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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2005-20756; Directorate Identifier 2004-NM-52-AD; Amendment 39-14112; AD 2005-11-10]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Bombardier Model DHC-8-102, -103, -106, -201, -202, -301, -311 and -315 airplanes. This AD requires installation of check valves in Numbers 1 and 2 hydraulic systems, removal of the filters from the brake shuttle valves, and removal of the internal garter spring from the brake shuttle valves. This AD results from two instances of brake failure due to the loss of hydraulic fluid from both Numbers 1 and 2 hydraulic systems and one incident of brake failure due to filter blockage in the shuttle valve. We are issuing this AD to prevent the loss of hydraulic power from both hydraulic systems, which could lead to reduced controllability of the airplane, and to prevent brake failure, which could result in the loss of directional control on the ground and consequent departure from the runway during landing.

**DATES:** This AD becomes effective July 12, 2005.

The incorporation by reference of certain publications listed in the AD is approved by the Director of the Federal Register as of July 12, 2005.

**ADDRESSES:** For service information identified in this AD, contact Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada.

Docket: The AD docket contains the proposed AD, comments, and any final disposition. You can examine the 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 U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Washington, DC. This docket number is FAA-2005-20756; the directorate identifier for this docket is 2004-NM-52-AD.

**FOR FURTHER INFORMATION CONTACT:** Ezra Sasson, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, 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:** The FAA proposed to amend 14 CFR part 39 with an AD for certain Bombardier Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. That action, published in the Federal Register on March 30, 2005 (70 FR 16182), proposed to require installation of check valves in Numbers 1 and 2 hydraulic systems, removal of the filters from the brake shuttle valves, and removal of the internal garter spring from the brake shuttle valves.

**Comments**

We provided the public the opportunity to participate in the development of this AD. No comments have been submitted on the proposed AD or on the determination of the cost to the public.

**Explanation of Editorial Change**

We have revised the Costs of Compliance section of this AD to correct a mathematical error.

**Conclusion**

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

**Costs of Compliance**

The following table provides the estimated costs for U.S. operators to comply with this AD:

<b>ESTIMATED COSTS</b>						
<b>Action</b>	<b>Work hours</b>	<b>Average labor rate per hour</b>	<b>Parts</b>	<b>Cost per airplane</b>	<b>Number of U.S.-registered airplanes</b>	<b>Average fleet cost</b>
Installation of check valves in Numbers 1 and 2 hydraulic systems	3	\$65	\$279-\$405	\$474-\$600	179	\$84,846-\$107,400
Removal of filters and internal garter springs from brake shuttle valves	3	65	252-1,360	447-1,555	179	80,013-278,345

**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. 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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):

# 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).

**2005-11-10 Bombardier, Inc. (Formerly de Havilland, Inc.):** Amendment 39-14112. Docket No. FAA-2005-20756; Directorate Identifier 2004-NM-52-AD.

## Effective Date

- (a) This AD becomes effective July 12, 2005.

## Affected ADs

- (b) None.

## Applicability

- (c) This AD applies to Bombardier Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category; serial numbers 003 through 593 inclusive.

## Unsafe Condition

- (d) This AD was prompted by two instances of brake failure due to the loss of hydraulic fluid from both Numbers 1 and 2 hydraulic systems and one incident of brake failure due to filter blockage in the shuttle valve. We are issuing this AD to prevent the loss of hydraulic power from both hydraulic systems, which could lead to reduced controllability of the airplane, and to prevent brake failure, which could result in the loss of directional control on the ground and consequent departure from the runway during landing.

## 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.

## Installation of Check Valves in Numbers 1 and 2 Hydraulic Systems

- (f) Within 12 months after the effective date of this AD, install check valves in the Numbers 1 and 2 hydraulic return systems by incorporating Modsum 8Q101320 in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-29-36, Revision "B," dated January 6, 2003.

## **Removal of Filters and Internal Garter Spring From the Brake Shuttle Valves**

(g) Within 12 months after the effective date of this AD, modify the brake shuttle valves, part number (P/N) 5084-1, by doing the actions in either paragraph (g)(1) or (g)(2) of this AD. The installation specified in paragraph (f) of this AD must be done prior to doing any actions in accordance with Bombardier Service Bulletin 8-29-37, Revision "A," dated September 19, 2003 (Modsum 8Q101316), that are specified in paragraphs (g)(1) and (g)(2) of this AD.

(1) Remove the filter assemblies by incorporating Modsum 8Q101422 in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-29-39, dated July 14, 2003; and within 40,000 flight hours after removing the filter assemblies, remove the internal garter spring by incorporating Modsum 8Q101316 in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-29-37, Revision "A," dated September 19, 2003.

(2) Remove the filter assemblies and internal garter spring by incorporating Modsum 8Q101316 in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-29-37, Revision "A," dated September 19, 2003.

**Note 1:** You can mix shuttle valves that have incorporated either Modsum 8Q101316 or 8Q101422 on the same airplane.

### **Actions Accomplished According to Previous Issues of Service Bulletins**

(h) Installations accomplished before the effective date of this AD according to Bombardier Service Bulletin 8-29-36, dated December 6, 2002; and Revision "A," dated December 12, 2002, are considered acceptable for compliance with the corresponding installation specified in paragraph (f) of this AD.

(i) Removals of the filters and internal garter springs accomplished before the effective date of this AD according to Bombardier Service Bulletin 8-29-37, dated July 15, 2003, are considered acceptable for compliance with the corresponding removals specified in paragraph (g) of this AD.

### **Alternative Methods of Compliance (AMOCs)**

(j) 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.

### **Related Information**

(k) Canadian airworthiness directive CF-2004-02, dated February 9, 2004, also addresses the subject of this AD.

### **Material Incorporated by Reference**

(l) You must use the documents listed in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approves the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get copies of the service information, contact Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. To view the AD docket, go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC. To review copies of the service

information, go to 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 1.—MATERIAL INCORPORATED BY REFERENCE**

<b>Bombardier service bulletin</b>	<b>Revision level</b>	<b>Date</b>
8-29-36	B	January 6, 2003.
8-29-37	A	September 19, 2003.
8-29-39	Original	July 14, 2003.

Issued in Renton, Washington, on May 26, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-11054 Filed 6-6-05; 8:45 am]

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