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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-0043; Directorate Identifier 2010-NM-192-AD; Amendment 39-16700; AD 2011-11-02]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Model DHC-8-400 Series 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) issued by an airworthiness authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

During production quality inspections of the aeroplane fuel motive flow system, it was discovered that some motive flow check valves (MFCV) were manufactured with an outlet fitting containing red anodized threads. These MFCV do not provide adequate electrical bonding between the valve and the adjacent fitting.

In the absence of proper electrical bonding within the motive flow system, the aeroplane fuel tank could be exposed to ignition sources in the case of a lightning strike.

\* \* \* \* \*

The unsafe condition is the potential for ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

**DATES:** This AD becomes effective June 22, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 22, 2011.

**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:** James Delisio, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7321; 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 February 23, 2011 (76 FR 9982). The MCAI states:

During production quality inspections of the aeroplane fuel motive flow system, it was discovered that some motive flow check valves (MFCV) were manufactured with an outlet fitting containing red anodized threads. These MFCV do not provide adequate electrical bonding between the valve and the adjacent fitting.

In the absence of proper electrical bonding within the motive flow system, the aeroplane fuel tank could be exposed to ignition sources in the case of a lightning strike.

This [TCCA] directive is issued to [do a general visual inspection to] verify the proper configuration of the MFCV and if required, replace the affected MFCV with a MFCV that has a chemically filmed (gold color) outlet valve fitting, which provides adequate electrical bonding.

The unsafe condition is the potential for ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane. 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 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.

### **Costs of Compliance**

Based on the service information, we estimate that this AD affects about 67 products of U.S. registry. We also estimate that it takes about 33 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$130 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$196,645, or \$2,935 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:



**2011-11-02 Bombardier, Inc.:** Amendment 39-16700. Docket No. FAA-2011-0043; Directorate Identifier 2010-NM-192-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective June 22, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category; having serial numbers 4001 through 4190 inclusive, 4199 through 4201 inclusive, and 4203 through 4216 inclusive; equipped with a motive flow check valve (MFCV) having part number (P/N) 2960018-101.

**Subject**

(d) Air Transport Association (ATA) of America Code 28: Fuel.

**Reason**

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

During production quality inspections of the aeroplane fuel motive flow system, it was discovered that some motive flow check valves (MFCV) were manufactured with an outlet fitting containing red anodized threads. These MFCV do not provide adequate electrical bonding between the valve and the adjacent fitting.

In the absence of proper electrical bonding within the motive flow system, the aeroplane fuel tank could be exposed to ignition sources in the case of a lightning strike.

\* \* \* \* \*

The unsafe condition is the potential for ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

**Compliance**

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

## **Actions**

(g) Within 6,000 flight hours after the effective date of this AD, do a general visual inspection for red anodized threads of the outlet fitting of the MFCV having P/N 2960018-101 installed in the left and right wing fuel tanks, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-28-08, dated March 11, 2010. If the MFCV has a chemical film coating (gold color) outlet fitting, no further action is required by AD, except as required by paragraph (i) of this AD.

(h) If during the inspection required by paragraph (g) of this AD, a MFCV having a red anodized check valve outlet fitting is found: Before further flight, replace the MFCV with a MFCV that has a chemical film coating (gold color) check valve outlet fitting, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-28-08, dated March 11, 2010.

(i) As of the effective date of this AD, no person may install a replacement MFCV having P/N 2960018-101, with a red anodized check valve outlet fitting, on any airplane.

## **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

## **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the New York ACO, send it to Attn: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(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.

## **Related Information**

(k) Refer to Transport Canada Civil Aviation Airworthiness Directive CF-2010-21, dated July 20, 2010; and Bombardier Service Bulletin 84-28-08, dated March 11, 2010; for related information.

## **Material Incorporated by Reference**

(l) You must use Bombardier Service Bulletin 84-28-08, dated March 11, 2010, 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., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; e-mail [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference 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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on May 6, 2011.

Kalene C. Yanamura,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.