(3) Within 3,800 flight cycles or 7,600 flight hours after the effective date of this AD, whichever occurs first, without exceeding 20,000 flight cycles since the most recent inspection done as specified in the Accomplishment Instructions of Airbus Service Bulletin A320–53–1089.

(i) New Repair Requirement

If any crack is detected during any inspection required by paragraph (b) of this AD: Before further flight, repair, including doing all applicable related investigative actions, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320–53–1089, Revision 04, dated June 1, 2016. Do all applicable related investigative actions before further flight. Repair of an airplane in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320–53–1089, Revision 04, dated June 1, 2016, constitutes terminating action for the repetitive inspections required by paragraph (b) of this AD.

(j) New Optional Modification

Modification of an airplane, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320–53–1090, Revision 02, dated December 22, 1998, constitutes terminating action for the repetitive inspections required by paragraphs (g) and (h) of this AD, provided the modification is accomplished before further flight after accomplishing an inspection required by paragraph (b) of this AD and no cracks were detected.

(k) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraphs (b) and (i) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraphs (k)(1)(i), (k)(1)(ii), or (k)(1)(iii) of this AD.


(iii) Airbus Service Bulletin A320–53–1089, Revision 03, dated March 18, 2015. This paragraph provides credit for the actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraphs (k)(2)(i) or (k)(2)(ii) of this AD.


(ii) Airbus Service Bulletin A320–53–1090, Revision 1, dated June 10, 1998, which is not incorporated by reference in this AD.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2015–0084, dated May 13, 2015; corrected May 18, 2015; 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–2016–7262.

(2) For more information about this AD, contact Sanjay Ralhan, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the EASA; or Airbus’s EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(n) 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 the AD specifies otherwise.

(3) The following service information was approved for IBR on July 11, 2017.


(ii) Airbus Service Bulletin A320–53–1090, Revision 02, dated December 22, 1998. Pages 1, 2, 7, 8, 9, 10, and 11 of this document are identified as Revision 1, dated June 6, 1998; and pages 3, 4, 5, and 6 of this document are identified as Revision 02, dated December 22, 1998.

(4) The following service information was approved for IBR on July 30, 1998, AD 98–13–14, Amendment 39–10602 (63 FR 34556, June 25, 1998).


(5) For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas-airbus.com; Internet http://www.airbus.com.

(6) 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.

(7) 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 Renton, Washington, on May 23, 2017.

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

[FR Doc. 2017–11290 Filed 6–5–17; 8:45 am]
BILLING CODE 4910–13–P

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 BD–100–1A10 airplanes. This AD was prompted by several reports of nose wheel steering failures in service. This AD requires a part verification and replacement of certain steering manifolds. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective July 11, 2017.

The Director of the Federal Register approved the incorporation by reference
of a certain publication listed in this AD as of July 11, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514–835–5000; fax 514–835–7401; email thd.cry@ 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. It is also available on the Internet at http:// www.regulations.gov by searching for and locating Docket No. FAA–2017– 0124.

**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–2017– 0124; 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 Docket Management Facility, 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:**


**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 BD–100–1A10 airplanes. The NPRM published in the Federal Register on February 28, 2017 (82 FR 12071). The NPRM was prompted by several reports of nose wheel steering failures in service. The NPRM proposed to require a part verification and replacement of certain steering manifolds. We are issuing this AD to prevent moisture from entering the electrical stage of the electro-hydraulic servo valve (EHSV), which, in combination with a steering selector valve failure, could lead to uncommanded nose wheel steering, and a consequent runway excursion at high speed.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF–2016–24, dated August 19, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model BD– 100–1A10 airplanes. The MCAI states:

Several cases of nose wheel steering failures have been reported in service. In one case, the aeroplane experienced uncommanded nose wheel steering, resulting in a runway excursion.

Investigations found the presence of moisture inside the electrical stage of the electro-hydraulic servo valve (EHSV) unit, which resulted in low insulation resistance and corrosion. This condition, in combination with a steering selector valve failure, could result in uncommanded nose wheel steering, which could lead to a runway excursion at high speed.

This [Canadian] AD mandates the replacement of the steering manifold to provide better moisture ingress protection of the EHSV.

**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>Steering manifold part verification .......</td>
<td>1 work-hour x $85 per hour = $85 ....</td>
<td>$0 .....................</td>
<td>$85 .....................</td>
<td>$13,685. Up to $3,036,7823.</td>
</tr>
<tr>
<td>Replacement of steering manifold ..........</td>
<td>Up to 4 work-hours x $85 per hour = $340.</td>
<td>Up to $18,522 ......</td>
<td>Up to $18,862 ......</td>
<td></td>
</tr>
</tbody>
</table>

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

**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 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
\(\text{\textbullet\text{\textbullet\textbullet}}\) 1. The authority citation for part 39 continues to read as follows:
Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]
\(\text{\textbullet\text{\textbullet\textbullet}}\) 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):


(a) Effective Date
This AD is effective July 11, 2017.

(b) Affected ADs
None.

(c) Applicability
This AD applies to Bombardier, Inc., Model BD–100–1A10 airplanes, certificated in any category, as identified in Bombardier Service Bulletin 100–32–25, Revision 01, dated June 30, 2015.

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

(e) Reason
This AD was prompted by several reports of nose wheel steering failures in service. We are issuing this AD to prevent moisture from entering the electrical stage of the electro-hydraulic servo valve (EHSV), which in combination with a steering selector valve failure, could lead to uncommanded nose wheel steering, and a consequent runaway excursion at high speed.

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

(g) Verification and Replacement of Steering Manifold
Within 48 months after the effective date of this AD, do a one-time inspection to determine the part number of the steering manifold, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100–32–25, Revision 01, dated June 30, 2015.

(1) If the airplane has steering manifold part number (P/N) 40750–103, within 48 months after the effective date of this AD, write “SB100–32–018” on the nose landing gear (NLG) mod plate. If the mod plate is missing or full, within 48 months after the effective date of this AD, install a new plate, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100–32–25, Revision 01, dated June 30, 2015.

(2) If the airplane has steering manifold P/N 40750–101, within 48 months after the effective date of this AD, replace it in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100–32–25, Revision 01, dated June 30, 2015, and write “SB100–32–018” on the NLG mod plate. If the mod plate is missing or full, within 48 months after the effective date of this AD, install a new plate, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100–32–25, Revision 01, dated June 30, 2015.

(h) Credit for Previous Actions
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 100–32–25, dated September 24, 2014.

(i) Parts Installation Prohibition
As of the effective date of this AD, no person may install a steering manifold, P/N 40750–101, on the NLG assembly of any airplane.

(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 manager of 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.

(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, ANE–170, 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.

(k) Related Information

(2) For more information about this AD, contact Assata Dessaline, Aerospace Engineer, Avionics and Services Branch, ANE–172, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7301; fax 516–794–5531.

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

(l) 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.


(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514–855–5000; fax 514–855–7401; email thd.crj@ aero.bombardier.com; Internet http://www.bombardier.com.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Kenton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on
DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; NavWorx, Inc. Automatic Dependent Surveillance Broadcast Universal Access Transceiver Units

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for NavWorx, Inc. (NavWorx), Automatic Dependent Surveillance Broadcast (ADS–B) Universal Access Transceiver Units (unit). This AD requires removing, disabling, or modifying the ADS–B unit. This AD was prompted by a design change that results in the unit communicating unreliable position information. The actions in this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective July 11, 2017.

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–2016–9226; 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 this AD, Supplemental Type Certificate (STC) No. SA11172SC, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800–647–5527) is U.S. Department of Transportation, Docket Operations Office, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kyle Cobble, Aviation Safety Engineer, Fort Worth Aircraft Certification Office (ACO), Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177, telephone (817) 222–5172, email kyle.cobble@faa.gov; or Michael Heusser, Program Manager, Continued Operational Safety Branch, Fort Worth ACO, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177, telephone (817) 222–5038, email michael.a.heusser@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On October 20, 2016, at 81 FR 72552, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by adding an AD that would apply to NavWorx ADS–B Model ADS600–B units, part number (P/N) 200–0012 and P/N 200–0013, and Model ADS600–EXP units, P/N 200–8013. The NPRM proposed to require removing the ADS–B unit before further flight and proposed to prohibit installing the affected ADS–B unit on any aircraft. The NPRM was prompted by a design change that resulted in the ADS–B units broadcasting a Source Integrity Level (SIL) of 3 instead of 0. A broadcast of SIL 0 is required because of the uncertified Global Positioning System (GPS) source included in the unit. The proposed actions were intended to prevent an ADS–B unit from communicating unreliable position information to Air Traffic Control (ATC) and nearby aircraft and a subsequent aircraft collision.

Comments

We gave the public the opportunity to participate in developing this AD. We received approximately 200 comments, mostly from individuals but also from NavWorx and organizations such as the Aircraft Owners and Pilots Association (AOPA), the Experimental Aircraft Association (EAA), and the Aircraft Electronics Association (AEA). The following presents the comments received on the NPRM and the FAA’s response to each comment.

A. Support for the NPRM

Five individual commenters supported the NPRM.

B. Comments Regarding the FAA’s Justification of the Unsafe Condition

Several commenters, including AOPA, requested that the FAA provide more information about the events that prompted this AD and the technical aspects surrounding the unsafe condition. We agree.

Request: AOPA requested the FAA clarify whether the internal position source in the ADS–B units meets the performance requirements in Appendix B to Advisory Circular (AC) 20–165B. In support of this request, AOPA stated the FAA’s contention that NavWorx did not present any data substantiating its SIL change is contrary to NavWorx’s public statements that its testing verified the position source met the integrity levels required by the regulations. Similarly, NavWorx commented on the AD and maintained it has provided the FAA with data demonstrating the internal GPS met the requirements to transmit a SIL of 3.

FAA Response: NavWorx has not demonstrated to the FAA that the internal position source meets the performance requirements in Appendix B to AC 20–165B for a SIL of 3. The design specifications for NavWorx’s P/N 200–0012 and 200–0013 ADS–B units identify the internal GPS source for those units as an uncertified SiRF IV GPS. The SiRF IV is a commercial grade chip not manufactured under an FAA Technical Standard Order (TSO). AC 20–165B requires the SIL be set at 0 when the ADS–B is integrated with an uncertified GPS source. When NavWorx submitted its software upgrade changing the SIL value from 0 to 3, no hardware design changes associated with the SIL value change were made to the ADS–B units and no testing data substantiating that SIL change was provided to the FAA. The only justification NavWorx cited for the software change was the FAA’s termination of Traffic Information Service–Broadcast (TIS–B) services to aircraft broadcasting ADS–B with a SIL of 0. This data is available for review in Docket No. FAA–2016–9226.

Request: AOPA requested the FAA clarify its meaning of “uncertified GPS source” since NavWorx has design approval through STC No. SA11172SC to install the ADS–B unit with the internal GPS on type-certificated aircraft, and since a compliant position source does not need to meet a specific TSO to meet the requirements set forth in Appendix B of AC 20–165B.

Some commenters requested the FAA explain why it approved NavWorx’s ADS–B units at all if the internal, uncertified GPS source is objectionable. Many commenters stated the NavWorx ADS–B units meet the performance and accuracy/integrity standards of TSO C–154c; others noted that NavWorx has stated its testing showed the units meet the requirements to broadcast a SIL of 3.

1 http://rgl.faa.gov/Regulatory_and_Guidance_Library/