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[Page 61288-61291]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-29235; Directorate Identifier 2007-NM-232-AD; Amendment 39-15245; AD 2007-22-09]

RIN 2120-AA64

Airworthiness Directives; Bombardier Model DHC-8-400 Series Airplanes

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

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bombardier Model DHC-8-400 series airplanes. This AD requires an inspection to detect discrepancies of the main landing gear (MLG) system, an inspection of the jam nut of the retract actuator of the MLGs to ensure the wire lock is in place and the nut is secured, an inspection of the retract actuator for any signs of corrosion or wear, and applicable related investigative and corrective actions if necessary. This AD also requires submitting an inspection report to Bombardier. This AD results from two reports of collapse of MLGs within a few days of each other. We are issuing this AD to detect and correct potential failure of major components of the MLG assembly and attachments, which could result in the possible collapse of a MLG and consequent damage to the airplane and injury to people or damage to property on the ground.

DATES: This AD becomes effective November 14, 2007.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 14, 2007.

We must receive comments on this AD by November 29, 2007.

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 W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility 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 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: Jon Hjelm, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7323; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA), which is the airworthiness authority for Canada, notified us that an unsafe condition may exist on certain Bombardier Model DHC-8-400 series airplanes. TCCA advises that, on September 9, 2007, a main landing gear (MLG) collapsed on a Bombardier Model DHC-8-400 series airplane during landing, and that two days later on September 11, 2007, another MLG collapsed on a Bombardier Model DHC-8-400 series airplane during landing. It has been determined that the root cause of both MLG failures was a failure of the retract actuator during gear extension. This failure allowed the gear to fall unrestricted with sufficient force to break the over-center drag strut. The reason for the component failure was determined to be caused by internal corrosion of the threads at the rod end of the retract actuator. Potential failure of the major components of the MLG assembly and attachments, if not corrected, could result in the possible collapse of the MLG and consequent damage to the airplane and injury to people or damage to property on the ground.

Relevant Service Information

Bombardier has issued DHC-8 Series 400 Maintenance Requirements Manual (PSM 1-84-7), Part 1 (Maintenance Review Board Report), tasks Z700-03E (left hand) and Z700-04E (right hand). These tasks describe procedures for doing a general visual inspection to detect discrepancies of the left- and right-hand MLG systems.

Bombardier also has issued Repair Drawing (RD) 8/4-32-059, Issue 4, dated September 14, 2007. Bombardier RD 8/4-32-059 refers to Goodrich Service Concession Request SCR 086-07, Revision C, dated September 14, 2007, as an additional source of service information for accomplishing the procedures in the RD. These documents describe procedures for doing an inspection of the retract actuator for any signs of corrosion or wear, and doing applicable corrective actions if necessary, which include adjusting the retracted length of the rod end, torquing the jam nut, installing a wire lock, and lubricating the piston if necessary. These documents also describe procedures for doing a detailed inspection of affected parts for any signs of corrosion or wear, and doing applicable related investigative and corrective actions if necessary. The related investigative actions involve visually inspecting the threads of the piston pin and the thread relief area for evidence of corrosion. The corrective actions include, but are not limited to, removing the wire lock, backing off the jam nut and rod end out of the piston, replacing any discrepant retract actuator or actuator assembly, coating certain parts with a corrosion inhibitor compound, and reworking any corroded threaded area of the piston.

TCCA mandated the RD and Bombardier DHC-8 Series 400 Maintenance Requirements Manual (PSM 1-84-7), Part 1 (Maintenance Review Board Report), tasks Z700-03E (left hand) and Z700-04E (right hand), and issued Canadian airworthiness directive CF-2007-20, dated September 12, 2007, to ensure the continued airworthiness of these airplanes in Canada.

FAA's Determination and Requirements of this AD

These airplanes are manufactured in Canada and are type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, TCCA has kept the FAA informed of the situation described above. We have examined TCCA's findings, evaluated all pertinent information, and determined that we need to issue an AD for products of this type design that are certificated for operation in the United States.

Therefore, we are issuing this AD to detect and correct potential failure of major components of the MLG assembly and attachments, which could result in the possible collapse of a MLG and consequent damage to the airplane and injury to people or damage to property on the ground. This AD requires doing a general visual inspection to detect discrepancies of the left- and right-hand MLG systems, doing a general visual inspection of the jam nut of the retract actuator of the left- and right-hand MLGs to ensure the wire lock is in place and the nut is secured, doing a detailed inspection of the retract actuator for any signs of corrosion or wear, and doing applicable related investigative and corrective actions if necessary. This AD also requires reporting the inspection results to Bombardier.

Interim Action

We consider this AD interim action. The inspection reports that are required by this AD will enable the manufacturer to obtain better insight into the nature, cause, and extent of the problem, and eventually to develop final action to address the unsafe condition. Once final action has been identified, we might consider further rulemaking.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2007-29235; Directorate Identifier 2007-NM-232-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 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 the regulation:

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. 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):



2007-22-09 Bombardier, Inc. (Formerly de Havilland, Inc.): Amendment 39-15245. Docket No. FAA-2007-29235; Directorate Identifier 2007-NM-232-AD.

Effective Date

(a) This AD becomes effective November 14, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Bombardier Model DHC-8-400 series airplanes, certificated in any category; serial number 003 and subsequent.

Unsafe Condition

(d) This AD results from two reports of collapse of the main landing gear (MLG) within a few days of each other. We are issuing this AD to detect and correct potential failure of major components of the MLG assembly and attachments, which could result in the possible collapse of the MLG and consequent damage to the airplane and injury to people or damage to property on the ground.

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.

General Visual Inspection of MLG System and Corrective Actions

(f) Before further flight, do a general visual inspection to detect discrepancies of the left- and right-hand MLG system and do all applicable corrective actions, in accordance with a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA; or the Transport Canada Civil Aviation (TCCA) (or its delegated agent). Bombardier DHC-8 Series 400 Maintenance Requirements Manual (PSM 1-84-7), Part 1 (Maintenance Review Board Report), tasks Z700-03E (left hand) and Z700-04E (right hand), is one approved method for accomplishing the general visual inspection.

Note 1: 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."

General Visual Inspection of the Jam Nut of the Retract Actuator of the MLG and Corrective Actions

(g) Before further flight, do a general visual inspection of the jam nut of the retract actuator of the left- and right-hand MLG to ensure the wire lock is in place and the nut is secured. If the wire lock is not in place or if the jam nut is not secured, before further flight, adjust the retracted length of the rod end, torque the jam nut, install a wire lock, and lubricate the piston, as applicable, in accordance with Bombardier Repair Drawing (RD) 8/4-32-059, Issue 4, dated September 14, 2007.

Note 2: Bombardier Repair Drawing 8/4-32-059 refers to Goodrich Service Concession Request SCR 086-07, Revision C, dated September 14, 2007 (specifically item 14), as an additional source of service information for adjusting the retracted length of the rod end, torquing the jam nut, installing a wire lock, and lubricating the piston if necessary, as required by paragraph (g) of this AD.

Detailed Inspection of the Retract Actuator of the MLG

(h) For airplanes on which the retract actuator of the MLG, part number 46550-7 or 46550-9, has accumulated 8,000 or more total landings or has been in-service 4 or more years since new as of the effective date of this AD: Before further flight, do a detailed inspection of affected parts for any signs of corrosion or wear, and applicable related investigative and corrective actions, in accordance with Bombardier Repair Drawing 8/4-32-059, Issue 4, dated September 14, 2007.

Note 3: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

(i) For airplanes other than those identified in paragraph (h) of this AD with a retract actuator of the MLG, part number 46550-7 or 46550-9: Do a detailed inspection of affected parts for any signs of corrosion or wear, and applicable related investigative and corrective actions, in accordance with Bombardier RD 8/4-32-059, Issue 4, dated September 14, 2007; at the later of the times specified in paragraphs (i)(1) and (i)(2) of this AD.

(1) Before the accumulation of 4,000 total landings or 2 years since new, whichever occurs first.

(2) Within 500 flight hours after the effective date of this AD.

Note 4: Bombardier Repair Drawing 8/4-32-059 refers to Goodrich Service Concession Request SCR 086-07, Revision C, dated September 14, 2007, as an additional source of service information for accomplishing the applicable related investigative and corrective actions required by paragraphs (h) and (i) of this AD.

Actions Done in Accordance with Previous Issues of Service Information

(j) Actions done before the effective date of this AD in accordance with Bombardier Repair Drawing 8/4-32-059, Issue 1, dated September 12, 2007; Issue 2, dated September 13, 2007; or Issue 3, dated September 13, 2007; are acceptable for compliance with the corresponding actions specified in paragraphs (g) through (i) of this AD.

Reporting Requirement

(k) Submit a report of any discrepancy found during any inspection required by this AD to the Bombardier Technical Help Desk, at the applicable time specified in paragraph (k)(1) or (k)(2) of this AD; telephone (416) 375-4000; fax (416) 375-4539; e-mail: thd.qseries@aero.bombardier.com.

Under the provisions of the

Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056.

(1) If the inspection was done after the effective date of this AD: Submit the report within 7 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 7 days after the effective date of this AD.

Special Flight Permit

(1) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be inspected (if the operator elects to do so), provided that the procedures and limitations in paragraphs (1)(1) and (1)(2) of this AD are adhered to.

(1) Flight Crew Limitations and Procedures:

(i) Ferry flight with gear extended and pinned.

(ii) Landing to be conducted at a minimum descent rate.

(iii) Minimize braking on landing.

(iv) Flight to be conducted in accordance with Section 4.8 of the Aircraft Operating Manual (AOM).

(v) Essential crew only on board.

(vi) Flight in known or forecast icing condition is prohibited.

(2) Maintenance Procedures:

(i) Do the general visual inspection required by paragraph (g) of this AD.

(ii) Do the general visual inspections of the stabilizer stay and the hinge points of the MLG for general condition and security, in accordance with Bombardier Q400 All Operator Message 236A, dated September 11, 2007.

(iii) If no discrepancy is detected during the inspections required by paragraph (1)(2)(i) and (1)(2)(ii) of this AD, before further flight, insert the ground lock pins and a wire lock of the MLG in place.

(iv) Ensure the ground lock of the nose landing gear is engaged.

Alternative Methods of Compliance (AMOCs)

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

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. 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.

Related Information

(n) Canadian airworthiness directive CF-2007-20, dated September 12, 2007, also addresses the subject of this AD.

Material Incorporated by Reference

(o) You must use Bombardier Repair Drawing 8/4-32-059, Issue 4, dated September 14, 2007, 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 this document 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 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>.

Issued in Renton, Washington, on October 19, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-21178 Filed 10-29-07; 8:45 am]