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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0479; Directorate Identifier 2010-NM-154-AD; Amendment 39-16827; AD 2011-21-04]

RIN 2120-AA64

Airworthiness Directives; Bombardier Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 Airplanes; Equipped With Certain Cockpit Door Installations

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

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) that applies to 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:

During structural testing of the cockpit door, it was observed that the door lower hinge block rotated which resulted in disengagement of the mating hinge pin and excessive door deflection. The lower hinge block rotated because it was attached to its support structure with only one attachment bolt, which prevented it from reacting to any moment force. This condition, if not corrected, could result in breakage and uncontrolled release of the cockpit door under certain decompression situations.

After incorporation of Modsum 8Q900267 * * *, an operator reported a failure to complete the cockpit door removal function test. This condition, if not corrected, could result in the inability to remove the cockpit door for emergency egress. * * *

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

DATES: This AD becomes effective November 16, 2011.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 16, 2011.

The Director of the Federal Register approved the incorporation by reference of Bombardier Service Bulletin 8-52-54, Revision A, dated November 5, 2004, as of July, 18, 2006 (71 FR 34006, June 13, 2006).

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: Andreas Rambalacos, 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) 228-7345; 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 8, 2011 (76 FR 33173), and proposed to supersede AD 2006-12-16, Amendment 39-14642 (71 FR 34006, June 13, 2006). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During structural testing of the cockpit door, it was observed that the door lower hinge block rotated which resulted in disengagement of the mating hinge pin and excessive door deflection. The lower hinge block rotated because it was attached to its support structure with only one attachment bolt, which prevented it from reacting to any moment force. This condition, if not corrected, could result in breakage and uncontrolled release of the cockpit door under certain decompression situations.

After incorporation of Modsum 8Q900267 * * *, an operator reported a failure to complete the cockpit door removal function test. This condition, if not corrected, could result in the inability to remove the cockpit door for emergency egress. Therefore, * * * this [Canadian] directive is issued to require rework of the cockpit door striker plate and replacement of the latch block for the affected aircraft serial numbers. * * *

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. The commenter supports the NPRM (76 FR 33173, June 8, 2011).

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

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 about 17 products of U.S. registry.

The actions that are required by AD 2006-12-16 (71 FR 34006, June 13, 2006) and retained in this AD take between 3 and 6 work-hours per product, at an average labor rate of \$85 per work-hour. Required parts cost about \$2,000 per product. Based on these figures, the estimated cost of the currently required actions is between \$2,255 and \$2,510 per product.

We estimate that it will take about 3 work-hours per product to comply with the new basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$2,000 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 \$38,335, or \$2,255 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 (76 FR 33173, June 8, 2011), 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 removing Amendment 39-14642 (71 FR 34006, June 13, 2006) and adding the following new AD:



2011-21-04 Bombardier Inc.: Amendment 39-16827. Docket No. FAA-2011-0479; Directorate Identifier 2010-NM-154-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective November 16, 2011.

Affected ADs

(b) This AD supersedes AD 2006-12-16, Amendment 39-14642 (71 FR 34006, June 13, 2006).

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 (S/Ns) 003 through 557 inclusive; equipped with cockpit door installation part numbers (P/Ns) identified in table 1 of this AD.

Table 1–Cockpit Door Installations Affected by This AD

P/N	Dash Number(s)
82510074	All
82510294	All
82510310	-001
8Z4597	-001
H85250010	All
82510700	All
82510704	All except -502 and -503

Subject

(d) Air Transport Association (ATA) of America Code 52: Doors.

Reason

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

During structural testing of the cockpit door, it was observed that the door lower hinge block rotated which resulted in disengagement of the mating hinge pin and excessive door deflection. The lower hinge block rotated because it was attached to its support structure with only one attachment bolt, which prevented it from reacting to any moment force. This condition, if not corrected, could result in breakage and uncontrolled release of the cockpit door under certain decompression situations.

After incorporation of Modsum 8Q900267 * * * an operator reported a failure to complete the cockpit door removal function test. This condition, if not corrected, could result in the inability to remove the cockpit door for emergency egress. * * *

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.

Restatement of Requirements of AD 2006-12-16 Amendment 39-14642 (71 FR 34006, June 13, 2006), With New Service Information

Modification

(g) Within 24 months after July 18, 2006 (the effective date of AD 2006-12-16 Amendment 39-14642 (71 FR 34006, June 13, 2006)), modify the cockpit door from a single-point attachment to a two-point attachment in accordance with the Accomplishment Instructions of the applicable service bulletin in table 2 of this AD. For airplane serial numbers 452, 464, 490, 506, and 508 through 557 inclusive: After the effective date of this AD, use Bombardier Service Bulletin 8-52-58, Revision A, dated November 17, 2006.

Table 2—Bombardier Service Bulletins for Modification Required by Paragraph (g) of This AD

Use this Bombardier Service Bulletin –	For airplane serial numbers –
8-52-54, Revision A, dated November 5, 2004	003 through 451 inclusive, 453 through 463 inclusive, 465 through 489 inclusive, 491 through 505 inclusive, and 507
8-52-58, dated May 12, 2004, or Revision A, dated November 17, 2006	452, 464, 490, 506, and 508 through 557 inclusive

Note 1: Bombardier Service Bulletin 8-52-54, Revision A, dated November 5, 2004, refers to Bombardier Series 100/300 Modification Summary (Modsum) 8Q100859 as an additional source of guidance for installing a hinge pin with a two-point attachment. Bombardier Service Bulletin 8-52-58, dated May 12, 2004, or Revision A, dated November 17, 2006, refers to Bombardier Series 100/300 Modsum 8Q900267 as an additional source of guidance for reworking and installing the cockpit door, and reworking the lower hinge attachment to provide a downward-facing pin with a two-point attachment.

Prior/Concurrent Requirements

(h) Prior to or concurrently with the modification in paragraph (g) of this AD, do the applicable actions specified in table 3 of this AD, in accordance with a method approved by either the Manager, New York Aircraft Certification (ACO), FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent).

Table 3—Bombardier Service Bulletins for Requirements of Paragraph (h) of This AD

For airplanes affected by Bombardier Service Bulletin—	That have these serial numbers—	Do these actions—
8-52-54, Revision A, dated November 5, 2004	003 through 407 inclusive, 409 through 412 inclusive, and 414 through 433 inclusive.	Rework the cockpit door emergency release. Install a new label regarding alternate release of the door.
8-52-58, dated May 12, 2004, or Revision A, dated November 17, 2006	452, 464, 490, 506, and 508 through 557 inclusive	Install the cockpit door.

Note 2: Bombardier Service Bulletin 8-52-54, Revision A, dated November 5, 2004, refers to De Havilland Aircraft of Canada, Limited, Modification 8/2337 as an additional source of guidance for reworking the cockpit door emergency release; and Modification 8/3339 as additional source of guidance for installing a new label regarding alternate release of the door; on airplanes having serial numbers 003 through 407 inclusive, 409 through 412 inclusive, and 414 through 433 inclusive.

Note 3: Bombardier Service Bulletins 8-52-58, dated May 12, 2004; and Revision A, dated November 17, 2006; refer to Bombardier Modsum 8Q200015, as an additional source of guidance for installing the cockpit door, on airplanes having serial numbers 452, 464, 490, 506, and 508 through 557 inclusive.

Actions Done in Accordance With Previous Revision of Service Bulletin

(i) Actions done before July 18, 2006, in accordance with Bombardier Service Bulletin 8-52-54, dated May 12, 2004, are acceptable for compliance with the corresponding requirements in paragraph (g) of this AD.

New Requirements of This AD

(j) For airplanes having S/N 452, 464, 490, 506, and 508 through 557 inclusive, and on which the requirements in paragraph (g) of this AD have been done as of the effective date of this AD: Within 12 months after the effective date of this AD rework the cockpit door striker plate and replace the latch block, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-52-61, dated October 20, 2006.

(k) For airplanes having S/Ns 452, 464, 490, 506, and 508 through 557 inclusive, and on which the requirements in paragraph (g) of this AD have not been done as of the effective date of this AD: Prior to or concurrently with doing the modification required in paragraph (g) of this AD, rework the cockpit door striker plate and replace the latch block, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-52-61, dated October 20, 2006.

FAA AD Differences

Note 4: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office, 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, 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

(m) Refer to MCAI Canadian Airworthiness Directive CF-2005-34R1, dated August 15, 2007; Bombardier Service Bulletin 8-52-54, Revision A, dated November 5, 2004; Bombardier Service Bulletin 8-52-58, Revision A, dated November 17, 2006; and Bombardier Service Bulletin 8-52-61, dated October 20, 2006; for related information.

Material Incorporated by Reference

(n) You must use the following service information to do the applicable actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR Part 51 of the following service information on the date specified:

(1) Bombardier Service Bulletin 8-52-58, Revision A, dated November 17, 2006, approved for IBR November 16, 2011;

(2) Bombardier Service Bulletin 8-52-61, dated October 20, 2006, approved for IBR November 16, 2011;

(3) Bombardier Service Bulletin 8-52-54, Revision A, dated November 5, 2004, approved for IBR July 18, 2006 (71 FR 34006, June 13, 2006).

(4) 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>.

(5) 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.

(6) 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 September 23, 2011.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.