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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2007-28371; Directorate Identifier 2007-NM-040-AD; Amendment 39-15234; AD 2007-21-16]**

**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:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated 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] roll spoiler cable failure could result in an unacceptable amount of roll spoiler deflection, which could result in reduced controllability of the aircraft. \* \* \*

\* \* \* \* \*

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

**DATES:** This AD becomes effective November 21, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 21, 2007.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**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:**

### **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 June 11, 2007 (72 FR 32027). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

It has been identified that a roll spoiler cable failure could result in an unacceptable amount of roll spoiler deflection, which could result in reduced controllability of the aircraft. To address this condition, Modsum 8Q100898 has been issued to introduce a spoiler cable disconnect sensing device. This modification has been installed in production on aircraft serial numbers 562 and subsequent. An associated operational check has also been introduced (See Note 1 [of the MCAI]).

In addition, Modsum 8Q101443 has been issued to address a potential spoiler cable interference condition on aircraft serial numbers 003 through 123, 125 through 130, 132 through 136, 138 and 139, which do not yet have a spoiler cable tension regulator (Mod[ification] 8/0708) installed.

Following incorporation of the spoiler cable disconnect sensing device on several aircraft, it was noted that, in the event of a spoiler cable failure, only the ROLL SPLR INBD HYD caution light will be illuminated until the aircraft speed decreases below 135 kts (knots), at which time the ROLL SPLR OUTBD HYD caution light will also be illuminated. Modsum 8Q101445 has been issued to rework the sensing circuit caution light indication to ensure that it is consistent for spoiler cable disconnects above and below 135 kts. This modification has been installed in production on aircraft serial numbers 600 and subsequent.

The corrective action includes installing a spoiler cable disconnect sensing device, correcting a potential spoiler cable interference condition, and reworking the spoiler cable disconnect sensing circuit, as applicable. You may obtain further information by examining the MCAI in the AD docket.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comment received.

### **Request To Refer to Latest Revision of a Service Bulletin**

Piedmont Airlines points out that the current revision level of Bombardier Service Bulletin 8-27-89 is Revision 'G,' dated April 12, 2007. (We referred to Bombardier Service Bulletin 8-27-89, Revision 'E,' dated January 27, 2005, as the appropriate source of service information for accomplishing certain actions specified in the NPRM.)

We infer that the commenter would like us to refer to Revision 'G' of the service bulletin in the AD. We agree. Revision 'G' was issued to correctly identify certain document numbers. No additional work is introduced by Revision 'G' of the service bulletin. We have revised paragraphs (f)(1) and (f)(2) of this AD to refer to Revision 'G' of the service bulletin. We have also revised paragraphs (f)(4) and (f)(5) of this AD to credit operators who have accomplished the actions in accordance with

Bombardier Service Bulletin 8-27-89, Revision 'E,' dated January 27, 2005, or in accordance with Bombardier Service Bulletin 8-27-89, Revision 'F,' dated March 14, 2007.

## **Conclusion**

We 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 determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

## **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 our FAA policies. Any such differences are highlighted in a Note within the AD.

## **Costs of Compliance**

We estimate that this AD will affect 166 products of U.S. registry. We also estimate that it will take about 13 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 \$1,000 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$338,640, or \$2,040 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 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 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 Operations office 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 Operations 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 adding the following new AD:



**2007-21-16 Bombardier, Inc.:** Amendment 39-15234. Docket No. FAA-2007-28371; Directorate Identifier 2007-NM-040-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective November 21, 2007.

**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 599.

**Subject**

- (d) Air Transport Association (ATA) of America Code 27: Flight controls.

**Reason**

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

It has been identified that a roll spoiler cable failure could result in an unacceptable amount of roll spoiler deflection, which could result in reduced controllability of the aircraft. To address this condition, Modsum 8Q100898 has been issued to introduce a spoiler cable disconnect sensing device. This modification has been installed in production on aircraft serial numbers 562 and subsequent. An associated operational check has also been introduced (See Note 1 [of the MCAI]).

In addition, Modsum 8Q101443 has been issued to address a potential spoiler cable interference condition on aircraft serial numbers 003 through 123, 125 through 130, 132 through 136, 138 and 139, which do not yet have a spoiler cable tension regulator (Mod[ification] 8/0708) installed.

Following incorporation of the spoiler cable disconnect sensing device on several aircraft, it was noted that, in the event of a spoiler cable failure, only the ROLL SPLR INBD HYD caution light will be illuminated until the aircraft speed decreases below 135 kts (knots), at which time the ROLL SPLR OUTBD HYD caution light will also be illuminated. Modsum 8Q101445 has been issued to rework the sensing circuit caution light indication to ensure that it is consistent for spoiler cable disconnects above and below 135 kts. This modification has been installed in production on aircraft serial numbers 600 and subsequent.

The corrective action includes installing a spoiler cable disconnect sensing device, correcting a potential spoiler cable interference condition, and reworking the spoiler cable disconnect sensing circuit, as applicable.

## **Actions and Compliance**

(f) Within 24 months after the effective date of this AD unless already done, do the following actions.

(1) Applicable to airplane serial numbers 124, 131, 137, and 140 through 561: Incorporate Modsum 8Q100898 to install the spoiler cable disconnect sensing device. Bombardier Service Bulletin 8-27-89, Revision 'G,' dated April 12, 2007, provides approved instructions for incorporating Modsum 8Q100898. (See paragraph (f)(4) of this AD.)

(2) Applicable to airplane serial numbers 003 through 123, 125 through 130, 132 through 136, 138, and 139: Incorporate Modsums 8Q100898 and 8Q101443 to install the spoiler cable disconnect sensing device and to correct potential spoiler cable interference condition. Bombardier Service Bulletin 8-27-89, Revision 'G,' dated April 12, 2007, provides approved instructions for incorporating Modsums 8Q100898 and 8Q101443. (See paragraphs (f)(4) and (f)(5) of this AD.)

(3) Applicable to airplane serial numbers 003 through 599: Incorporate Modsum 8Q101445 to rework the spoiler cable disconnect sensing circuit. Bombardier Service Bulletin 8-27-103, Revision 'B,' dated January 24, 2007, provides approved instructions for incorporating Modsum 8Q101445. (See paragraph (f)(6) of this AD.) If Modsum 8Q100898 has not yet been incorporated, incorporate Modsum 8Q101445 in conjunction with Modsum 8Q100898. Refer to paragraph (f)(1) or (f)(2) of this AD, as applicable.

Note 1: The mandatory operational check requirement for the spoiler cable disconnect system (Modsum 8Q100898) is detailed in Task Number 2760/14, dated November 21, 2003, of Part 2 of the applicable de Havilland Dash 8 Maintenance Program Manual (MPM), Airworthiness Limitations (AWL). It was introduced by de Havilland Dash 8 Temporary Revisions AWL-88 (series 100), AWL 2-28 (series 200), and AWL 3-95 (series 300), all dated August 5, 2004. Temporary Revision AWL-88 (Task Number 2760/14) has since been incorporated in Revision 17, dated April 19, 2005, of Part 2 of the AWLs of the MPM for Model DHC-8-100 series airplanes.

(4) Installation of Modsum 8Q100898, in accordance with Bombardier Service Bulletin 8-27-89, dated January 31, 2002; Revision 'A,' dated September 10, 2002; Revision 'B,' dated November 17, 2003; Revision 'C,' dated March 10, 2004; Revision 'D,' dated June 29, 2004; Revision 'E,' dated January 27, 2005; or Revision 'F,' dated March 14, 2007; also meets the requirements of paragraphs (f)(1) and (f)(2) of this AD.

(5) Installation of Modsum 8Q101443, in accordance with Bombardier Service Bulletin 8-27-89, Revision 'C,' dated March 10, 2004; Revision 'D,' dated June 29, 2004; Revision 'E,' dated January 27, 2005; or Revision 'F,' dated March 14, 2007; also meets the requirements of paragraph (f)(2) of this AD for this particular Modsum.

(6) Installation of Modsum 8Q101445, in accordance with Bombardier Service Bulletin 8-27-103, dated November 5, 2003; or Revision 'A,' dated February 12, 2004; also meets the requirements of paragraph (f)(3) of this AD.

## **FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows: No differences.

## Other FAA AD Provisions

(g) 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: Ezra Sasson, Aerospace Engineer; New York ACO, FAA, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7320; 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, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(h) Refer to MCAI Canadian Airworthiness Directive CF-2006-13, dated June 6, 2006; Bombardier Service Bulletin 8-27-89, Revision 'G,' dated April 12, 2007; and Bombardier Service Bulletin 8-27-103, Revision 'B,' dated January 24, 2007; for related information.

## Material Incorporated by Reference

(i) You must use the service information specified in Table 1 of this AD 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 this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

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

(3) You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington; 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>.

**Table 1 – Material Incorporated by Reference**

<b>Service Bulletin</b>	<b>Revision Level</b>	<b>Date</b>
Bombardier Service Bulletin 8-27-89	'G'	April 12, 2007
Bombardier Service Bulletin 8-27-103	'B'	January 24, 2007

Issued in Renton, Washington, on October 9, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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