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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2014-0752; Directorate Identifier 2014-NM-079-AD]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc. Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2014-06-08, for certain Bombardier, Inc. Model DHC-8-100, -200, and -300 series airplanes.

AD 2014-06-08 currently requires repetitive functional checks of the nose and main landing gear, and corrective actions if necessary; and also provides optional terminating action modification for the repetitive functional checks. Since we issued AD 2014-06-08, we have determined that the optional terminating action modification is necessary to address the identified unsafe condition. This proposed AD would also require the terminating action modification. We are proposing this AD to detect and correct a false down-and-locked landing gear indication, which, on landing, could result in possible collapse of the landing gear.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**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, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0752; 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 proposed 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:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2014-0752; Directorate Identifier 2014-NM-079-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on 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 proposed AD.

## **Discussion**

On March 19, 2014, we issued AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014). AD 2014-06-08 requires actions intended to address an unsafe condition on certain Bombardier, Inc. Model DHC-8-100, -200, and -300 series airplanes.

Since we issued AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014), we have determined that the optional terminating modification specified in AD 2014-06-08 is necessary to address the identified unsafe condition.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-11, dated February 13, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition certain Bombardier, Inc. Model DHC-8 airplanes. The MCAI states:

During an in-service event where the landing gear control panel indicated an unsafe nose landing gear, the flight crew observed that all three green lights were illuminated on the emergency downlock indication system. The nose landing gear was not down and locked, and collapsed during landing.

Investigation found ambient light and wiring shorts can lead to incorrect illumination of the green lights on the emergency downlock indication system.

This [Canadian] AD mandates the functional check of the nose and main landing gear alternate indication phototransistors and the modification of the emergency downlock indication system [incorporation of Modsums 8Q101955, 8Q101968, and 8Q101969 as applicable].

The unsafe condition is a false down-and-locked landing gear indication, which, on landing, could result in possible collapse of the landing gear. The proposed modification consists of installing certain new electrical components and cable assemblies.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0752.

**FAA’s Determination and Requirements of this Proposed 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 proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

**“Contacting the Manufacturer” Paragraph in this Proposed AD**

Since late 2006, we have included a standard paragraph titled “Airworthy Product” in all MCAI ADs in which the FAA develops an AD based on a foreign authority’s AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to the FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase “its delegated agent” to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

One commenter to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) stated the following: “The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin.”

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the

identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it “Contacting the Manufacturer.” This paragraph now clarifies that for any requirement in this proposed AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, Transport Canada Civil Aviation (TCCA), or Bombardier’s TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer’s message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers’

service instructions that are “Required for Compliance” with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

We also have decided not to include a generic reference to either the “delegated agent” or “design approval holder (DAH) with State of Design Authority design organization approval,” but instead we have provided the specific delegation approval granted by the State of Design Authority for the DAH.

**Clarification of Repair Approval Required by Paragraph (g) of AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014)**

In paragraph (g) of AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014), the functional check and corrective actions are done in accordance with Bombardier Service Bulletin 8-32-173, Revision A, dated December 17, 2012. That service information specifies to contact the manufacturer for further instructions if certain discrepancies are found. As noted in paragraph (j)(2) of AD 2014-06-08, “For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved ...” and “... corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority’s design organization approval, as applicable).”

To clarify the repair approval for the action specified in paragraph (g) of this AD, we have added an exception to paragraph (g) of this AD, including specific delegation approval language. The exception clarifies that where the service information specifies to

contact the manufacturer for further instructions, this AD requires repairing using a method approved by the Manager, New York Aircraft Certification Office, ANE-170, Engine and Propeller Directorate, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO.

### **Costs of Compliance**

We estimate that this proposed AD affects 85 airplanes of U.S. registry.

The actions that are required by AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014), and retained in this proposed AD take about 3 work-hours per product, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the actions that were required by AD 2014-06-08 is \$21,675, or \$255 per product, per inspection cycle.

We also estimate that it would take up to 40 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost up to \$19,436 per product. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be up to \$1,941,060, or \$22,836 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed 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 proposed 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed 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);
3. Will not affect intrastate aviation in Alaska; and
4. 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.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 removing Airworthiness Directive (AD) 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014), and adding the following new AD:

**Bombardier, Inc.:** Docket No. FAA-2014-0752; Directorate Identifier 2014-NM-079-AD.

#### **(a) Comments Due Date**

We must receive comments by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

#### **(b) Affected ADs**

This AD replaces AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014).

#### **(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers 003 through 672 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by a report that the emergency downlock indication system (EDIS) had given a false landing gear down-and-locked indication and a determination that a terminating action modification is necessary to address the identified unsafe condition. We are issuing this AD to detect and correct a false down-and-locked landing gear indication, which, on landing, could result in possible collapse of the landing gear.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Functional Check with Repair Approval Clarification**

This paragraph restates the requirements of paragraph (g) of AD 2014-06-08, Amendment 39-17812 (79 FR 17390, March 28, 2014), with specific delegation approval language. Within 600 flight hours or 100 days, whichever occurs first after April 14, 2014 (the effective date of AD 2014-06-08): Perform a functional check of the alternate indication phototransistors of the nose and main landing gear; and do all applicable corrective actions; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-173, Revision A, dated December 17, 2012; except where Bombardier Service Bulletin 8-32-173, Revision A, dated December 17, 2012, specifies to contact the manufacturer for further instructions, before further, flight, repair using a method approved by the Manager, New York Aircraft Certification Office, ANE-170,

Engine and Propeller Directorate, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). Do all applicable corrective actions before further flight. Repeat the functional check thereafter at intervals not to exceed 600 flight hours or 100 days, whichever occurs first, until accomplishment of the applicable actions specified in paragraph (h) of this AD.

**(h) New Requirement of this AD: Terminating Action**

Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first: Do the applicable actions specified in paragraphs (h)(1) through (h)(3) of this AD. Accomplishment of the applicable actions specified in paragraphs (h)(1) through (h)(3) of this AD terminates the requirements of paragraph (g) of this AD.

(1) For airplanes configured as described in Modsum 8/1519: Incorporate Modsum 8Q101968, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-33-56, Revision A, dated February 22, 2013.

(2) For airplanes configured as described in Modsum 8/0235, 8/0461, and 8/0534: Incorporate Modsum 8Q101955, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-176, Revision A, dated February 22, 2013.

(3) For airplanes not configured as described in Modsum 8/0534: Incorporate Modsum 8Q101969, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-177, dated October 9, 2013.

**(i) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-32-173, dated October 28, 2011, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (h)(1) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-33-56, dated February 11, 2013, which is not incorporated by reference in this AD.

(3) This paragraph provides credit for actions required by paragraph (h)(2) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-32-176, dated February 11, 2013, which is not incorporated by reference in this AD.

**(j) Other FAA AD Provisions**

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 ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 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) Contacting the Manufacturer:** As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must

be accomplished using a method approved by the Manager, New York Aircraft Certification Office, ANE-170, Engine and Propeller Directorate, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-11, dated February 13, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0752.

(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; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on September 24, 2014.

**Michael Kaszycki,**  
*Acting Manager,*  
*Transport Airplane Directorate,*  
*Aircraft Certification Service.*

**BILLING CODE 4910-13-P**

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