

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004-CE-02-AD; Amendment 39-13827; AD 2004-21-06]

RIN 2120-AA64

Airworthiness Directives; deHavilland Inc. Models DHC-2 Mk. I and DHC-2 Mk. II Airplanes and Bombardier Inc. Model (Otter) DHC-3 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA adopts a new airworthiness directive (AD) for all deHavilland Inc. Models DHC-2 Mk. I and DHC-2 Mk. II airplanes and for all Bombardier Inc. Model (Otter) DHC-3 airplanes powered by radial engines. This AD requires you to visually inspect the firewall connector plugs for proper lockwire security and replace or modify as appropriate. This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Canada. We are issuing this AD to prevent loss of ignition systems during flight caused by improper lockwire security, which could result in engine failure. This failure could lead to a forced landing of the airplane.

DATES: This AD becomes effective on December 6, 2004.

As of December 6, 2004, the Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation.

ADDRESSES: You may get the service information identified in this AD from Bombardier Commercial Service Center, Plant 9, C.P. 6087 Succurale Centre-ville, Montreal QC H3C 3G9, Canada.

You may view the AD docket at FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2004-CE-02-AD, 901 Locust, Room 506, Kansas City, Missouri 64106. Office hours are 8 a.m. to 4 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mazdak Hobbi, Aerospace Engineer, New York Aircraft Certification Office (ACO), FAA, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: (516) 228-7330; facsimile: (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? Transport Canada, which is the airworthiness authority for Canada, recently notified FAA that an unsafe condition may exist on all deHavilland DHC-2 Mk. I and DHC-2 Mk. II airplanes and all Bombardier (Otter) DHC-3 airplanes powered by radial engines. Transport Canada reports that a DHC-3 airplane lost both ignition systems during flight.

The lockwire hole in the connector plug on the firewall broke and the plug vibrated loose. Both magnetos then grounded through a spring-loaded center pin in the plug (a maintenance safety feature).

The DHC-2 Mk. I and DHC-2 Mk. II airplanes have a similar ignition system.

What is the potential impact if FAA took no action? If not detected and corrected, failure of the lockwire hole could result in engine failure. This failure could lead to a forced landing of the airplane.

Has FAA taken any action to this point? We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to all deHavilland Inc. Models DHC-2 Mk. I and DHC-2 Mk. II airplanes, and all Bombardier Inc. (Otter) DHC-3 airplanes powered by radial engines of the same type. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on April 12, 2004 (69 FR19132). The NPRM proposed to require you to visually inspect the firewall connector plugs for proper lockwire security and replace or modify as appropriate.

Comments

Comment Issue No. 1: Incorporate Revision "B" of the Applicable Service Bulletins

What is the commenter's concern? The manufacturer has revised the applicable service bulletins to clarify the information presented in the Description and in the Accomplishment Instructions.

The revisions delete the requirement to remove the upholstery in order to perform the visual inspections and delete the requirement to inspect the receptacle. The receptacle is attached with four self-locking nuts. Lockwire is not used to secure these nuts.

The manufacturer wants the revised service bulletins incorporated into the final rule AD action.

What is FAA's response to the concern? We concur with the commenter and will make these changes in the final rule AD action.

Comment Issue No. 2: Update the Manufacturer's Address

What is the commenter's concern? The manufacturer has provided an updated address and wants it incorporated into the final rule AD action.

What is FAA's response to the concern? We concur with the commenter and will make these changes in the final rule AD action.

Conclusion

What is FAA's final determination on this issue? We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the changes discussed above and minor editorial corrections. We have determined that these changes and minor corrections:

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

Changes to 14 CFR Part 39—Effect on the AD

How does the revision to 14 CFR part 39 affect this AD? On July 10, 2002, the FAA published a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's AD system. This regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Costs of Compliance

How many airplanes does this AD impact? We estimate that this AD affects 242 airplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes? We estimate the following costs to accomplish the inspection(s):

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
2 workhours × \$65 per hour = \$130	Not applicable	\$130	$\$130 \times 242 = \$31,460.$

We estimate the following costs to accomplish any necessary replacements that will be required based on the results of the inspection(s). We have no way of determining the number of airplanes that may need these replacements:

Labor cost	Parts cost	Total cost per replacement part
2 workhours × \$65 per hour = \$130	Firewall connector plug = \$152 each. Lockwire = minimal cost.	$\$130 + \$152 = \$282.$

Regulatory Findings

Will this AD impact various entities? We have 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.

Will this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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 summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2004-CE-02-AD" in your request.

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 Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. FAA amends § 39.13 by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2004-21-06 deHavilland Inc. and Bombardier Inc.: Amendment 39-13827; Docket No. 2004-CE-02-AD.

When Does This AD Become Effective?

- (a) This AD becomes effective on December 6, 2004.

What Other ADs Are Affected by This Action?

- (b) None.

What Airplanes Are Affected by This AD?

- (c) This AD affects the following airplane models and serial numbers that are certificated in any category:

Model	Serial Nos.
deHavilland DHC-2 Mk. I.	All.
deHavilland DHC-2 Mk. II.	All.
Bombardier (Otter) DHC-3.	All serial numbers powered by radial engines.

What Is the Unsafe Condition Presented in This AD?

- (d) This AD is the result of mandatory continuing airworthiness information (MCAI) issued by the airworthiness authority for Canada. We are issuing this AD to prevent loss of ignition systems during flight caused by improper lockwire security, which could result in engine failure. This failure could lead to a forced landing of the airplane.

What Must I Do To Address This Problem?

- (e) To address this problem, you must do the following:

Actions	Compliance	Procedures
(1) Inspect the following: (i) connector plugs on the fore side of the firewall for security; (ii) the connector plug lockwire to ensure 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 effective date of this AD). Repetitively inspect thereafter at intervals not to exceed 100 hours TIS.	Follow 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.
(2) If during any inspection required in paragraph (e)(1)(i) and (e)(1)(ii) of this AD: (i) the lockwire holes are found damaged, replace the connector plug with a new part of the same number; and (ii) the lockwire is damaged, replace the lockwire.	Prior to further flight after any inspection required by paragraphs (e)(1)(i) and (e)(1)(ii) of this AD.	Follow 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.
(3) When the connector plugs are replaced, do an operational check of the magnetos and correct as appropriate.	Prior to further flight after any replacement required by paragraph (e)(2)(i) this AD.	Follow the applicable maintenance manual procedures.

Note: We recommend you insert de Havilland Inc. Temporary Revision No. 2-24, dated August 24, 2001, and Temporary Revision No. 14, dated August 24, 2001, into the applicable maintenance manual.

May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, New York Aircraft Certification Office (ACO), FAA. For information on any already approved alternative methods of compliance, contact Mazdak Hobbi, Aerospace Engineer, New York ACO, FAA, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: (516) 228-7330; facsimile: (516) 794-5531.

Does This AD Incorporate Any Material by Reference?

(g) You must do the actions required by this AD following the instructions in 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. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may get a copy from Bombardier Commercial Service Center, Plant 9, C.P. 6087 Succurale Centre-ville, Montreal QC H3C 3G9, Canada. You may review copies at 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/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on October 12, 2004.
Dorenda D. Baker,
Manager, Small Airplane Directorate, Aircraft Certification Service.
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