[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1821; Project Identifier MCAI-2022-01045-A; Amendment 39-22601; AD 2023-22-17]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland, Inc.) (Viking) Model DHC-3 airplanes. This AD was prompted by a report of cracking in the left-hand side (LHS) and right-hand side (RHS) lower engine mount pickup fittings. This AD requires a one-time inspection of the affected parts for cracking, deformation, corrosion, fretting or wear, paint or surface coating damage, and loose, missing, or broken fasteners, and applicable corrective actions. This AD also requires reporting the inspection results. 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].

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No.FAA-2023-1821; 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 mandatory continuing airworthiness information (MCAI), 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.

Material Incorporated by Reference:

• For service information identified in this final rule, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (800) 663-8444; fax: (403) 295-8888; email: dh_technical.support@vikingair.com; website: vikingair.com/support/service-bulletins.

• You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2023-1821.

FOR FURTHER INFORMATION CONTACT: Yaser Osman, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (917) 348-6266; email: avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Viking Model DHC-3 airplanes. The NPRM published in the *Federal Register* on September 7, 2023 (88 FR 61488). The NPRM was prompted by AD CF-2022-41, dated August 4, 2022 (also referred to as the MCAI), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states

that Viking received a post inspection report of fatigue cracking on the LHS and RHS of the lower engine mount pickup fittings on a Viking Model DHC-3 airplane. The two upper and two lower engine mount pickup fittings provide a rigid connection between the engine mount ring to which the engine is secured, and the firewall rear face. The MCAI also states that the current inspection requirements do not include a direct inspection of the lower and upper engine mount pickup fittings, and consequently, cracks or other damage to the engine mount pickup fittings may not be detected. Additionally, the MCAI states that an investigation determined that the upper engine mount pickup fittings can also have undetected fatigue cracks because they are manufactured from the same material as the lower engine mount pickup fittings.

Cracking of any of the engine mount pickup fittings can result in failure of the fitting, leading to a loose connection of the engine mount ring, which provides main support for the engine at the firewall. This condition, if not addressed, could, in the case of cracking of any of the engine mount pickup fittings, result in failure of the fitting, leading to a loose connection of the engine mount ring and consequent reduced control of the airplane. To address the unsafe condition, the MCAI requires a one-time inspection of the affected parts and applicable corrective action. The MCAI also requires reporting the inspection results to Viking.

In the NPRM, the FAA proposed to require a one-time inspection of the affected parts for cracking, deformation, corrosion, fretting or wear, paint or surface coating damage, and loose, missing, or broken fasteners, and applicable corrective actions. Additionally, in the NPRM, the FAA proposed to require reporting the inspection results. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2023-1821.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed Part 1 of Viking PSM 1-3-3, DHC-3 Otter Repair Manual, dated August 1, 1963. This service information specifies procedures for determining the damage classification and repair limits of any structural damage found on an engine mount pickup fitting and determining if an affected engine mount pickup fitting can be repaired or if it should be replaced. Although the watermarked words "Uncontrolled for Reference Only" appear on the title page and each page of the table of contents of this document, and the watermarked word "Uncontrolled" appears on each page of Part 1 of this document, this is the current version.

The FAA also reviewed Part 1 of Viking PSM 1-3-5, DHC-3 Otter Supplemental Inspection and Corrosion Control Manual, Revision IR, dated December 21, 2017 (Viking PSM 1-3-5, Revision IR). This service information specifies procedures for repairing any damaged paint or surface coating of an engine mount pickup fitting.

In addition, the FAA reviewed Viking Service Bulletin V3/0012, Revision NC, dated January 20, 2022. This service information specifies procedures for inspecting the

upper and lower LHS and RHS engine mount pickup fittings, reporting the inspection results, and performing corrective actions. The corrective actions include replacing any loose, missing, or broken fastener; and replacing any cracked or deformed engine mount pickup fitting with a new or serviceable part.

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 ADDRESSES.

Differences Between this AD and the MCAI

The MCAI requires contacting Viking for approval of proposed repair instructions if any corrosion, wear, or fretting damage to any engine mount pickup fitting is found and this AD does not. This AD requires contacting either the Manager, International Validation Branch, FAA; Transport Canada; or Viking's Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

Where Part 1 of Viking PSM 1-3-5, Revision IR, specifies contacting Viking if the alloy and condition of an affected engine mount pickup fitting cannot be identified, this AD requires contacting the Manager, International Validation Branch, FAA; Transport Canada; or Viking's Transport Canada DAO for instructions. If approved by the DAO, the approval must include the DAO-authorized signature.

Interim Action

The FAA considers that this AD is an interim action. If final action is later identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 65 airplanes of U.S. registry.

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

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Detailed visual inspection of the engine mount pickup fitting	2 work-hours x $85 per hour = $170	$0	$170	$11,050
Report results of inspection	1 work-hour x $85 per hour = $85	$0	$85	$5,525

The FAA estimates the following costs to do any necessary actions that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these actions:

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Replace engine mount pickup fitting	4 work-hours x $85 per hour = $340 (per engine mount pickup fitting)	Up to $692 per engine mount pickup fitting	Up to $1,032 per engine mount pickup fitting
Replace the fastener with a new fastener	1 work-hour x $85 per hour = $85	Negligible	$85
Perform a detailed visual inspection of the fastener hole	1 work-hour x $85 per hour = $85	$0	$85

Any repair that may be needed as a result of the detailed visual inspection of the engine mount pickup fitting could vary significantly from airplane to airplane. The FAA has no data to determine the costs to accomplish the repair or the number of airplanes that may require repair.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a

collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

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

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.

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:

2023-22-17 Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland, Inc.): Amendment 39-22601; Docket No. FAA-2023-1821; Project Identifier MCAI-2022-01045-A.

(a) Effective Date

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

(b) Affected ADs

None.

(c) Applicability

This AD applies to Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland, Inc.) Model DHC-3 airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 7120, Engine Mount Section.

(e) Unsafe Condition

This AD was prompted by a report of cracking in the left-hand side (LHS) and right-hand side (RHS) lower engine mount pickup fittings. The FAA is issuing this AD to address cracking in the LHS and RHS lower engine mount pickup fittings. The unsafe condition, if not addressed, could, in the case of cracking of any of the engine mount pickup fittings, result in failure of the fitting, leading to a loose connection of the engine mount ring, which provides main support for the engine at the firewall, and consequent reduced control of the airplane.

(f) Compliance

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

(g) Required Actions

(1) Within 6 months after the effective date of this AD, do a detailed visual inspection of the lower engine mount pickup fittings part numbers (P/Ns) C3FS46-7 and C3FS46-8 and the upper engine mount pickup fittings P/Ns C3FS42-5 and C3FS42-6 for cracking, deformation (altered form or shape), corrosion, fretting or wear, paint or surface coating damage (loose, delaminating, flaking, peeling, chipping of the coating or paint, exposed bare metal, or corroded), and loose, missing, or broken fasteners, in accordance with Part A, steps 1 through 8, of the Accomplishment Instructions in Viking Service Bulletin V3/0012, Revision NC, dated January 20, 2022 (Viking SB V3/0012).

(2) If any crack or deformation (altered form or shape) of any engine mount pickup fitting is found during the detailed visual inspection required by paragraph (g)(1) of this AD, before further flight, replace the fitting with a new or serviceable part, in accordance with Part A, step 10, of the Accomplishment Instructions in Viking SB V3/0012. For purposes of this AD, "new" means zero hours time-in-service.

(3) If any paint or surface coating of the engine mount pickup fitting is found damaged (loose, delaminating, flaking, peeling, chipping of the coating or paint, exposed bare metal, or corroded) during the detailed visual inspection required by paragraph (g)(1) of this AD, before further flight, repair the fitting in accordance with Part 1 of Viking PSM 1-3-5, DHC-3 Otter Supplemental Inspection and Corrosion Control Manual, Revision IR, dated December 21, 2017 (Viking PSM 1-3-5, Revision IR), and Part A, step 12, of the Accomplishment Instructions in Viking SB V3/0012. Where Part 1 of Viking PSM 1-3-5, Revision IR, specifies contacting Viking if the alloy and condition of an affected engine mount pickup fitting cannot be identified, this AD requires contacting the Manager, International Validation Branch, FAA; Transport Canada; or Viking's Transport Canada Design Approval Organization (DAO) for instructions.

(4) If any loose, missing, or broken fastener is found during the detailed visual inspection required by paragraph (g)(1) of this AD, before further flight, replace the fastener with a new fastener, do a detailed visual inspection of the fastener hole to detect cracking, corrosion, an elongated bore hole, bore surface roughness, or other defects (abnormalities when compared to a new part), and repair any damage found or replace the engine mount pickup fitting with a new or serviceable part if damage is beyond repairable limits, in accordance with Part 1 of Viking PSM 1-3-3 DHC-3 Otter Repair Manual, dated August 1, 1963, and Part A, step 9, of the Accomplishment Instructions in Viking SB V3/0012.

(5) If any corrosion, wear, or fretting to any engine mount pickup fitting is found during the detailed visual inspection required by paragraph (g)(1) of this AD, before further flight, contact the Manager, International Validation Branch, FAA; Transport Canada; or Viking's Transport Canada DAO to obtain instructions for an approved repair and, within the compliance timeframe specified therein, do the repair. If approved by the DAO, the approval must include the DAO-authorized signature. Alternatively, before further flight, replace the engine mount pickup fitting with a new or serviceable part in accordance with Part A, step 10, of the Accomplishment Instructions in Viking SB V3/0012.

(h) Reporting Requirement

Report the inspection results from the detailed visual inspection required by paragraph (g)(1) of this AD at the applicable time specified in paragraph (h)(1) or (2) of this AD in accordance with Part A, step 14, of the Accomplishment Instructions in Viking SB V3/0012.

(1) For inspections done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) For inspections done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(i) Alternative Methods of Compliance (AMOCs)

The Manager, International Validation 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 International Validation Branch, mail it to the address identified in paragraph (j)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. If mailing information, also submit information by email. 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.

(j) Additional Information

(1) Refer to Transport Canada AD CF-2022-41, dated August 4, 2022, for related information. This Transport Canada AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-1821.

(2) For more information about this AD, contact Yaser Osman, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (917) 348-6266; email: Yaser.M.Osman@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference 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 the AD specifies otherwise.

(i) Viking PSM 1-3-3, DHC-3 Otter Repair Manual, Part 1, dated August 1, 1963.

Note 1 to paragraph (k)(2)(i): Although the document specified in paragraph (k)(2)(i) has the watermarked words “Uncontrolled for Reference Only” on the title page and each page of the table of contents, and the watermarked word “Uncontrolled” on each page of Part 1, this is a current version of that document.

(ii) Viking PSM 1-3-5, DHC-3 Otter Supplemental Inspection and Corrosion Control Manual, Revision IR, Part 1, dated December 21, 2017.

(iii) Viking Service Bulletin V3/0012, Revision NC, dated January 20, 2022.

(3) For Viking service information identified in this AD, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada,

V8L 5V5; phone: (800) 663-8444; fax: (403) 295-8888; email: dh_technical.support@vikingair.com; website: vikingair.com/support/service-bulletins.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on November 3, 2023.

Victor Wicklund,
Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2023-27495 Filed: 12/14/2023 8:45 am; Publication Date: 12/15/2023]