DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


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 adopting a new airworthiness directive (AD) for certain De Havilland Aircraft of Canada Limited Model DHC–8–400 series airplanes. This AD was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. This AD requires, depending on airplane configuration, removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, re-identifying the reworked side brace fitting and A-frame, and repair if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective July 20, 2021.

The Director of the Federal Register approved the incorporation by reference of certain publication listed in this AD as of July 20, 2021.

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 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–2021–0183.

Examing 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–2021–0183; 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: Antariksh Shetty, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300; fax 516–794–5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF–2020–39, dated October 14, 2020 (TCCA AD CF–2020–39) (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 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–2021–0183.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain De Havilland Aircraft of Canada Limited Model DHC–8–400 series airplanes. The NPRM published in the Federal Register on March 22, 2021 (86 FR 15149). The NPRM was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. The holes in the side brace sub-assemblies were not cold-worked as required. As a result the side brace fitting might not meet its fatigue life, and cracking of the A-frame bottom flange may result. The NPRM proposed to require, depending on airplane configuration, removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, re-identifying the reworked side brace fitting and A-frame, and repair if necessary. The FAA is issuing this AD to address possible cracking of the A-frame. This condition, if not addressed, may lead to collapse of the main landing gear (MLG). See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA has considered the comment received. The Air Line Pilots Association, International (ALPA), stated that it supports the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for 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.

Related Service Information Under 1 CFR Part 51

De Havilland Aircraft of Canada Limited has issued Service Bulletin 84–54–32, dated October 10, 2019. This service information describes procedures, depending on airplane configuration, for removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, and re-identifying the reworked side brace fitting and A-frame.

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.

Cost of Compliance

The FAA estimates that this AD affects 41 airplanes of U.S. registry. The
FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

<table>
<thead>
<tr>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 work-hours × $85 per hour = $1,275</td>
<td>$254</td>
<td>$1,529</td>
<td>$62,689</td>
</tr>
</tbody>
</table>

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:


(a) Effective Date

This airworthiness directive (AD) is effective July 20, 2021.

(b) Affected ADs

None.

(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, certified in any category, serial numbers 4081 through 4591 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/pylons.

(e) Reason

This AD was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. The holes in the side brace sub-assemblies were not cold-worked as required. As a result the side brace fitting might not meet its fatigue life, and cracking of the A-frame bottom flange may result. The FAA is issuing this AD to address possible cracking of the A-frame. This condition, if not addressed, may lead to collapse of the main landing gear (MLG).

(f) Compliance

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

(g) Required Actions

(1) Within the compliance time specified in paragraph (g)(2) of this AD, do the applicable actions specified in paragraphs (g)(1)(i) and (ii) of this AD.

(i) For airplanes having serial numbers 4061 through 4582 inclusive: Remove the fasteners on the nacelle A-frame side brace sub-assemblies, do an eddy current inspection for cracking on airplanes having 30,000 total flight cycles or more, cold-work the holes, and install oversize fasteners, in accordance with Part A of paragraph 3.B. of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin 84–54–32, dated October 10, 2019. If any cracking is found, before further flight, repair the cracking 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.


(2) At the earlier of the times specified in paragraphs (g)(2)(i) and (ii) of this AD, do the applicable actions specified in paragraph (g)(1) of this AD.

(i) Within 48 months or 8,000 flight hours after the effective date of this AD, whichever occurs first.

(ii) At the later of the times specified in paragraphs (g)(2)(i) and (ii) of this AD.

(A) Before accumulating 40,000 total flight cycles.

(B) Within 12 months or 1,290 flight cycles after the effective date of this AD, whichever occurs first.

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(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 responsible Flight Standards 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 responsible Flight Standards 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
DEPARTMENT OF TRANSPORTATION

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14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; GE Aviation Czech s.r.o. (Type Certificate sro., Walter Engines a.s., Walter a.s., and MOTORLET a.s.) Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all GE Aviation Czech s.r.o. (GEAC) M601D–11, M601E–11, M601E–11A, M601E–11AS, M601E–115S, and M601F model turboprop engines. This AD is prompted by the manufacturer finding errors in the Airworthiness Limitation Section (ALS) of the Engine Maintenance Manual (EMM), including errors in the formula to determine the equivalent flight cycles (FCs) of critical parts and errors with certain part numbers (P/Ns). The manufacturer also determined that the life limit of a certain compressor case is not listed in the ALS section of the applicable EMM. This AD requires recalculating the life of critical parts and, depending on the results of the recalculation, replacement of these critical parts. This AD also requires replacement of a certain compressor case. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 30, 2021.

The Director of the Federal Register will publish a document in the Federal Register to announce the date of issue. You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2021–0499; 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 street address for the Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Barbara Gaufield, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7199; email: barbara.caufield@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Emergency AD 2021–0125–E, dated May 7, 2021 (referred to after this as “the MCAI”), to address an unsafe condition for the specified products. The MCAI states:

Errors have been identified in the ALS section of the EMM [Engine Maintenance Manual], including errors in the formula to determine the equivalent flight cycles of critical parts, and certain part numbers. It was also determined that, inadvertently, certain M601E engines have a compressor case P/N M601–154.61 installed, the life limit of which is not listed in the ALS section of the applicable EMM. These conditions, if not corrected, may lead to operation of an engine beyond the life limit of one or more critical parts, possibly resulting in failure of the engine and consequent reduced control of the aeroplane. To address this potential unsafe conditions, GEAC issued [GEAC Alert Service Bulletin (ASB) ASB–M601D–72–00–00–0075, ASB–M601E–72–00–00–0106, ASB–M601F–72–00–00–0057 and ASB–M601Z–72–00–00–0057 [issued as a single document], providing instructions to recalculate the consumed life of certain