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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2013-0798; Directorate Identifier 2013-NM-087-AD; Amendment 39-17796; AD 2014-05-23]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

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**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 multiple reports of erratic electrical status indications on the push button annunciators and the engine instrument and crew alerting system. Certain of those reported incidents resulted in the airplane experiencing a momentary loss of electrical power and loss of flight displays. This AD requires modification of the direct current power centers. We are issuing this AD to prevent loss of electrical power, which could result in the loss of flight displays and reduced controllability of the airplane.

**DATES:** This AD becomes effective April 15, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 15, 2014.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0798>; 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](mailto: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.

**FOR FURTHER INFORMATION CONTACT:** Assata Dessaline, Aerospace Engineer, Systems and Flight Test 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 September 25, 2013 (78 FR 58965). The NPRM was prompted by multiple reports of erratic electrical status indications on the push button annunciators and the engine instrument and crew alerting system. Certain of those reported incidents resulted in the airplane experiencing a momentary loss of electrical power and loss of flight displays. The NPRM proposed to require modification of the direct current power centers. We are issuing this AD to prevent loss of electrical power, which could result in the loss of flight displays and reduced controllability of the airplane.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2013-05, dated February 22, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

There have been multiple in-service reports of erratic electrical status indications on the Push Button Annunciators (PBA) and the Engine Instrument & Crew Alerting System (EICAS) while on-ground and during flight. Three of those reported incidents resulted in the aeroplane experiencing momentary loss of electrical power and loss of flight displays.

The investigation revealed that improper insertion of a Printed Circuit Board (PCB) in a Direct Current Power Center (DCPC) may lead to erroneous electrical status indications on the PBAs and EICAS. The erroneous indications could mislead the pilots into turning off active generators and leading to partial or complete loss of electrical power. Loss of electrical power could result in the loss of flight displays and reduced controllability of the aeroplane.

Further investigation determined that the design of the existing DCPC covers does not ensure that the PCBs will remain inserted into the motherboard of the DCPC.

This [TCCA] AD mandates the modification of each DCPC to ensure that properly closed covers will retain the PCBs within the motherboards.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0798-0001>.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (78 FR 58965, September 25, 2013) 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 except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 58965, September 25, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 58965, September 25, 2013).

### **Costs of Compliance**

We estimate that this AD affects 92 airplanes of U.S. registry.

We also estimate that it will take about 7 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$1,568 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$198,996, or \$2,163 per product.

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.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0798>; 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 AD:



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**2014-05-23 Bombardier, Inc.:** Amendment 39-17796. Docket No. FAA-2013-0798; Directorate Identifier 2013-NM-087-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective April 15, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model BD-100-1A10 (Challenger 300) airplanes, certificated in any category, serial numbers 20003 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 24, Electrical power.

**(e) Reason**

This AD was prompted by multiple reports of erratic electrical status indications on the push button annunciators and the engine instrument and crew alerting system. Certain of those reported incidents resulted in the airplane experiencing a momentary loss of electrical power and loss of flight displays. We are issuing this AD to prevent loss of electrical power, which could result in the loss of flight displays and reduced controllability of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Direct Current Power Centers (DCPC) Modification**

For airplanes having serial numbers 20003 through 20405 inclusive: Within 800 flight hours after the effective date of this AD or within 24 months after the effective date of this AD, whichever occurs first, modify the left-hand DCPC, right-hand DCPC, and auxiliary DCPC, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-24-23, dated November 26, 2012.

## **(h) Parts Installation Limitation**

As of the effective date of this AD, no person may install a DCPC having a part number specified in paragraphs (h)(1) through (h)(9) of this AD on any airplane, unless the DCPC serial number has a suffix "R" beside the serial number.

- (1) 970GC02Y04.
- (2) 970GC02Y05.
- (3) 970GC02Y06.
- (4) 975GC02Y04.
- (5) 975GC02Y05.
- (6) 975GC02Y06.
- (7) 320GC03Y04.
- (8) 320GC03Y05.
- (9) 320GC03Y06.

## **(i) 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) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

## **(j) Related Information**

Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-05, dated February 22, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0798-0001>.

## **(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 100-24-23, dated November 26, 2012.
- (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](mailto: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 February 26, 2014.

Jeffrey E. Duven,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.