



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2023-1052; Project Identifier MCAI-2023-00260-T; Amendment 39-22532; AD 2023-17-06]

RIN 2120-AA64

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

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. This AD was prompted by an uncommanded flap extension accompanied by a flaps fail caution message during climb. This AD requires initial and repetitive operational tests of the flap control system. 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 certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1052; 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 mandatory continuing airworthiness information (MCAI), 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.

*Material Incorporated by Reference:*

- For service information identified in this final rule, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](http://bombardier.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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 at [regulations.gov](http://regulations.gov) under Docket No. FAA-2023-1052.

**FOR FURTHER INFORMATION CONTACT:** Chirayu Gupta, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Background**

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-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. The NPRM published in the *Federal Register* on May 31, 2023 (88 FR 34794). The NPRM was prompted by AD CF-2023-07, dated February 10, 2023, issued by Transport Canada, which is the aviation authority for Canada (referred to after this as the MCAI).

The MCAI states a Model CL-600-2B16 airplane experienced an uncommanded flap extension from 0 to 45 degrees accompanied by a flaps fail caution message during

climb. The airplane returned to the departure airport without further incident. The investigations of this event by Transport Canada and the airplane manufacturer found that the flap control system failed to arrest the uncommanded movement of the flap, due to a failed retract relay. The failed retract relay also caused the flap control system to operate at half speed, which had occurred, but was undetected, during previous flights. The root cause of the uncommanded flap extension remains under investigation. Transport Canada considers the MCAI to be an interim action, and further AD action may follow.

In the NPRM, the FAA proposed to require initial and repetitive operational tests of the of the inboard and outboard flaps of the flap control system to verify the functionality of the retract relays. The FAA is issuing this AD to address the failure of the flap control system to arrest the uncommanded flap extension. The unsafe condition, if not addressed, could lead to the loss of control of the airplane.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1052.

### **Discussion of Final Airworthiness Directive**

The FAA received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed the following service information, which specifies procedures for performing initial and repetitive operational tests of the inboard and outboard flaps to verify the functionality of the retract relays. The service information also specifies contacting the manufacturer for corrective action (repair) for any anomaly found during an operational test. These documents are distinct since they apply to different airplane models.

- Bombardier Service Bulletin 600-0780, dated December 29, 2022.
- Bombardier Service Bulletin 601-1112, Revision 01, dated February 23, 2023.
- Bombardier Service Bulletin 604-27-040, dated December 29, 2022.
- Bombardier Service Bulletin 605-27-011, dated December 29, 2022.
- Bombardier Service Bulletin 650-27-004, dated December 29, 2022.

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.

### **Interim Action**

The FAA considers this AD an interim action. If final action is later identified, the FAA might consider further rulemaking then.

### **Costs of Compliance**

The FAA estimates that this AD affects 1,124 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
1 work-hour X \$85 per hour = \$85	\$0	\$85	\$95,540 per test cycle

#### 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.

#### 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.

### **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:

**2023-17-06 Bombardier, Inc.:** Amendment 39-22532; Docket No. FAA-2023-1052; Project Identifier MCAI-2023-00260-T.

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

This airworthiness directive (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., airplanes, certificated in any category, identified in paragraphs (c)(1) through (3) of this AD.

(1) Model CL-600-1A11 (600) airplanes, serial numbers 1004 through 1085 inclusive.

(2) Model CL-600-2A12 (601) airplanes, serial numbers 3001 through 3066 inclusive.

(3) Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes, serial numbers 5001 through 5194 inclusive, 5301 through 5665 inclusive, 5701 through 5988 inclusive, and 6050 through 6999 inclusive.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by a Model CL-600-2B16 airplane that experienced an uncommanded flap extension from 0 to 45 degrees accompanied by a flaps fail caution message during climb. The FAA is issuing this AD to address the failure of the flap control system to arrest the uncommanded flap extension. The unsafe condition, if not addressed, could lead to the loss of control of the airplane.

**(f) Compliance**

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

**(g) Initial Operational Test**

Within 100 flight hours or 15 months, whichever occurs first after the effective date of this AD, perform an initial operational test of the inboard and outboard flaps, and all applicable corrective actions, in accordance with Section 2.B. of the Accomplishment Instructions of the applicable service information identified in paragraphs (g)(1) through (5) of this AD. Corrective actions must be done before further flight after the test.

(1) For Model CL-600-1A11 (Challenger 600) airplanes, serial numbers 1004 through 1085 inclusive: Use Bombardier Service Bulletin 600-0780, dated December 29, 2022.

(2) For Model CL-600-2A12 (Challenger 601) airplanes, serial numbers 3001 through 3066 inclusive, and Model CL-600-2B16 (Challenger 601) airplanes, serial numbers 5001 through 5194 inclusive: Use Bombardier Service Bulletin 601-1112, Revision 01, dated February 23, 2023.

(3) For Model CL-600-2B16 (Challenger 604) airplanes, serial numbers 5301 through 5665 inclusive: Use Bombardier Service Bulletin 604-27-040, dated December 29, 2022.

(4) For Model CL-600-2B16 (Challenger 605) airplanes, serial numbers 5701 through 5988 inclusive: Use Bombardier Service Bulletin 605-27-011, dated December 29, 2022.

(5) For Model CL-600-2B16 (Challenger 650) airplanes, serial numbers 6050 through 6999 inclusive: Use Bombardier Service Bulletin 650-27-004, dated December 29, 2022.

**(h) Repetitive Operational Tests**

Repeat the operational test required by paragraph (g) of this AD at the applicable time specified in paragraph (h)(1) through (3) of this AD.

(1) For Model CL-600-1A11 airplanes: Repeat at intervals not to exceed 100 flight hours.

(2) For the airplanes identified in paragraphs (h)(2)(i) and (ii) of this AD: Repeat within the repetitive intervals specified in Section 1.D. of Bombardier Service Bulletin 601-1112, Revision 01, dated February 23, 2023.

(i) Model CL-600-2A12 airplanes.

(ii) Model CL-600-2B16 airplanes, serial numbers 5001 through 5194 inclusive.

(3) For the airplanes identified in paragraphs (h)(3)(i) through (iii) of this AD: Repeat the test at intervals not to exceed 400 flight hours.

(i) Model CL-600-2B16 airplanes, serial numbers 5301 through 5665 inclusive.

(ii) Model CL-600-2B16 airplanes, serial numbers 5701 through 5988 inclusive.

(iii) Model CL-600-2B16 airplanes, serial numbers 6050 through 6999 inclusive.

**(i) Credit for Previous Actions**

For the airplanes identified in paragraph (h)(2) of this AD: This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 601-1112, dated December 29, 2022.

**(j) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (k)(2) of this AD or email to: 9-avs-nyaco-cos@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or Transport Canada; or Bombardier, Inc.'s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(k) Additional Information**

(1) Refer to Transport Canada AD CF-2023-07, dated February 10, 2023, for related information. This Transport Canada AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-1052.

(2) For more information about this AD, contact Chirayu Gupta, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (4) of this AD.

**(I) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference 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 600-0780, dated December 29, 2022.

(ii) Bombardier Service Bulletin 601-1112, Revision 01, dated February 23, 2023.

(iii) Bombardier Service Bulletin 604-27-040, dated December 29, 2022.

(iv) Bombardier Service Bulletin 605-27-011, dated December 29, 2022.

(v) Bombardier Service Bulletin 650-27-004, dated December 29, 2022.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to:

[www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on August 22, 2023.

Victor Wicklund, Deputy Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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