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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0479; Product Identifier 2019-NM-020-AD; Amendment 39-19790; AD 2019-22-11]

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) 2009-09-02, which applied to certain Bombardier, Inc., Model DHC-8-400 series airplanes. AD 2009-09-02 required repetitive inspections for damage of certain main landing gear (MLG) forward stabilizer brace assemblies, repetitive inspections for cracking of both MLG forward stabilizer braces, liquid penetrant inspections for cracking, and corrective actions if necessary. This AD retains the existing actions and also requires installation of an elbow restrictor. This AD was prompted by reports of failures of the aft hinge of the MLG forward stabilizer brace due to fatigue cracks. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 9, 2020.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 9, 2020.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of May 6, 2009 (74 FR 18121, April 21, 2009).

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; internet https://dehavilland.com. You may view this referenced service information at the FAA, Transport Standards 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-2019-0479.

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-2019-0479; 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, the regulatory evaluation, 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: Andrea Jimenez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7330; 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-2009-11R2, dated May 31, 2018 (also referred to as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain 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-2019-0479.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2009-09-02, Amendment 39-15888 (74 FR 18121, April 21, 2009) ("AD 2009-09-02"). AD 2009-09-02 applied to certain Bombardier Model DHC-8-400 series airplanes. The NPRM published in the Federal Register on July 12, 2019 (84 FR 33185). The NPRM was prompted by reports of failures of the aft hinge of the MLG forward stabilizer brace due to fatigue cracks. The NPRM proposed to continue to require inspections for damage (including excessive wear, corrosion, foreign object damage, and cracking) of certain MLG forward stabilizer brace assemblies and applicable corrective actions; and repetitive inspections for cracking of both MLG forward stabilizer braces, applicable liquid penetrant inspections for cracking, and corrective actions if necessary. The NPRM also proposed to require installation of an elbow restrictor. The FAA is issuing this AD to address failure of the stabilizer brace, which could result in the collapse of the MLG. 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.

Support for the NPRM

Air Line Pilots Association, International (ALPA) stated its support for the NPRM.

Request To Exclude Certain Service Information Procedures

Horizon Air requested that paragraphs (h) and (k) of the proposed AD refer specifically to paragraph 3.B., "Procedure," in the Accomplishment Instructions of the referenced service information rather than "the Accomplishment Instructions." Horizon Air stated that the "Job-Set Up" and "Close Out" procedures in the Accomplishment Instructions of the applicable service information do not directly correct the unsafe condition.

The FAA agrees with the commenter's request for the reason provided above. The FAA has revised paragraphs (h) and (k) of this AD to require accomplishment of paragraph 3.B., “Procedure,” of the Accomplishment Instructions of the applicable service information.

Explanation of Additional Change Made to This Final Rule

The FAA has revised this final rule to identify the legal name of the manufacturer, De Havilland Aircraft of Canada Limited, as published in the most recent type certificate data sheet for the affected airplane model.

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 Service Information Under 1 CFR Part 51

Bombardier has issued the following service information.

Bombardier Service Bulletin 84-32-69, Revision C, dated January 20, 2011, which describes procedures for replacing the standard elbow fitting with a new restrictor elbow fitting.

Bombardier Service Bulletin 84-32-76, Revision B, dated August 1, 2018, which describes procedures for replacing the standard elbow fitting with a new restrictor elbow fitting and introduction of a new configuration stabilizer brace assembly.

Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, which describes, among other actions, procedures for inspections for cracking of the apex lug stop on the MLG forward stabilizer brace assembly.

UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, which describes, among other actions, procedures for inspections for excessive wear of the apex pins on the MLG forward stabilizer brace assembly.

This AD also requires the following service information, which the Director of the Federal Register approved for incorporation by reference as of May 6, 2009 (75 FR 18121, April 21, 2009).

Bombardier Q400 All Operator Message 338, dated February 23, 2009.

Bombardier Repair Drawing 8/4-32-099, Issue 1, dated March 10, 2009.

Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009.

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 54 airplanes of U.S. registry.

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

Estimated Costs for Required Actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2009-09-02	8 work-hours × $85 per hour = $680	$0	$680	$36,720
New actions	19 work-hours × $85 per hour = $1,615	10,867	12,482	674,028

The FAA has received no definitive data that would enable it to provide cost estimates for the on-condition actions specified in this AD.

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage for affected individuals. As a result, the FAA has included all known costs in the cost estimate.

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

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 removing Airworthiness Directive (AD) 2009-09-02, Amendment 39-15888 (74 FR 18121, April 21, 2009), and adding the following new AD:

2019-22-11 De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.): Amendment 39-19790; Docket No. FAA-2019-0479; Product Identifier 2019-NM-020-AD.

(a) Effective Date

This AD is effective January 9, 2020.

(b) Affected ADs

This AD replaces AD 2009-09-02, Amendment 39-15888 (74 FR 18121, April 21, 2009) ("AD 2009-09-02").

(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 4001, 4003, and subsequent, equipped with main landing gear (MLG) forward stabilizer brace part number (P/N) 46401-7.

(d) Subject

Air Transport Association (ATA) of America Code 32, Main landing gear.

(e) Reason

This AD was prompted by reports of failures of the aft hinge of the MLG forward stabilizer brace due to fatigue cracks. The FAA is issuing this AD to address failure of the stabilizer brace, which could result in the collapse of the MLG.

(f) Compliance

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

(g) Retained Inspection and Corrective Actions, With Revised Service Information and Removed Reporting Requirement

This paragraph restates the requirements of paragraph (f) of AD 2009-09-02, with new service information and removed reporting requirement. Unless already done, do the following actions:

(1) At the applicable time specified in one of paragraphs (g)(1)(i) through (iv) of this AD: Perform non-destructive inspections for damage of the MLG forward stabilizer brace assemblies P/N 46401-7, in accordance with Bombardier Repair Drawing 8/4-32-099, Issue 1, dated March 10, 2009, and Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, and UTC Aerospace Systems Service

Concession Request 026-09, Revision H, dated August 29, 2018. Repeat the inspection thereafter at intervals not to exceed 2,000 flight cycles. As of the effective date of this AD, use Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, and UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, for the actions required by this paragraph.

(i) For airplanes with MLG forward stabilizer braces that have accumulated 12,000 or more total flight cycles as of May 6, 2009 (the effective date of AD 2009-09-02): Inspect within 50 flight cycles after May 6, 2009.

(ii) For airplanes with MLG forward stabilizer braces that have accumulated 9,000 or more total flight cycles but fewer than 12,000 total flight cycles as of May 6, 2009 (the effective date of AD 2009-09-02): Inspect before the accumulation of 12,050 total flight cycles, or within 500 flight cycles after May 6, 2009, whichever occurs earlier.

(iii) For airplanes with MLG forward stabilizer braces that have accumulated 4,500 or more total flight cycles but fewer than 9,000 total flight cycles as of May 6, 2009 (the effective date of AD 2009-09-02): Inspect before the accumulation of 9,500 total flight cycles, or within 1,500 flight cycles after May 6, 2009, whichever occurs earlier.

(iv) For airplanes with MLG forward stabilizer braces that have accumulated fewer than 4,500 total flight cycles as of May 6, 2009 (the effective date of AD 2009-09-02): Inspect before the accumulation of 6,000 total flight cycles.

(2) If any damage is found during any inspection required by paragraph (g)(1) of this AD, before further flight, do all applicable corrective actions in accordance with Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018; except as provided by paragraphs (g)(3) through (6) of this AD. As of the effective date of this AD, use UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, for the actions required by this paragraph.

(3) For airplanes on which step 24. of Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009, has been done: Within 1,200 flight cycles after May 6, 2009 (the effective date of AD 2009-

[[Page 66585]]

09-02), rework the MLG forward stabilizer brace, and except for airplanes on which the rework has been done, within 600 flight cycles after May 6, 2009, do a detailed visual inspection for damage of the stabilizer brace apex lugs, in accordance with Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. If any damage is found, repair before further flight in accordance with Section C of Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or Section C of UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. As of the effective date of this AD, use UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, for the actions required by this paragraph.

(4) At the applicable time specified in one of paragraphs (g)(4)(i) through (iii) of this AD, replace the forward stabilizer brace assembly, in accordance with Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. As of the effective date of this AD, use UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, for the actions required by this paragraph.

(i) For airplanes on which cracking is found during any inspection required by this AD, and the cracking exceeds the limit specified in paragraph (g)(4)(i)(A) or (B) of this AD, as applicable: Replace the assembly before further flight.

(A) For cracking found before the effective date of this AD: The limit specified in Section C of Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009.

(B) For cracking found on or after the effective date of this AD: The limit specified in Section C or Section D of UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018.

(ii) For airplanes on which any cracking is found after the rework specified in Section C of Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or specified in Section C or Section D of UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018: Replace the assembly before further flight.

(iii) For airplanes on which no cracking is found after the rework specified in Section C of Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or specified in Section C or Section D of UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018: Replace the assembly within 2,700 flight cycles after doing the rework.

(5) If foreign object damage is found during any inspection required by this AD, or if damage is found to a forward stabilizer brace lug or stop bracket retention hole apex bushing, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO); or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(6) If any crack is found during the visual inspection under 10X magnification, repair before further flight, in accordance with Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. As of the effective date of this AD, use UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, for the actions required by this paragraph.

(7) Before the accumulation of 6,000 total flight cycles on the MLG forward stabilizer braces, or within 600 flight hours after May 6, 2009 (the effective date of AD 2009-09-02), whichever occurs later: Do a detailed visual inspection for cracking of both MLG forward stabilizer braces and do all applicable liquid penetrant inspections for cracking, in accordance with Bombardier Q400 All Operator Message 338, dated February 23, 2009. Repeat the inspection thereafter at intervals not to exceed 600 flight hours. If any cracking is found during any inspection required by this paragraph, repair before further flight in accordance with Bombardier Repair Drawing 8/4-32-099, Issue 1, dated March 10, 2009, and Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009; or Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, and UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. As of the effective date of this AD, use Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, and UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018, to repair cracking found during any inspection required by this paragraph.

(h) New Requirement of This AD: Installation of Elbow Restrictor

Within 2,000 flight hours or 12 months, whichever occurs first, from the effective date of this AD: Install an elbow restrictor, P/N 46610-1, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-69, Revision C, dated January 20, 2011.

(i) Terminating Actions

(1) Installation of an elbow restrictor as required by paragraph (h) of this AD terminates the repetitive inspection requirements of paragraphs (g)(1) and (7) of this AD.

(2) Installation of an elbow restrictor as required by paragraph (h) of this AD terminates the replacement of the forward stabilizer brace assembly requirement of paragraph (g)(4)(iii) of this AD.

(j) New Requirement of This AD: Revised Repetitive Inspections of the MLG Forward Stabilizer Brace

(1) Within 2,000 flight cycles after the installation specified in paragraph (h) of this AD, or within 12 months after the effective date, whichever occurs later, do the non-destructive inspection, in accordance with Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018, and UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018. Thereafter, repeat the non-destructive inspection at the times specified in paragraph (j)(2) of this AD.

(2) Repeat the non-destructive inspection required in paragraph (j)(1) of this AD at the applicable intervals specified in paragraphs (j)(2)(i) through (iii) of this AD.

(i) For forward stabilizer braces, P/N 46401-7, that have not had any required rework done, as specified in Goodrich or UTC Aerospace Systems Service Concession Request 026-09, Section C or D, and have had Bombardier Service Bulletin 84-32-69 or Bombardier Service Bulletin 84-32-76 incorporated: Do the non-destructive inspection at intervals not to exceed 6,000 flight cycles.

(ii) For forward stabilizer braces, P/N 46401-7, that have been reworked in accordance with Goodrich or UTC Aerospace Systems Service Concession Request 026-09, Section D, and have had Bombardier Service Bulletin 84-32-69 or Bombardier Service Bulletin 84-32-76 incorporated: Do the non-destructive inspection at intervals not to exceed 6,000 flight cycles.

(iii) For forward stabilizer braces, P/N 46401-7, that have been reworked in accordance with Goodrich or UTC Aerospace Systems Service Concession Request 026-09, Section C, and have had Bombardier Service Bulletin 84-32-69 or Bombardier Service Bulletin 84-32-76 incorporated: Do the non-destructive inspection at intervals not to exceed 3,000 flight cycles.

(k) Acceptable Method of Compliance for Paragraph (h) of This AD

Replacing the standard elbow fitting at the retract port of the lock actuator with a new custom elbow fitting in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-76, Revision B, dated August 1, 2018, is an acceptable method of compliance for the installation required by paragraph (h) of this AD.

(l) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using the service information in one of paragraphs (l)(1)(i) through (iii) of this AD.

(i) Bombardier Service Bulletin 84-32-69, dated June 30, 2009.

(ii) Bombardier Service Bulletin 84-32-69, Revision A, dated August 19, 2009.

(iii) Bombardier Service Bulletin 84-32-69, Revision B, dated September 17, 2009.

(2) This paragraph provides credit for actions specified in paragraph (j) of this AD, if those actions were performed before the effective date of this AD using the service information in one of paragraphs (l)(2)(i) through (iii) of this AD.

(i) Bombardier Repair Drawing 8/4-32-099, Issue 1, dated March 10, 2009, and Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009.

(ii) Bombardier Repair Drawing 8/4-32-099, Issue 2, dated April 20, 2009, and Goodrich Service Concession Request 026-09, Revision C, dated April 17, 2009.

(iii) Bombardier Repair Drawing 8/4-32-099, Issue 3, dated December 3, 2009, and Goodrich Service Concession Request 026-09, Revision D, dated November 27, 2009.

(3) This paragraph provides credit for actions performed using the method of compliance specified in paragraph (k) of this AD, if those actions were performed before the effective date of this AD using the service information in paragraph (l)(3)(i) or (ii) of this AD.

(i) Bombardier Service Bulletin 84-32-76, dated May 20, 2010.

(ii) Bombardier Service Bulletin 84-32-76, Revision A, dated June 19, 2014.

(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. AMOCs approved previously in accordance with AD 2009-09-02 are approved as AMOCs for the corresponding requirements in paragraph (g) of 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 Branch, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO; or De Havilland Aircraft of Canada Limited's TCCA 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-2009-11R2, dated May 31, 2018, 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-2019-0479.

(2) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7330; fax 516-794-5531; email 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 January 9, 2020.

(i) Bombardier Repair Drawing 8/4-32-099, Issue 4, dated September 4, 2018.

(ii) Bombardier Service Bulletin 84-32-69, Revision C, dated January 20, 2011.

(iii) Bombardier Service Bulletin 84-32-76, Revision B, dated August 1, 2018.

(iv) UTC Aerospace Systems Service Concession Request 026-09, Revision H, dated August 29, 2018.

(4) The following service information was approved for IBR on May 6, 2009 (75 FR 18121, April 21, 2009).

(i) Bombardier Q400 All Operator Message 338, dated February 23, 2009. The issue date is specified on only the first page of this document.

(ii) Bombardier Repair Drawing 8/4-32-099, Issue 1, dated March 10, 2009. The issue date is specified on only the first page of this document.

(iii) Goodrich Service Concession Request 026-09, Revision B, dated March 10, 2009. Pages 1 through 8 of this document are identified as Revision B, dated March 5, 2009; pages 9 through 22 are identified as Revision B, dated March 10, 2009.

(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; internet https://dehavilland.com.

(6) You may view this service information at the FAA, Transport Standards 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, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Des Moines, Washington, on November 7, 2019.

Michael Kaszycki,

Acting Director, System Oversight Division,

Aircraft Certification Service.