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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0154; Directorate Identifier 2011-NM-016-AD; Amendment 39-16624; AD 2011-05-14]

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; request for comments.

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:

Two cases of the main landing gear (MLG) alternate extension system (AES) cam mechanism failure were found during line checks. The cam mechanism operates the cable to open the MLG door and releases the MLG uplock in sequence. In the case where it is necessary to deploy the MLG using the AES, the failure of the MLG AES cam mechanism on one side will lead to an unsafe asymmetrical landing configuration.

* * * * *

The unsafe condition is possible loss of control during landing. This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective March 25, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of March 25, 2011.

We must receive comments on this AD by April 25, 2011.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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 this AD, 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.

FOR FURTHER INFORMATION CONTACT: Fabio Buttitta, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7303; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

The Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Emergency Airworthiness Directive CF-2011-01, dated January 17, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Two cases of the main landing gear (MLG) alternate extension system (AES) cam mechanism failure were found during line checks. The cam mechanism operates the cable to open the MLG door and releases the MLG uplock in sequence. In the case where it is necessary to deploy the MLG using the AES, the failure of the MLG AES cam mechanism on one side will lead to an unsafe asymmetrical landing configuration.

Preliminary investigation indicates that the cam mechanism failure may have occurred and remained dormant after a previous AES operation. The cam mechanism may not have fully returned to the normal rested position. With the cam mechanism out of normal rested position, normal powered landing gear door operation could introduce sufficient loads to fracture the cam mechanism or rupture the door release cable.

This directive mandates the initial and subsequent [detailed] inspections for proper operation of the MLG AES cam mechanism, and rectify [repair or replace cam assembly with new or serviceable cam assembly] as necessary.

The unsafe condition is possible loss of control during landing. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Bombardier has issued Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between the 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 FAA policies. Any such differences are highlighted in a Note within the AD.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because two cases of the main landing gear (MLG) alternate extension system (AES) cam mechanism failure were found during line checks. The cam mechanism operates the cable to open the MLG door and releases the MLG uplock in sequence. In the case where it is necessary to deploy the MLG using the AES, the failure of the MLG AES cam mechanism on one side will lead to an unsafe asymmetrical landing configuration. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2011-0154; Directorate Identifier 2011-NM-016-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

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.

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:



2011-05-14 Bombardier, Inc.: Amendment 39-16624. Docket No. FAA-2011-0154; Directorate Identifier 2011-NM-016-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective March 25, 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, serial numbers 4001 and subsequent.

Subject

(d) Air Transport Association (ATA) of America Code 32: Landing Gear.

Reason

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

Two cases of the main landing gear (MLG) alternate extension system (AES) cam mechanism failure were found during line checks. The cam mechanism operates the cable to open the MLG door and releases the MLG uplock in sequence. In the case where it is necessary to deploy the MLG using the AES, the failure of the MLG AES cam mechanism on one side will lead to an unsafe asymmetrical landing configuration.

* * * * *

The unsafe condition is possible loss of control during landing.

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 50 flight hours or 10 days after the effective date of this AD, whichever occurs first, do a detailed inspection for proper operation of the MLG AES cam mechanism, in accordance with paragraph A) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011. Repeat the inspection thereafter at intervals not to exceed 50 flight hours or 10 days, whichever occurs first.

(1) If the cam mechanism is found to reset to the normal rested position without any sticking or binding, it is operating properly.

(2) If the cam mechanism has not reset to its normal rested position, or if any sticking or binding is observed, before further flight, remove the cam assembly, in accordance with paragraph A) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011, and do the actions in paragraph (g)(2)(i) or (g)(2)(ii) of this AD.

(i) Repair the cam mechanism assembly, including doing detailed inspections for discrepancies (including an inspection to determine proper operation, an inspection for damage, an inspection for corrosion and cadmium coating degradation, and inspections to determine dimensions are within the limits specified in paragraph B) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011), in accordance with paragraph B) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011, and install the repaired cam assembly in accordance with paragraph C) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011.

(ii) Install a new or serviceable cam assembly, in accordance with paragraph C) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011.

(3) If the cam mechanism is found damaged or inoperative during the repair specified in paragraph (g)(2)(i) of this AD, or if any discrepancies are found and Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011, does not specify repairs for those discrepancies, or repairs specified in paragraph (g)(2)(i) of this AD cannot be accomplished: Before further flight, repair and reinstall using a method approved by the Manager, ANE-170, New York Aircraft Certification Office (ACO), FAA, or Transport Canada Civil Aviation (TCCA) (or its delegated agent), or install new or serviceable cam assembly in accordance with paragraph C) of Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011.

Credit for Actions Accomplished in Accordance With Previous Service Information

(h) Actions done before the effective date of this AD in accordance with Bombardier 8/4-32-0160, Issue 1, dated January 14, 2011, are acceptable for compliance with the corresponding requirements of this AD.

FAA AD Differences

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

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANE-170, New York ACO, 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 manager of the 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, 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

(j) Refer to MCAI Canadian Emergency Airworthiness Directive CF-2011-01, dated January 17, 2011; and Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011; for related information.

Material Incorporated by Reference

(k) You must use Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011, to do the actions required by this AD, unless the AD specifies otherwise. Bombardier Repair Drawing 8/4-32-0160, Issue 2, dated January 18, 2011, contains the following effective pages:

Sheet number shown on page	Issue level shown on page	Date shown on page
1	2	January 18, 2011
2, 3, 11	2	None shown *
4-10	1	None shown *

(* The issue date of this document is found only on the first page of the document; no other page of this document contains this information.)

(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; 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.

Issued in Renton, Washington, on February 22, 2011.

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