Federal Aviation Administration (FAA) has issued an action order (AD) for certain Bombardier, Inc., Model DHC–8–400 series airplanes. This AD was prompted by reports of arcing and smoke emanating from the windshield. This AD requires a revision to the maintenance or inspection program, as applicable, to include an inspection of the windshield moisture seal for signs of cracks, erosion, wear, and other deterioration; doing that inspection and repair if necessary; and re-torquing the screws that fasten the windshield heater terminal lugs and applying sealant to the screw heads of the windshield heaters. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2018.


For information on the availability of this material at the FAA, call 206–231–3195. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA–2018–0118.

**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–8–400 series airplanes. This AD was prompted by reports of arcing and smoke emanating from the windshield. This AD requires a revision to the maintenance or inspection program, as applicable, to include an inspection of the windshield moisture seal for signs of cracks, erosion, wear, and other deterioration; doing that inspection and repair if necessary; and re-torquing the screws that fasten the windshield heater terminal lugs and applying sealant to the screw heads of the windshield heaters. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 2, 2018.


**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–2018–0118; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800–647–5527) is Docket Operations, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Steve Dzierzynski, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7367; fax 516–794–5531.

**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–8–400 series airplanes. The NPRM published in the Federal Register on March 1, 2018 (83 FR 8810). The NPRM was prompted by reports of arcing and smoke emanating from the windshields. The NPRM proposed to require a revision to the maintenance or inspection program, as applicable, to include an inspection of the windshield moisture seal for signs of cracks, erosion, wear, and other deterioration; doing that inspection and repair if necessary; and re-torquing the screws that fasten the windshield heater terminal lugs and applying sealant to the screw heads of the windshield heaters.

We are issuing this AD to detect and correct loose windshield heater terminal lugs. Loose terminal lugs could create sparks that lead to burning of the lugs and, due to the excessive heat, cracking of the windshields. If not corrected, such a condition could cause a loss of cabin pressure resulting in an emergency descent.
CF–2017–18, dated May 26, 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–8–400 series airplanes. The MCAI states:

There have been numerous reports of arcing and smoke emanating from the windshields. Review of these incidents revealed that the windshield heater terminal lugs tend to loosen over time. Loose terminal lugs could create sparks that lead to burning of the lugs and, due to the excessive heat, cracking of the windshields. If not corrected, this condition could cause a loss of cabin pressure resulting in an emergency descent.

Required actions include a revision to the maintenance or inspection program, as applicable, to include an inspection of the windshield moisture seal for signs of cracks, erosion, wear, or other deterioration; doing that inspection and repair if necessary; and re-torquing the screws that fasten the windshield heater terminal lugs and applying sealant (Humiseal) to the screw heads of the windshield heaters. 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–2018–0118.

Comments

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Request To Revise Requirements

Related to Temporary Revision (TR)

Horizon Air requested that paragraph (g) of the proposed AD be revised to either refer to Bombardier Q400 Dash 8 Maintenance Requirements Manual (MRM) Part 1, Revision 13, dated March 15, 2017 (“MRM Part 1, Revision 13”), or include a statement that, “When this temporary revision has been included in general revisions of the PSM (product support manual), the general revisions may be inserted in the maintenance or inspection program, as applicable, provided the relevant information in the general revision is identical to that in Bombardier Q400 Dash 8 Maintenance Review Board Report TR MRB–0099 [dated December 9, 2016 (“TR MRB–0099”)].” The commenter noted that paragraph (g) of the proposed AD would require incorporation of TR MRB–0099 and that this TR has already been incorporated into MRM Part 1, Revision 13.

We agree to clarify the requirement in paragraph (g) of the AD. As noted by the commenter, the TR has already been incorporated into MRM Part 1, Revision 13. Therefore, if operators incorporate MRM Part 1, Revision 13, into the maintenance or inspection program, as applicable, they are in compliance with paragraph (g)(1) of this AD (i.e., since the MRM Part 1, Revision 13, contains the information in TR MRB–0099, by incorporating MRM Part 1, Revision 13, the operator is complying with the requirement to incorporate the information specified in TR MRB–0099).

We have revised paragraph (g) of this AD to include a statement in paragraph (g)(2) of this AD that specifies if the information in TR MRB–0099 has been included in the general revisions of the maintenance requirements manual and the general revisions have been inserted in the maintenance or inspection program, as applicable, the requirement of paragraph (g)(1) of this AD is met.

Request To Include Instructions for Doing Inspection

Horizon Air requested that Bombardier Q400 Dash 8 MRB Task 561001E201, “General Visual Inspection of the Windshield Moisture Seal,” (“MRB Task 561001E201”), Task 56–10–01–210–801, of the Bombardier Q400 Dash 8 Airplane Maintenance Manual, be included in paragraph (i) of the proposed AD as approved instructions for doing the inspection of the moisture seal on the left and right windshields.

We agree with the commenter’s request. We have included information in Note 1 to paragraph (i) of this AD that guidance for doing the inspection of the moisture seal can be found in MRB Task 561001E201. We also re-designated Note 1 to paragraph (i) of the proposed AD to Note 2 to paragraph (i) of this AD.

Request To Include Additional Information in Note 1 to Paragraph (i) of the Proposed AD

Horizon Air requested that Note 1 to paragraph (i) of the proposed AD include PPG Sierracin Component Maintenance Manual (CMM) 56–10–12, and 561001E201. The commenter observed that Note 1 to paragraph (i) of this AD specifies that operators must do the applicable actions in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84–30–16, Revision A, dated September 27, 2017, to address the unsafe condition specified in paragraph (j) of the proposed AD. The commenter stated that including the job set-up and close out sections of the Accomplishment Instructions restricts an operator’s ability to perform other maintenance in conjunction with the incorporation of the actions specified in this service bulletin.

We agree with the commenter’s request to clarify which section of the Accomplishment Instructions of Bombardier Service Bulletin 84–30–16, Revision A, dated September 27, 2017, that operators must use to accomplish the actions required by paragraph (j) of this AD. We have revised paragraph (j) of this AD to specify that operators must do the applicable actions in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84–30–16, Revision A, dated September 27, 2017.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and 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.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information Under 1 CFR Part 51

Bombardier has issued Service Bulletin 84–30–16, Revision A, dated September 27, 2017. This service information describes procedures for re-torquing the screws that fasten the windshield heater terminal lugs and applying sealant to the screw heads of the windshield heaters.

Bombardier has also issued Q400 Dash 8 Maintenance Review Board Report Temporary Revision (TR) MRB–0099, dated December 9, 2016. This
temporary revision describes procedures for inspecting the moisture seal for the left and right windshields for signs of cracks, erosion, wear, and other deterioration.

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.

**ESTIMATED COSTS**

<table>
<thead>
<tr>
<th>Action</th>
<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>Inspection/Re-torque/ Seal.</td>
<td>Up to 3 work-hours</td>
<td>$85 per hour</td>
<td>$255</td>
<td>$0</td>
</tr>
</tbody>
</table>

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 x $85 per work-hour).

We have received no definitive data that will enable us to provide a cost estimate for the on-condition repair 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. The regulatory process 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.

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 to the Director of the System Oversight Division.

**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 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.
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**

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 October 2, 2018.

   **(b) Affected ADs**

   None.

   **(c) Applicability**

   This AD applies to Bombardier, Inc., Model DHC–8–400, –401, and –402 airplanes, certificated in any category, serial numbers 4001 through 4524 inclusive.

   **(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 windshields. We are issuing this AD to detect and correct loose windshield heater terminal lugs. Loose terminal lugs could create sparks that lead to burning of the lugs and, due to the excessive heat, cracking of the windshields. If not corrected, such a condition could 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) Revision to Inspection or Maintenance Program**

   (1) Within 30 days after the effective date of this AD: Revise the maintenance or inspection program, as applicable, to incorporate the task specified in Bombardier Q400 Dash 8 Maintenance Review Board Report Temporary Revision (TR) MRB–0099, dated December 9, 2016.

   (2) If the information in Bombardier Q400 Dash 8 Maintenance Review Board Report Temporary Revision (TR) MRB–0099, dated December 9, 2016, has been included in the general revisions of the Bombardier Q400 Dash 8 Maintenance Requirements Manual and the general revisions have been inserted into the maintenance or inspection program, as applicable, the requirement in paragraph (g)(1) of this AD is met.

   **(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

   **Costs of Compliance**

   We estimate that this AD affects 54 airplanes of U.S. registry.

   We estimate the following costs to comply with this AD:
procedures specified in paragraph (k)(1) of this AD.

(i) Inspection and Corrective Action

Within 1,600 flight hours or 12 months after the effective date of this AD, whichever occurs first, do a general visual inspection of the moisture seal on the left and right windshields for signs of cracks, erosion, wear, and other deterioration (including discoloration, warping, or missing material). If any crack, erosion, wear, or other deterioration is found, before further flight, repair the moisture seal in accordance with 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.

Note 1 to paragraph (i) of this AD:

Note 2 to paragraph (i) of this AD:

(j) Re-Torquing and Sealing Screws

Within 8,000 flight hours or 60 months after the effective date of this AD, whichever occurs first: Re-torque the windshield heater terminal lug screws for the left and right windshields and apply Humiseal to the screw heads of the windshield heaters, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84–30–16, Revision A, dated September 27, 2017.

(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 ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 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.

(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 Steve Dzierzynski, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516–228–7367; fax: 516–794–5531.

(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.

(i) Bombardier Q400 Dash 8 Maintenance Review Board Report Temporary Revision (TR) MRB–0099, dated December 9, 2016.


(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.

(5) You may view this 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/cfr/ibr-locations.html.

Issued in Des Moines, Washington, on August 16, 2018.

Michael Kaszycy, Acting Director, System Oversight Division, Aircraft Certification Service.

[FR Doc. 2018–18273 Filed 8–27–18; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2018–0437; Airspace Docket No. 18–AS0–5]

RIN 2120–AA66

Establishment and Modification of Area Navigation Routes, Florida Metroplex Project; Southeastern United States

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action establishes 16 high altitude area navigation (RNAV) routes (Q-routes), and modifies 7 existing Q-routes, in support of the Florida Metroplex Project. The routes were developed to improve the efficiency of the National Airspace System (NAS) and reduce dependency on ground-based navigational systems that cause system inefficiencies due to their limitations. This action also makes minor corrections to the waypoint names and geographic coordinates of certain Q-routes.

DATES: Effective date 0901 UTC, November 8, 2018. The Director of the Federal Register approves this incorporation by reference action under Title 1, Code of Federal Regulations, part 51, subject to the annual revision of FAA, Order 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11B, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at http://www.faa.gov/air_traffic/publications/. For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11B at NARA, call (202) 741–6030, or go to http://www.archives.gov/federal-register/cfr/ibr-locations.html.

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.