This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model DHC–8–8–102, –103, and –106 airplanes, Model DHC–8–200 series airplanes, and Model DHC–8–300 series airplanes. This AD was prompted by reports of arcing and smoke emanating from the windshields, caused by loose or damaged windshield heater terminal lugs. This AD requires revising the maintenance or inspection program to incorporate maintenance review board (MRB) tasks for general visual inspections of the windshield moisture seal. This AD also requires re-torqueing the windshield heater terminal lugs, applying a coating to the windshields and side window posts, doing a chemical cleaning of the wiring and components, doing an operational test of the pilot’s and co-pilot’s windshield heating system, and repair if necessary.

We are issuing this AD to address the unsafe condition on certain Bombardier, Inc., Model DHC–8–200 series airplanes, and Model DHC–8–300 series airplanes. This AD was prompted by reports of arcing and smoke emanating from the windshields, caused by loose or damaged windshield heater terminal lugs. This AD requires revising the maintenance or inspection program to incorporate MRB tasks for general visual inspections of the windshield moisture seal. The NPRM also proposed to require re-torqueing the windshield heater terminal lugs, applying a coating to the windshield heater screw heads, doing a chemical cleaning of the wiring and components, doing a visual inspection of the wiring and components, doing an operational test of the pilot’s and co-pilot’s windshield heating system, and repair if necessary.

We are adopting this AD to address loose terminal lugs and terminal lugs damaged due to fluid ingress between the windshields and side window posts, which could lead to burning of the lugs and cracking of the windshields, and could ultimately cause a loss of cabin pressure, resulting in an emergency descent.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF–2017–25, dated July 31, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model DHC–8–102, –103, and –106 airplanes, Model DHC–8–200 series airplanes, and Model DHC–8–300 series airplanes. The MCAI states:

There have been several reports of arcing and smoke emanating from the windshields. Investigation of these incidents revealed that de-icing fluid and water could enter between the windshields and side window posts, leading to possible damage of the windshield heater terminal lugs creating arcing and smoke. In addition, investigation also revealed that the windshield heater terminal lugs tend to loosen over time. Loose terminal lugs could also have a similar effect of arcing and smoke. Both events could lead to burning of the lugs and, due to the excessive heat, cracking of the windshields. If not corrected, these conditions could cause a loss of cabin pressure resulting in an emergency descent.


For further information contact: John P. DeLuca, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7369; fax 516–794–5531; email 9-avs-nyaco-cos@faa.gov.

Supplementary Information:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model DHC–8–102, –103, and –106 airplanes, Model DHC–8–200 series airplanes, and Model DHC–8–300 series airplanes. The NPRM published in the Federal Register on July 6, 2018 (83 FR 31493). The NPRM was prompted by reports of arcing and smoke emanating from the windshield, caused by loose or damaged windshield heater terminal lugs. The NPRM proposed to require reviewing the maintenance or inspection program to incorporate MRB tasks for general visual inspections of the windshield moisture seal. The NPRM also proposed to require re-torqueing the windshield heater terminal lugs, applying a coating to the windshield heater screw heads, doing a chemical cleaning of the wiring and components, doing a visual inspection of the wiring and components, doing an operational test of the pilot’s and co-pilot’s windshield heating system, and repair if necessary.

We have considered the comment received. The Air Line Pilots Association, International (ALPA) indicated its support for the NPRM.
Conclusion
We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51
Bombardier has issued Service Bulletin 8–30–41, Revision A, dated March 24, 2017. This service information describes procedures for re-torquing the windshield heater terminal lugs and applying Humiseal coating to the screw heads of the windshield heater, doing a chemical cleaning and general visual inspection of the wiring and components, and doing an operational test of the windshield heating system.

Bombardier has also issued the following service information, which describes airworthiness limitation tasks for a general visual inspection of the windshield moisture seal. These documents are distinct since they apply to different airplane models.


This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance
We estimate that this AD affects 63 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

<table>
<thead>
<tr>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>$255</td>
<td>$0</td>
<td>$255</td>
<td>$16,065</td>
</tr>
</tbody>
</table>

*Table does not include estimated costs for revising the maintenance or inspection program.

We have determined that revising the maintenance or inspection program takes an average of 90 work-hours per operator, although we recognize that this number may vary from operator to operator. In the past, we have estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), we have determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, we estimate the total cost per operator to be $7,650 (90 work-hours × $85 per work-hour).

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings
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 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),
(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.

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

§ 39.13 [Amended]
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 airworthiness directive (AD):


(a) Effective Date
This AD is effective November 23, 2018.

(b) Affected ADs
None.

(c) Applicability
This AD applies to Bombardier, Inc., Model DHC–8–102, –103, –106, –201, –202,
(d) Subject
Air Transport Association (ATA) of America Code 30, Ice and rain protection.

(e) Reason
This AD was prompted by reports of arcing and smoke emanating from the windshield, caused by loose or damaged windshield heater terminal lugs. We are issuing this AD to address loose terminal lugs and terminal lugs damaged due to fluid ingress between the windshields and side window posts, which could lead to burning of the lugs and cracking of the windshields, and could ultimately cause a loss of cabin pressure, resulting in an emergency descent.

(f) Compliance
Comply with this AD within the compliance times specified, unless already done.

(g) Maintenance or Inspection Program Revision
Within 30 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the applicable task identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD into the applicable program support manual (PSM) identified in table 1 to paragraph (g) of this AD, which is included in the existing maintenance or inspection program. The initial compliance time for the tasks are within 1,600 flight hours or 12 months, whichever occurs first after the effective date of this AD.


Table 1 to Paragraph (g) of this AD—PSM to Update

<table>
<thead>
<tr>
<th>Airplane model</th>
<th>Maintenance requirements manual (MRM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHC–8–102, –103, and –106</td>
<td>PSM 1–8–7</td>
</tr>
<tr>
<td>DHC–8–201 and –202</td>
<td>PSM 1–82–7</td>
</tr>
<tr>
<td>DHC–8–301, –311, and –315</td>
<td>PSM 1–83–7</td>
</tr>
</tbody>
</table>

(h) No Alternative Actions or Intervals
After the maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k)(1) of this AD.

(i) Cleaning, Inspection, Re-Torqueing, Sealant Application, and Operational Test
Within 8,000 flight hours or 60 months, whichever occurs first after the effective date of this AD: Perform a chemical cleaning of the wiring and components, do a general visual inspection of the wiring and components for signs of cracking, erosion, wear, or other damage, if applicable, apply Humiseal coating to the screw heads of the windshield heater, and do an operational test of the pilot’s and co-pilot’s windshield heating system, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8–30–41, Revision A, dated March 24, 2017. If the operational test fails, before further flight, do corrective actions, repeat the test, and do applicable corrective actions until the operational test is passed. If any cracking, erosion, wear, or other damage is found, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Credit for Previous Actions
This paragraph provides credit for the actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8–30–41, dated March 31, 2016.

(k) Other FAA AD Provisions
The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, 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 certification office, send it to ATT: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300; fax 516–794–5331. 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.

(2) Contacting the Manufacturer: 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 ACO Branch, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(l) Related Information

(2) For more information about this AD, contact John P. DeLuca, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7399; fax 516–794–5331; email 9-avs-nycos-faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (m)(4) of this AD.

(m) Material Incorporated by Reference
(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.


(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

Issued in Des Moines, Washington, on September 20, 2018.

John P. Piccola,
Acting Director, System Oversight Division, Aircraft Certification Service.

[FR Doc. 2018–22150 Filed 10–17–18; 8:45 am]