38615, July 7, 2015).

**ADDRESSES:** For service information identified in this final rule, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd@dehavilland.com](mailto:thd@dehavilland.com); Internet <https://dehavilland.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0200.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0200; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is 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:** Darren Gassetto, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7323; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2014-08R1, dated July 30, 2019 (also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Model DHC-8-400 series airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0200.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2015-14-01, Amendment 39-18199 (80 FR 38615, July 7, 2015) (“AD 2015-14-01”). AD 2015-14-01 applied to certain Bombardier, Inc., Model DHC-8-400 series airplanes. The NPRM published in the Federal Register on March 20, 2020 (85 FR 16008). The NPRM was prompted by reports of loose bolts that are intended to secure the translating door crank assembly to the outside handle shaft, and of sealant missing from these bolts on another translating door. The NPRM proposed to retain the

requirements of AD 2015-14-01 and add airplanes to the applicability. The NPRM also proposed to require, for all airplanes, a modification of the door crank handle, which would terminate the inspection. The FAA is issuing this AD to address the potential for both bolts to become loose or fall out after the door is closed and locked, which would prevent the door from being opened from inside or outside and impede evacuation in the event of an emergency. See the MCAI for additional background information.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request to Use the Latest Service Information**

Horizon Air requested that the FAA use the latest service information for the actions proposed in the NPRM.

The FAA agrees with the comment. The FAA has revised paragraphs (i), (j) and (l) of this AD accordingly.

### **Request to Require Only Certain Sections of the Service Information**

Horizon Air requested that the proposed AD specifically require paragraph 3.B., "Procedure," of the applicable service information specified in paragraphs (i)(1) through (3) of the proposed AD instead of the entire section of the Accomplishment Instructions. Horizon Air stated that the job set-up and close out sections of the Accomplishment Instructions do not directly correct the unsafe condition, and that incorporating the job

set-up and close out sections restricts an operator's ability to perform other maintenance in conjunction with incorporating the service information.

The FAA agrees with the commenter's request. Paragraphs 3.A., "Job Set-Up," and 3.C., "Close Out," of the Accomplishment Instructions of the applicable service information specified in this AD are recommended steps that can be used at the operator's discretion. The FAA has revised this AD to specify that the actions in paragraph (i) of this AD be accomplished in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of the applicable service information specified in paragraphs (i)(1) through (3) of this AD.

#### **Changes to the Final Rule Since the NPRM was Issued**

The FAA inadvertently referred to certain service information as "Bombardier Service Bulletin." The FAA has revised this AD to refer to certain service information as "De Havilland Aircraft of Canada Limited Service Bulletin."

In addition, the FAA has removed Bombardier Service Bulletin 84-52-75, dated July 27, 2012, from paragraph (g)(1) of this AD, as it was inadvertently cited and is not needed for the actions required in paragraph (g)(1) of this AD.

#### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

### **Related IBR Material under 1 CFR Part 51**

De Havilland Aircraft of Canada Limited has issued the following service information.

- De Havilland Aircraft of Canada Limited Service Bulletin 84-52-89, Revision B, dated February 26, 2020.
- De Havilland Aircraft of Canada Limited Service Bulletin 84-52-92, Revision B, dated February 27, 2020.
- De Havilland Aircraft of Canada Limited Service Bulletin 84-52-94, Revision B, dated February 26, 2020.

This service information describes procedures for modifying the door crank handle with an improved bolt retention design on the type 1 emergency door, the aft entry door, and the aft service door, as necessary. These documents are distinct since they apply to different airplane configurations.

De Havilland Aircraft of Canada Limited has also issued Bombardier Service Bulletin 84-52-96, dated February 26, 2019, which describes procedures for a detailed visual inspection of the translating door crank assembly for any loose bolts.

De Havilland Aircraft of Canada Limited has also issued Modification Summary Package IS4Q5200101, Revision A, dated July 5, 2019, which describes a deviation to the actions specified in certain service information.

This AD would also require Bombardier Service Bulletin 84-52-75, Revision A, dated July 11, 2013, which the Director of the Federal Register approved for incorporation by reference as of August 11, 2015 (80 FR 38615, July7, 2015).

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**

The FAA estimates that this AD affects 59 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

#### **Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Up to 13 work-hours X \$85 per hour = \$1,105	Up to \$677	Up to \$1,782	Up to \$105,138

### **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.

The FAA is 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**

The FAA 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) Will not affect intrastate aviation in Alaska, 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.

### **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:

a. Removing Airworthiness Directive (AD) 2015-14-01, Amendment 39-18199 (80 FR 38615, July 7, 2015); and

b. Adding the following new AD:

**2020-21-03 De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes:** Amendment 39-21276; Docket No. FAA-2020-0200; Product Identifier 2019-NM-185-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2015-14-01, Amendment 39-18199 (80 FR 38615, July 7, 2015) (“AD 2015-14-01”).

#### **(c) Applicability**

This AD applies to De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers (S/Ns) 4001 through 4530 inclusive.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 52, Doors.

**(e) Reason**

This AD was prompted by reports of loose bolts that are intended to secure the translating door crank assembly to the outside handle shaft, and of sealant missing from these bolts on another translating door. The FAA is issuing this AD to address the potential for both bolts to become loose or fall out after the door is closed and locked, which would prevent the door from being opened from inside or outside and impede evacuation in the event of an emergency.

**(f) Compliance**

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

**(g) Inspection and Corrective Actions for S/Ns 4001 through 4411 Inclusive**

For airplane S/Ns 4001 through 4411 inclusive: Within 600 flight hours or 100 days, whichever occurs first after August 11, 2015 (the effective date of AD 2015-14-01): Perform a detailed inspection for loose bolts of the aft translating door crank assembly, in accordance with paragraph 3.B., "Procedure," of Part A – INSPECTION of the Accomplishment Instructions of Bombardier Service Bulletin 84-52-75, Revision A, dated July 11, 2013.

(1) If the detailed inspection was done before the effective date of this AD and the corrective action was done in accordance with 3.B., "Procedure," and steps 3.C.(4) and 3.C.(5) of paragraph 3.C., "Close Out," of Part B – RECTIFICATION, of the Accomplishment Instructions of Bombardier Service Bulletin 84-52-75, Revision A, dated July 11, 2013: No further work is required by paragraph (g) of this AD.

(2) If the detailed inspection is done on or after the effective date of this AD, and any loose bolt is found: Before further flight, do the modification in paragraph (i) of this AD.

**(h) Inspection and Modification for S/Ns 4412 through 4491 Inclusive**

For airplane S/Ns 4412 through 4491 inclusive: Within 800 flight hours or 120 days, whichever occurs first after the effective date of this AD, perform a detailed inspection for loose bolts of the translating door crank assembly, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-52-96, dated February 26, 2019.

(1) If any loose bolt is found, before further flight do the modification specified in paragraph (i) of this AD.

(2) If no loose bolt is found, at the compliance time specified in paragraph (i) of this AD, do the modification specified in paragraph (i) of this AD.

**(i) Modification for S/Ns 4001 through 4530 Inclusive**

For airplane S/Ns 4001 through 4530 inclusive: Except as required by paragraphs (g)(2) and (h)(1) of this AD, within 8,000 flight hours or 48 months, whichever occurs first after the effective date of this AD, modify the door crank handle with an improved bolt retention design on the type 1 emergency door, the aft entry door, and the aft service door, as applicable, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of the applicable service information specified in paragraphs (i)(1) through (3) of this AD.

(1) For the aft entry door: De Havilland Aircraft of Canada Limited Service Bulletin 84-52-89, Revision B, dated February 26, 2020.

(2) For the aft service door: De Havilland Aircraft of Canada Limited Service Bulletin 84-52-92, Revision B, dated February 27, 2020.

(3) For the type 1 emergency door: De Havilland Aircraft of Canada Limited Service Bulletin 84-52-94, Revision B, dated February 26, 2020.

**(j) Alternative Modification**

For airplanes with de Havilland Modification Summary Package 4Q459324 incorporated for the cargo combi configuration: Accomplishing the modification in paragraph (i) of this AD using De Havilland Aircraft of Canada Limited Service Bulletin 84-52-89, Revision B, dated February 26, 2020; and De Havilland Aircraft of Canada Limited Service Bulletin 84-52-92, Revision B, dated February 27, 2020; as applicable; in combination with de Havilland Modification Summary Package IS4Q5200101, Revision A, dated July 5, 2019, also meets the requirement specified in paragraph (i) of this AD for the aft entry and aft service doors.

**(k) Terminating Actions**

Accomplishing the action required by paragraph (i) of this AD terminates the requirements of paragraphs (g) and (h) of this AD.

**(l) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by the introductory text to paragraph (g) of this AD, if those actions were performed before August 11, 2015 (the

effective date of AD 2015-14-01) using Bombardier Service Bulletin 84-52-75, dated July 27, 2012, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for the modification of the applicable doors in paragraphs (i) and (j) of this AD, if the modification was performed before the effective date of this AD using the applicable service information specified in paragraphs (l)(2)(i) through (vi) of this AD.

(i) Bombardier Service Bulletin 84-52-89, dated April 13, 2017.

(ii) Bombardier Service Bulletin 84-52-89, Revision A, dated January 29, 2018.

(iii) Bombardier Service Bulletin 84-52-92, dated April 18, 2017.

(iv) Bombardier Service Bulletin 84-52-92, Revision A, dated January 24, 2018.

(v) Bombardier Service Bulletin 84-52-94, dated April 13, 2017.

(vi) Bombardier Service Bulletin 84-52-94, Revision A, dated January 24, 2018.

**(m) Other FAA AD Provisions**

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, 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 manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 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.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or De Havilland Aircraft of Canada Limited'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-2014-08R1, dated July 30, 2019, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0200.

(2) For more information about this AD, contact Darren Gassetto, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7323; fax 516-794-5531; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (o)(5) and (6) 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.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) De Havilland Aircraft of Canada Limited Service Bulletin 84-52-89, Revision B, dated February 26, 2020.

(ii) De Havilland Aircraft of Canada Limited Service Bulletin 84-52-92, Revision B, dated February 27, 2020.

(iii) De Havilland Aircraft of Canada Limited Service Bulletin 84-52-94, Revision B, dated February 26, 2020.

(iv) Bombardier Service Bulletin 84-52-96, dated February 26, 2019.

(v) De Havilland Aircraft of Canada Limited Modification Summary Package IS4Q5200101, Revision A, dated July 5, 2019.

(4) The following service information was approved for IBR on August 11, 2015 (80 FR 38615, July 7, 2015).

(i) Bombardier Service Bulletin 84-52-75, Revision A, dated July 11, 2013.

(ii) [Reserved]

(5) For service information identified in this AD, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd@dehavilland.com](mailto:thd@dehavilland.com); Internet <https://dehavilland.com>.

(6) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(7) 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, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 1, 2020.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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