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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0088; Directorate Identifier 2014-NM-179-AD; Amendment 39-18217; AD 2015-15-08]

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 (Challenger 300) airplanes. This AD was prompted by testing of the spoiler electronic control unit (SECU) software for an upgrade, which revealed a timing error between the command and monitor channels. This AD requires revising the maintenance or inspection program to incorporate repetitive operational tests of the aileron disconnect system, and corrective action if necessary. This AD also requires modification and reidentification of the SECU, which would terminate the repetitive operational tests. We are issuing this AD to prevent a timing error in the SECU software, which, in combination with failure of the roll disconnect switch, could result in complete loss of spoiler functionality and consequent reduced controllability of the airplane.

DATES: This AD becomes effective August 28, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 28, 2015.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-0088> or in person at the 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.

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>. 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-2015-0088.

FOR FURTHER INFORMATION CONTACT: Assata Dessaline, Aerospace Engineer, Avionics and Service Branch, ANE-172, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7301; 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 BD-100-1A10 (Challenger 300) airplanes. The NPRM published in the Federal Register on February 18, 2015 (80 FR 8564).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2014-24, dated August 5, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on certain Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes. The MCAI states:

During testing of the software for an upgrade of the spoiler electronic control unit (SECU), a timing error between the Command and Monitor channels was found in the SECU software. This timing error, if not corrected, in combination with the failure of the roll disconnect switch, may lead to a complete loss of spoiler functionality and result in a reduction or complete loss of aeroplane roll control.

This [Canadian] AD mandates the SECU software modification to correct the timing error and to change the inspection interval for a maintenance task based on System Functional Hazard Analysis [by revising the inspection or maintenance program].

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2015-0088-0002>.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (80 FR 8564, February 18, 2015) or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed, with minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (80 FR 8564, February 18, 2015) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (80 FR 8564, February 18, 2015).

Related Service Information Under 1 CFR Part 51

Bombardier, Inc. has issued Service Bulletin 100-27-16, dated October 31, 2013. The service information describes procedures for modification and reidentification of the SECU. 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 of this AD.

Costs of Compliance

We estimate that this AD affects 107 airplanes of U.S. registry.

We also estimate that it takes up to 6 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be up to \$54,570, or up to \$510 per product.

We have received no definitive data on the parts cost for doing the modification 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.

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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2015-0088>; 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 Operations office (telephone 800-647-5527) is in the ADDRESSES section.

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):



AD 2015-15-08 Bombardier, Inc.: Amendment 39-18217. Docket No. FAA-2015-0088; Directorate Identifier 2014-NM-179-AD.

(a) Effective Date

This AD becomes effective August 28, 2015.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes, equipped with a spoiler electronic control unit (SECU) having part number (P/N) C47330-006, C47330-007, or C47330-008; certificated in any category.

(d) Subject

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

(e) Reason

This AD was prompted by testing of the spoiler electronic control unit (SECU) software for an upgrade, which revealed a timing error between the command and monitor channels. We are issuing this AD to prevent a timing error in the SECU software, which, in combination with failure of the roll disconnect switch, could result in complete loss of spoiler functionality and consequent reduced controllability of the airplane.

(f) Compliance

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

(g) Revision of the Maintenance or Inspection Program

Within 600 flight hours since the most recent operational test of the aileron disconnect system for spoiler functionality as of the effective date of this AD, or within 400 flight hours after the effective date of this AD, whichever occurs first: Revise the maintenance or inspection program, as applicable, to incorporate repetitive operational tests of the aileron disconnect system for spoiler functionality, and all applicable corrective actions, using a method approved by the Manager, New York ACO, ANE-170, FAA.

Note 1 to paragraph (g) of this AD: Guidance on operational tests of the aileron disconnect system can be found in the Bombardier Inc., BD-100-1A10 Time Limits/Maintenance Checks (TLMC) Manual.

(h) Modification of the SECU

Within 1,600 flight hours or 48 months after the effective date of this AD, whichever occurs first: Modify and re-identify the SECU, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-27-16, dated October 31, 2013. Doing the actions required by this paragraph terminates the actions required by paragraph (g) of this AD.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install an SECU, P/N C47330-006, C47330-007, or C47330-008, on 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 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. 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) 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 TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-24, dated August 5, 2014, 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 it in Docket No. FAA-2015-0088-0002.

(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.

(i) Bombardier Service Bulletin 100-27-16, dated October 31, 2013.

(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., Renton, 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 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 July 15, 2015.
Suzanne Masterson,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.