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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA–2025–0483; Project Identifier MCAI–2024–00523–T; Amendment 39–23182; AD 2025–22–04]

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 all Bombardier, Inc., Model CL–600–2B16 (604 Variant) airplanes. This AD was prompted by reports that the flap system on-board recorder (FSOBR) interfaces with the flap control unit signals and may result in the flap control unit monitors tripping, causing Flap Fail messages and possibly an uncommanded flap movement. This AD requires the disconnection of the FSOBR and prohibits future installation of this system. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective December 23, 2025.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 23, 2025.

#### ADDRESSES:

**AD Docket:** You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2025–0483; 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 Bombardier material 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](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](https://www.bombardier.com).

- You may view this material 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](https://www.regulations.gov) under Docket No. FAA–2025–0483.

#### FOR FURTHER INFORMATION CONTACT:

Steven Dzierzynski, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 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 all Bombardier, Inc., Model CL–600–2B16 (604 Variant) airplanes. The NPRM was published in the **Federal Register** on April 7, 2025 (90 FR 14929). The NPRM was prompted by AD CF–2024–31R1, dated December 17, 2024 (Transport Canada AD CF–2024–31R1) (also referred to as the MCAI), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states that the FSOBR interfaces with the flap control unit Input/Output (I/O) signals and may result in the flap control unit monitors tripping, causing Flap Fail messages and possibly an uncommanded flap movement. This event combined with other flap system failures can lead to an uncommanded flap runaway. This condition, if not addressed, could lead to loss of control of the airplane.

In the NPRM, the FAA proposed to require the disconnection of the FSOBR and prohibit future installation of this system. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA–2025–0483.

#### Discussion of Final Airworthiness Directive

##### Comments

The FAA received comments from The Boeing Company (Boeing) and an anonymous commenter. The following presents the comments received on the NPRM and the FAA's response to each comment.

#### Request for Clarification on FSOBR Unit

Boeing requested clarification on the state of the FSOBR unit. Boeing stated that paragraph (h) of the proposed AD conflicts with Bombardier Service Bulletin 650–27–005, dated May 20, 2024, because the service bulletin does not require the removal of FSOBR unit, part number (P/N) 604–70201–1.

The FAA notes that this AD does not require removal of an affected FSOBR from the airplane. Instead, paragraph (g) of this AD requires disconnection of the FSOBR, which is consistent with the service bulletin instructions and other service bulletins referenced in table 1 to paragraph (g) of this AD. In addition, paragraph (h) of this AD prohibits installation of an affected FSOBR or FSOBR harness on or after the effective date of this AD, and reconnection of an FSOBR if one was installed on the airplane before the effective date of this AD. No change to the AD is necessary in this regard.

#### Request for Oversight of AD Compliance

The anonymous commenter requested that the FAA require all affected aircraft operators to submit documentation of completed FSOBR disconnect, and mandate an independent verification process to ensure compliance, with public reporting of results for transparency.

The FAA does not agree with the request. In certain cases, the FAA might determine that additional information (*i.e.*, data collection) is needed to understand the problem and develop appropriate mitigation for an unsafe condition. In this case, the unsafe condition was identified, and a corrective action was developed, without the need to require operator reports. However, an operator may still choose to send relevant information to the FAA. The FAA has not changed this AD in this regard.

**Request To Track and Report Flap Control Incidents**

The anonymous commenter requested that the FAA collect and publicly release data on any post-AD incidents involving flap control systems on Bombardier, Inc., Model CL-600-2B16 (604 Variant) airplanes for at least five years, to track effectiveness and spot emerging risks.

Under the bilateral agreement between Canada and the U.S., Transport Canada and the FAA have established implementation procedures specifying that the certificating authority is required to collect and analyze any data, and notify the other foreign authority of all known unsafe conditions and any necessary corrective actions. In this case, Transport Canada is the certificating authority for Bombardier aircraft. The FAA notes that U.S. operators may also submit any incidents to the service difficulty reporting (SDR) system at [sdrs.faa.gov](https://sdrs.faa.gov), which is accessible to the public. No change to the AD is necessary in this regard.

**Request To Require Root Cause Analysis and Collaboration**

The anonymous commenter requested that the FAA require manufacturers to conduct and publish root-cause analysis of FSOBR failures and collaborate with labor and consumer safety groups in designing future onboard systems to avoid similar risks.

The FAA does not agree. As discussed in the previous comment, Transport Canada will continue to collect and analyze reports regarding the FSOBR system. The FAA has not revised the AD in this regard.

**Request To Offset Economic Burden on Small Operators**

The anonymous commenter requested the FAA ensure that warranty coverage, reimbursement, or federal funding is accessible to offset compliance costs and prevent a disproportionate economic burden on smaller businesses or regional carriers.

The FAA recognizes that this AD imposes certain operational costs on operators, and that operators have an obligation to maintain their airplanes in airworthy condition. However, the FAA does not mandate warranty coverage, reimbursement, or federal funding, and has not changed this AD in this regard.

**Request To Provide Compliance Time Flexibility for Small Operators**

The anonymous commenter requested that the FAA provide targeted support or flexibility for compliance timelines to operators serving rural, low-income, or remote communities, ensuring

continued access to Essential Air Services.

The FAA does not agree. The compliance time for this AD was developed based on the recommendations of Transport Canada and the manufacturer, the urgency associated with the subject unsafe condition, and the practical aspect of accomplishing the required actions. The FAA has determined that the compliance time required by this AD will ensure an appropriate level of safety. The FAA has not changed this AD in this regard.

**Request for Certified Personnel To Perform Work, With Whistleblower Protection**

The anonymous commenter requested that the FAA require only FAA-certified technicians to perform the FSOBR maintenance and disconnect procedures, with explicit whistleblower protections for reporting safety lapses or procedural shortcuts.

The FAA notes that FAA regulations require maintenance, preventative maintenance, and alterations be performed by certified personnel (14 CFR 43.3 and 43.17). Further, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (49 U.S.C. 42121) prohibits discrimination against employees of the U.S. air carrier industry and U.S. manufacturers who report information related to air carrier safety. More information about the FAA AIR-21 Whistleblower Protection Program is available at <https://www.faa.gov/about/initiatives/whistleblower>. No change to the AD is necessary in this regard.

**Request To Include Stakeholder Input**

The anonymous commenter requested that the FAA solicit feedback from frontline aviation workers and labor unions on the effectiveness and challenges of the FSOBR removal process, especially regarding time and resource requirements.

The FAA notes that this AD requires a disconnect of the FSOBR harness, not removal of the FSOBR. The FAA also notes that it invites industry stakeholders to participate in the rulemaking process by providing notice of the proposed rule in the **Federal Register**. Before issuing the final rule, the FAA considers all comments received and determines whether air safety requires incorporating any requested changes or adopting the AD as proposed. No change to the AD is necessary in this regard.

**Request To Coordinate With International Regulators**

The anonymous commenter requested that the FAA ensure continued close coordination with Transport Canada and other international regulators to harmonize safety standards and avoid creating regulatory loopholes that could undermine safety or equity.

The FAA notes that the FAA has bilateral agreements with international civil aviation authorities, including Transport Canada, to ensure aviation regulations are harmonized as much as practicable. No change to the AD is necessary in this regard.

**Request To Address Safe Handling and Disposal of Hazardous Materials**

The anonymous commenter requested that the FAA ensure that all FSOBR removal and disposal processes comply with Occupational Safety and Health Administration (OSHA) guidelines for hazardous material handling and require environmentally safe disposal of all electronic components.

The FAA acknowledges the commenter's concern. However, the FAA notes that this AD requires disconnecting the FSOBR harness, not removal and disposal of the FSOBR or other electrical components. No change to the AD is necessary in this regard.

**Conclusion**

These products have been approved by the civil aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, that authority has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. 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.

**Material Incorporated by Reference Under 1 CFR Part 51**

The FAA reviewed Bombardier Service Bulletins 650-27-005, 605-27-012, and 604-27-041, all dated May 20, 2024. This material specifies procedures to disconnect the FSOBR. These documents are distinct since they apply to different airplane serial numbers. This material 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 442 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
Up to 3 work-hours × \$85 per hour = \$255.	Minimal .....	Up to \$255 .....	Up to \$112,710.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

### 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:

**2025–22–04 Bombardier, Inc.:** Amendment 39–23182; Docket No. FAA–2025–0483; Project Identifier MCAI–2024–00523–T.

### (a) Effective Date

This airworthiness directive (AD) is effective December 23, 2025.

### (b) Affected ADs

None.

### (c) Applicability

This AD applies to all Bombardier, Inc., Model CL–600–2B16 (604 Variant) airplanes, certificated in any category.

### (d) Subject

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

### (e) Unsafe Condition

This AD was prompted by reports that the flap system on-board recorder (FSOBR) interfaces with the flap control unit signals and may result in the flap control unit monitors tripping, causing Flap Fail messages and possibly an uncommanded flap movement. The FAA is issuing this AD to address uncommanded flap runaway. The unsafe condition, if not addressed, could lead to loss of control of the airplane.

### (f) Compliance

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

### (g) FSOBR Disconnection

For airplanes that have incorporated Bombardier Service Bulletin 604–27–035, Bombardier Service Bulletin 605–27–006, or Bombardier Service Bulletin 650–27–001 as of the effective date of this AD: Within 1,000 flight hours or 14 months, whichever occurs first, after the effective date of this AD, disconnect the FSOBR in accordance with Section 2.B of the Accomplishment Instructions of the applicable service bulletin listed in table 1 to paragraph (g) of this AD.

Table 1 to paragraph (g) – Service Bulletin References

Airplane Model (Marketing Designation)	Airplane Serial Number	Applicable Bombardier Service Bulletin
CL-600-2B16 (Challenger 604)	5301 through 5665 inclusive	604-27-041, dated May 20, 2024
CL-600-2B16 (Challenger 605)	5701 through 5988 inclusive	605-27-012, dated May 20, 2024
CL-600-2B16 (Challenger 650)	6050 through 6999 inclusive	650-27-005, dated May 20, 2024

**(h) Parts Installation Prohibition**

As of the effective date of this AD, no person may reconnect or install any FSOBR unit part number (P/N) (604–70201–1) or FSOBR harness P/N (604–57140–3) on any airplane.

**(i) 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, send it to the attention of the person identified in paragraph (j) of this AD and email to: [AMOC@faa.gov](mailto:AMOC@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.

**(j) Additional Information**

For more information about this AD, contact Steven Dzierzynski, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516–228–7300; email: [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 604–27–041, dated May 20, 2024.

(ii) Bombardier Service Bulletin 605–27–012, dated May 20, 2024.

(iii) Bombardier Service Bulletin 650–27–005, dated May 20, 2024.

(3) For Bombardier material 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](mailto:ac.yul@aero.bombardier.com); website [bombardier.com](http://bombardier.com).

(4) You may view this material 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 material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov).

Issued on November 10, 2025.

**Steven W. Thompson,**

*Acting Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.*

[FR Doc. 2025–20064 Filed 11–17–25; 8:45 am]

**BILLING CODE 4910–13–P**

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

**[Docket No. FAA–2025–1106; Project Identifier MCAI–2023–01052–R; Amendment 39–23159; AD 2025–20–06]**

**RIN 2120–AA64**

**Airworthiness Directives; Airbus Helicopters Deutschland GmbH Helicopters**

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all

Airbus Helicopters Deutschland GmbH Model MBB–BK 117 D–2 and MBB–BK 117 D–3 helicopters. This AD was prompted by reports of airspeed and altitude indication errors. This AD requires revising the existing rotorcraft flight manual supplement (RFMS) for the helicopter, replacing the air conditioning system (ACS) condenser outlet grids with ACS condenser outlet covers, and prohibiting the installation of ACS condenser outlet grids. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective December 23, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 23, 2025.

**ADDRESSES:**

**AD Docket:** You may examine the AD docket at [regulations.gov](http://regulations.gov) under Docket No. FAA–2025–1106; 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 European Union Aviation Safety Agency (EASA) material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); website: [easa.europa.eu](http://easa.europa.eu). You may find this material on the EASA website at [ad.easa.europa.eu](http://ad.easa.europa.eu).

- You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, Room 6N–321, Fort Worth, TX