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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0444; Directorate Identifier 2008-CE-024-AD; Amendment 39-15555; AD 2008-12-12]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited Models DHC-2 Mk. I, DHC-2 Mk. II, and DHC-3 Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

A complete loss of both ignition systems occurred on a DHC-3 Otter when the lock wire hole in the ignition connector plug on the firewall broke out, allowing the plug to vibrate loose. A maintenance safety feature grounds out both magneto systems through a spring-loaded safety pin incorporated into the Cannon plug. The DHC-2 system is similar in design.

Subsequent to the issuance of AD CF-2001-36 a complete loss of both ignition systems occurred on a DHC-2 Beaver resulting in engine failure and subsequent forced approach and landing. Investigation by the Transportation Safety Board determined the internal failure of the magneto firewall connector resulted in both magneto "P" leads shorting to ground. A maintenance "safety" feature through a spring-loaded safety pin incorporated in the firewall connector on many DHC-2 aircraft grounds out both magneto systems when the connector is disconnected. This connector type is readily identified when disconnected by the existence of three internal pins on the firewall and magneto harness side, one of which is shorted directly to ground.

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective July 23, 2008.

On July 23, 2008, the Director of the Federal Register approved the incorporation by reference of Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, listed in this AD.

As of December 6, 2004 (69 FR 61758, October 21, 2004), the Director of the Federal Register approved the incorporation by reference of deHavilland Beaver Alert Service Bulletin Number A2/53, Revision B, dated May 28, 2004; and deHavilland Otter Alert Service Bulletin Number A3/53, Revision B, dated May 28, 2004, listed in this AD.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> 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 20590.

FOR FURTHER INFORMATION CONTACT: Fabio Buttitta, Aerospace Engineer, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: (516) 228-7303; fax: (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on April 18, 2008 (73 FR 21074), and proposed to supersede AD 2004-21-06, Amendment 39-13827 (69 FR 61758, October 21, 2004). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states that:

A complete loss of both ignition systems occurred on a DHC-3 Otter when the lock wire hole in the ignition connector plug on the firewall broke out, allowing the plug to vibrate loose. A maintenance safety feature grounds out both magneto systems through a spring-loaded safety pin incorporated into the Cannon plug. The DHC-2 system is similar in design.

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These connectors are no longer in production.

Since no effective Instructions for Continued Airworthiness exist to ensure the safety feature of these connectors will operate correctly when disconnected, or will ensure the internal integrity of the connector while in service, this directive is revised to mandate replacement of connectors with a different design.

Viking Air Limited has developed SB V2/0001 to provide for the installation of a replacement connector, similar in design to magneto systems in service today. This modification incorporates a "straight through" type connector, ensuring magneto circuit integrity should the connection open.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect 159 products of U.S. registry. We also estimate that it will take about 10 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$881 per product.

Based on these figures, we estimate the cost of the AD on U.S. operators to be \$267,279, or \$1,681 per product.

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 this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866;

(2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD Docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 Amendment 39-13827 (69 FR 61758; October 21, 2004), and adding the following new AD:



2008-12-12 Viking Air Limited: Amendment 39-15555; Docket No. FAA-2008-0444; Directorate Identifier 2008-CE-024-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective July 23, 2008.

Affected ADs

(b) This AD supersedes AD 2004-21-06, Amendment 39-13827.

Applicability

(c) This AD applies to the following model and serial number airplanes certificated in any category:

Model	Serial No.
DHC-2 Mk. I	All.
DHC-2 Mk. II	All.
DHC-3	All serial numbers with piston engines.

Subject

(d) Air Transport Association of America (ATA) Code 74: Engine Ignition.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

A complete loss of both ignition systems occurred on a DHC-3 Otter when the lock wire hole in the ignition connector plug on the firewall broke out, allowing the plug to vibrate loose. A maintenance safety feature grounds out both magneto systems through a spring-loaded safety pin incorporated into the Cannon plug. The DHC-2 system is similar in design.

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disconnected by the existence of three internal pins on the firewall and magneto harness side, one of which is shorted directly to ground.

These connectors are no longer in production.

Since no effective Instructions for Continued Airworthiness exist to ensure the safety feature of these connectors will operate correctly when disconnected, or will ensure the internal integrity of the connector while in service, this directive is revised to mandate replacement of connectors with a different design.

Viking Air Limited has developed SB V2/0001 to provide for the installation of a replacement connector, similar in design to magneto systems in service today. This modification incorporates a "straight through" type connector, ensuring magneto circuit integrity should the connection open.

Actions and Compliance

(f) Inspect the connector plugs on the fore side of the firewall for security and the connector plug lockwire to assure it is intact and the holes in the plugs are not broken out or cracked. Initially inspect within the next 100 hours time-in-service (TIS) after December 6, 2004 (the compliance date retained from AD 2004-21-06). Repetitively inspect thereafter at intervals not to exceed 100 hours TIS until the modification required in paragraph (h) of this AD is done. Do the inspections following deHavilland Beaver Alert Service Bulletin Number A2/53, Revision B, dated May 28, 2004; and deHavilland Otter Alert Service Bulletin Number A3/53, Revision B, dated May 28, 2004, as applicable.

(g) During any inspection required in paragraph (f) of this AD, if the lockwire holes or the lockwire is found damaged, install Modification Kit Number C2VMK0001-1 or Modification Kit Number C3VMK0001-1, as applicable. Install the modification kit before further flight following the Accomplishment Instructions in Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, as applicable. Installing the modification kit terminates the repetitive inspections required in paragraph (f) of this AD.

(h) Unless already done, replace the magneto firewall connector by installing Modification Kit Number C2VMK0001-1 or Modification Kit Number C3VMK0001-1, as applicable. Install the modification kit within the next 6 months after July 23, 2008 (the effective date of this AD) following the Accomplishment Instructions in Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, as applicable. Installing the modification kit terminates the repetitive inspections required in paragraph (f) of this AD.

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows: AD 2004-21-06 required incorporating repetitive inspections of the connector plugs and the connector plug lockwire on the fore side of the firewall into the maintenance program while the MCAI required incorporating Temporary Revision No. 14, dated August 24, 2001, into the applicable maintenance manual in order to incorporate the repetitive inspections into the maintenance program.

Other FAA AD Provisions

(i) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Fabio Buttitta, Aerospace Engineer, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: (516) 228-7303; fax: (516) 794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et.seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(j) Refer to MCAI Transport Canada AD No. CF-2001-36R1, dated January 21, 2008; Transport Canada AD No. CF-2001-37R, dated January 21, 2008; deHavilland Beaver Alert Service Bulletin Number A2/53, Revision B, dated May 28, 2004; deHavilland Otter Alert Service Bulletin Number A3/53, Revision B, dated May 28, 2004; Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, for related information.

Material Incorporated by Reference

(k) You must use deHavilland Beaver Alert Service Bulletin Number A2/53, Revision B, dated May 28, 2004; deHavilland Otter Alert Service Bulletin Number A3/53, Revision B, dated May 28, 2004; Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of Viking DHC-2 Beaver Service Bulletin Number V2/0001, dated June 27, 2007; and Viking DHC-3 Otter Service Bulletin Number V3/0001, dated June 27, 2007, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On December 6, 2004 (69 FR 61758, October 21, 2004), the Director of the Federal Register previously approved the incorporation by reference of deHavilland Beaver Alert Service Bulletin Number A2/53, Revision B, dated May 28, 2004; and deHavilland Otter Alert Service Bulletin Number A3/53, Revision B, dated May 28, 2004.

(3) For service information identified in this AD, contact Viking, 9574 Hampden Road, Sidney, British Columbia, Canada V8L 5V5.

(4) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106; or 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 Kansas City, Missouri, on June 5, 2008.
David R. Showers,
Acting Manager, Small Airplane Directorate, Aircraft Certification Service.
[FR Doc. E8-13112 Filed 6-17-08; 8:45 am]