

[Federal Register: September 28, 2006 (Volume 71, Number 188)]  
[Rules and Regulations]  
[Page 56856-56859]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr28se06-3]

---

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2006-24867; Directorate Identifier 2006-NM-064-AD; Amendment 39-14773; AD 2006-20-04]**

**RIN 2120-AA64**

### **Airworthiness Directives; Bombardier Model DHC-8-102, -103, and -106 Airplanes, and Model DHC-8-200 and DHC-8-300 Series 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 Bombardier Model DHC-8-102, -103, and -106 airplanes, and Model DHC-8-200 and DHC-8-300 series airplanes. This AD requires performing a one-time general visual inspection for non-conforming chain links of chain assemblies of the elevator trim system and gust lock system, and corrective actions if necessary. This AD also requires temporary revisions to the airplane flight manuals of the affected airplanes, which describe procedures for elevator trim checks. This AD results from reports of several failures of the elevator trim chain, due to hydrogen embrittlement. We are issuing this AD to prevent breakage of the elevator trim chain, which would prevent the actual position of the elevator trim tab from being annunciated to the flightcrew. Attempting to adjust the trim tab from the full nose up or full nose down position with a broken trim chain could result in misleading information relative to takeoff trim settings and consequent loss of control on takeoff.

**DATES:** This AD becomes effective November 2, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of November 2, 2006.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada, for service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Ezra Sasson, Aerospace Engineer, Systems and Flight Test Branch, ANE-172, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, suite 410, Westbury, New York 11590; telephone (516) 228-7320; fax (516) 794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Examining the Docket**

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Bombardier Model DHC-8-102, -103, and -106 airplanes, and Model DHC-8-200 and DHC-8-300 series airplanes. That NPRM was published in the Federal Register on May 25, 2006 (71 FR 30070). That NPRM proposed to require performing a one-time inspection for non-conforming chain links of chain assemblies of the elevator trim system and gust lock system, and corrective actions if necessary. That NPRM also proposed to require temporary revisions to the airplane flight manuals of the affected airplanes, which describe procedures for elevator trim checks.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the single comment received.

### **Request To Revise Costs of Compliance**

One commenter, Horizon Air, requests that we adjust the costs of compliance in the NPRM. Horizon Air asserts that, rather than the 5 work hours specified in the NPRM to accomplish the inspection on each airplane, the figure specified by Bombardier of 15 work hours to accomplish the inspection is far more relevant. Further, Horizon Air states that all chain link assemblies will likely need to be replaced on its airplanes and asserts that, according to Bombardier, an additional 32 work hours per airplane would be needed to replace the assemblies. Horizon Air believes the costs of compliance will far exceed the estimated figure of \$400 per airplane specified in the NPRM.

We do not agree. The economic analysis of an AD is limited to the cost of actions that are actually required. The economic analysis does not consider the costs of on-condition actions, such as repairing a crack detected during a required inspection ("repair, if necessary"). Such on-condition repairs would be required—regardless of AD direction—to correct an unsafe condition identified in an airplane and to ensure that the airplane is operated in an airworthy condition, as required by the Federal Aviation Regulations. We have not changed the AD in this regard.

### **Clarification of Type of Inspection**

We specified a "general visual inspection" in the NPRM to eliminate any confusion about the proper type of inspection; however, we neglected to include a definition of this type of inspection in the NPRM. Therefore, we added Note 2 to the AD to define a general visual inspection.

## **Clarification of End-Level Effect**

We have determined that the description in the NPRM of the end-level effect of the unsafe condition is not entirely accurate. Therefore, we have revised the AD to more clearly describe the probable end-level effect of the unsafe condition on the airplane.

## **Conclusion**

We have carefully reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Costs of Compliance**

This AD affects about 166 airplanes of U.S. registry. The required inspection will take about 5 work hours per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the required inspection for U.S. operators is \$66,400, or \$400 per airplane.

## **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 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.

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 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. See the ADDRESSES section for a location to examine the regulatory evaluation.

## **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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

# AIRWORTHINESS DIRECTIVE

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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



**2006-20-04 Bombardier, Inc. (Formerly de Havilland, Inc.):** Amendment 39-14773. Docket No. FAA-2006-24867; Directorate Identifier 2006-NM-064-AD.

## Effective Date

(a) This AD becomes effective November 2, 2006.

## Affected ADs

(b) None.

## Applicability

(c) This AD applies to Bombardier Model DHC-8-102, -103, and -106 airplanes, and Model DHC-8-200 and DHC-8-300 series airplanes, certificated in any category; as identified in Bombardier Service Bulletin 8-27-105, Revision A, dated September 13, 2005.

## Unsafe Condition

(d) This AD results from reports of several failures of the elevator trim chain, due to hydrogen embrittlement. We are issuing this AD to prevent breakage of the elevator trim chain, which would prevent the actual position of the elevator trim tab from being annunciated to the flightcrew. Attempting to adjust the trim tab from the full nose up or full nose down position with a broken trim chain could result in misleading information relative to takeoff trim settings and consequent loss of control on takeoff.

## Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

## Temporary Amendments (TAs)

(f) Within 30 days after the effective date of this AD, revise the applicable airplane flight manual (AFM) of the affected airplanes by incorporating the information in the applicable TAs into the AFMs listed in Table 1 of this AD. This may be accomplished by inserting a copy of the applicable TA into the AFM. The copy of the TA may be removed from the AFM when a new revision of the AFM is released that incorporates material identical to the content of the TA.

**Table 1 – de Havilland TAs**

<b>For Airplane Model –</b>	<b>Use de Havilland TA Number –</b>	<b>Dated –</b>	<b>To the de Havilland Dash 8 Model –</b>
102	9	January 28, 2004	102 Flight Manual PSM 1-81-1A

102NS	8	January 28, 2004	102 NS Flight Manual PSM 1-81-1A
103	9	January 28, 2004	103 Flight Manual PSM 1-81-1A
103NS	8	January 28, 2004	103 NS Flight Manual PSM 1-81-1A
106	9	January 28, 2004	106 Flight Manual PSM 1-81-1A
106NS	8	January 28, 2004	106 NS Flight Manual PSM 1-81-1A
201	11	June 22, 2005	201 Flight Manual PSM 1-82-1A
201S	9	June 22, 2005	201 S Flight Manual PSM 1-82-1A
202	10	January 28, 2004	202 Flight Manual PSM 1-82-1A
202HT	8	January 28, 2004	202 HT Flight Manual PSM 1-82-1A
202S	9	June 22, 2005	202 S Flight Manual PSM 1-82-1A
301	8	January 28, 2004	301 Flight Manual PSM 1-83-1A
311	15	January 28, 2004	311 Flight Manual PSM 1-83-1A
315	9	January 28, 2004	315 Flight Manual PSM 1-83-1A

**Note 1:** The suffixes "NS," "S," and "HT," do not indicate separate airplane models; for example, a Model 102NS airplane is a Model 102 airplane.

### Inspection and Corrective Actions

(g) Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, perform a one-time general visual inspection for non-conforming chain links of the trim chain/chain assemblies of the elevator trim system and gust lock system and, before further flight, do the applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-105, Revision A, dated September 13, 2005. After accomplishing the requirements of this paragraph, operators may remove the AFM revisions required by paragraph (f) of this AD from the AFM.

**Note 2:** For the purposes of this AD, a general visual inspection is: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

### Parts Installation

(h) As of the effective date of this AD, no person may install an elevator trim chain/chain assembly on any airplane, unless the chain links of that trim chain/chain assembly are identified with the number RC-25.

### Alternative Methods of Compliance (AMOCs)

(i)(1) The Manager, New York Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

**Related Information**

(j) Canadian airworthiness directive CF-2005-38, dated October 25, 2005, also addresses the subject of this AD.

**Material Incorporated by Reference**

(k) You must use Bombardier Service Bulletin 8-27-105, Revision A, dated September 13, 2005, and the temporary amendments specified in Table 2 of this AD, as applicable, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Table 2 – Temporary Amendments Incorporated by Reference**

<b>de Havilland Temporary Amendment -</b>	<b>Dated -</b>	<b>To the de Havilland Dash 8 Model -</b>
8	January 28, 2004	102 NS Flight Manual PSM 1-81-1A
8	January 28, 2004	103 NS Flight Manual PSM 1-81-1A
8	January 28, 2004	106 NS Flight Manual PSM 1-81-1A
8	January 28, 2004	202 HT Flight Manual PSM 1-82-1A
8	January 28, 2004	301 Flight Manual PSM 1-83-1A
9	January 28, 2004	102 Flight Manual PSM 1-81-1A
9	January 28, 2004	103 Flight Manual PSM 1-81-1A
9	January 28, 2004	106 Flight Manual PSM 1-81-1A
9	June 22, 2005	201 S Flight Manual PSM 1-82-1A
9	June 22, 2005	202 S Flight Manual PSM 1-82-1A
9	January 28, 2004	315 Flight Manual PSM 1-83-1A
10	January 28, 2004	202 Flight Manual PSM 1-82-1A
11	June 22, 2005	201 Flight Manual PSM 1-82-1A
15	January 28, 2004	311 Flight Manual PSM 1-83-1A

Issued in Renton, Washington, on September 14, 2006.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-8226 Filed 9-27-06; 8:45 am]