



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-1008; Product Identifier 2018-NM-126-AD; Amendment 39-19666; AD 2019-12-11]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. This AD was prompted by reports indicating there is a possibility of excessive error in the signal generated by the angle of attack (AOA) transducer. This AD requires replacing certain AOA transducers. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet <http://www.bombardier.com>. 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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-1008.

#### **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-2018-1008; 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 is 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:** John DeLuca, Aerospace Engineer, Avionics and Electrical Systems 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](mailto:9-avs-nyaco-cos@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA 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 CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The NPRM published in the Federal Register on December 11, 2018 (83 FR 63594). The NPRM was prompted by reports indicating there is a possibility of excessive error in the signal generated by the AOA transducer. The NPRM proposed to require replacing certain AOA transducers.

The FAA is issuing this AD to address this potential error, which, if not detected by the stall protection computer, could lead to late activation of the stall protection system and possible loss of control of the airplane.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2018-17, dated June 29, 2018 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The MCAI states:

Bombardier has received reports from the manufacturer of its Angle of Attack (AOA) transducers indicating that there is a possibility of excessive error in the signal generated by the AOA Transducer. It is possible that this error may not be detected by the stall protection computer, which could lead to late stall protection system activation and potentially result in the loss of control of the aeroplane. The error could be a result of incorrect assembly or/and internal wear in the AOA Transducer.

This [Canadian] AD mandates the modification or replacement of the AOA transducers in order to prevent late activation of the stick pusher in the stall protection system.

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-2018-1008.

### **Comments**

The FAA 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 Reduce Proposed Applicability of this AD**

Air Wisconsin Airlines (Air Wisconsin) recommended revising paragraph (c) of the proposed AD to restrict the applicability to only those airplanes equipped with the affected parts. Air Wisconsin suggested adding the phrase "having AOA transducers P/Ns [part numbers] 45-150-340, C16258AA, or C16258AB" to the end of the sentence that specifies the airplane models and serial numbers. Air Wisconsin pointed out that some airplanes might have unaffected part numbers installed, either by having installed a supplemental type certificate or prior accomplishment of the service information.

The FAA has not changed the AD as recommended by the commenter, because the affected AOA transducers are rotatable parts and might be later installed on airplanes not initially delivered with the affected AOA transducers, or that did not have an affected AOA installed on the effective date of this AD. Paragraph (f) of this AD provides relief for airplanes on which the AOA transducer has been replaced prior to the effective date of this AD.

### **Request to Extend Proposed Compliance Time for Parts Installation Prohibition**

Air Wisconsin requested that the compliance time for the Parts Installation Prohibition specified in paragraph (h) of the proposed AD be revised to match the

compliance time for the AOA replacement required in paragraph (g) of this AD. Air Wisconsin suggested that, based on the date of the service information and the amount of time Bombardier recommends the service information be performed within, it would appear as though there is not an imminent pending failure of the parts.

The FAA disagrees with the request to extend the compliance time for the parts installation prohibition specified in paragraph (h) of this AD. In general, once the FAA has determined that an unsafe condition exists, the FAA does not allow that condition to be introduced into the fleet. In developing the technical information on which every AD is based, the FAA considers the availability of replacement parts that the AD will require to be installed. Replacement parts are available to operators, and this AD prohibits installation of the unsafe parts. The FAA's determination regarding compliance time is consistent with TCCA's compliance time determination. The FAA has not changed this AD in this regard.

#### **Request to Clarify Airplanes Affected by Parts Installation Prohibition**

Air Wisconsin requested a revision to paragraph (h) of the proposed AD to clarify that "any airplane" means those airplanes identified in paragraph (c) of the proposed AD.

The FAA finds that the requested change is unnecessary, because paragraph (c) of this AD establishes the AD's applicability for the airplanes in which the actions in paragraph (h) of this AD apply.

#### **Request to Address Connection Between the Proposed AD and AD 2010-08-03, Amendment 39-16258 (75 FR 19203, April 14, 2010) ("AD 2010-08-03")**

Air Wisconsin requested that AD 2010-08-03 be addressed in this AD because that AD applies to the same airplane model, serial numbers, and AOA parts identified in the proposed AD.

The FAA disagrees with the request to reference AD 2010-08-03, because that AD is not affected by this AD. Although, AD 2010-08-03 and this AD both require actions on the AOA transducer, the two ADs address different root causes or failure modes. The primary focus of AD 2010-08-03 was heater element degradation and inaccurate calibration in AOA transducers. The focus of this AD is possible excessive error in the signal from the AOA transducer, which became known at a later time. Therefore, since the required actions in this AD are not related to the required actions in AD 2010-08-03, the FAA has not changed this AD in this regard.

### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has 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.

The FAA 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 601R-27-165, dated December 20, 2016. This service information describes procedures for replacing certain AOA transducers with new or modified AOA transducers.

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**

The FAA estimates that this AD affects 525 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

**Estimated costs**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
5 work-hours X \$85 per hour = \$425	Up to \$6,800	Up to \$7,225	Up to \$3,793,125

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage for affected individuals. As a result, the FAA has included all known costs in its 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.

The FAA is 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) Will not affect intrastate aviation in Alaska, 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.

### **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):

**2019-12-11 Bombardier, Inc.:** Amendment 39-19666; Docket No. FAA-2018-1008;

Product Identifier 2018-NM-126-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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

None.

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

This AD applies to Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, having serial numbers 7003 through 7067 inclusive and 7069 through 7891 inclusive.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 27, Flight Controls.

#### **(e) Reason**

This AD was prompted by reports indicating there is a possibility of excessive error in the signal generated by the angle of attack (AOA) transducer. The FAA is issuing this AD to address this potential error, which, if not detected by the stall protection

computer, could lead to late activation of the stall protection system and possible loss of control of the airplane.

**(f) Compliance**

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

**(g) Replacement of AOA Transducers**

Within 9,000 flight hours or 46 months, whichever occurs first, after the effective date of this AD, replace the AOA transducers having part number (P/N) 45-150-340, C16258AA, or C16258AB, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-27-165, dated December 20, 2016.

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may install any AOA transducer having P/N 45-150-340, C16258AA, or C16258AB, on any Bombardier, Inc., Model CL-600-2B19 airplane.

**(i) 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 516-228-7300; 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.

(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 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) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2018-17, dated June 29, 2018, 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-2018-1008.

(2) For more information about this AD, contact John DeLuca, Aerospace Engineer, Avionics and Electrical Systems 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.

**(k) 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 Service Bulletin 601R-27-165, dated December 20, 2016.

(ii) [Reserved]

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet <http://www.bombardier.com>.

(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 June 28, 2019.

Jeffrey E. Duven,  
Director,  
System Oversight Division,  
Aircraft Certification Service.

[FR Doc. 2019-15360 Filed: 7/18/2019 8:45 am; Publication Date: 7/19/2019]