



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0521; Product Identifier 2016-NM-189-AD; Amendment 39-19086; AD 2017-22-06]**

**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 CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes. This AD was prompted by reports of fuel leaks in the engine and auxiliary power unit (APU) electrical fuel pump (EFP) cartridge/canister electrical connectors and conduits. This AD requires repetitive inspections for fuel leakage at the engine and APU fuel pumps, and related investigative and corrective actions if necessary. We are 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:** 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 referenced service information at the FAA, Transport Standards Branch, 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-2017-0521.

### **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-2017-0521; 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 Office (telephone 800-647-5527) is 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 20590.

**FOR FURTHER INFORMATION CONTACT:** Steven Dzierzynski, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; 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 CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes. The NPRM published in the Federal Register on June 2, 2017 (82 FR 25556) (“the NPRM”). The NPRM was prompted by reports of fuel leaks in the engine and APU EFP cartridge/canister electrical connectors and conduits. The NPRM proposed to require repetitive inspections for fuel leakage at the engine and APU fuel pumps, and related investigative and corrective actions if necessary. We are issuing this AD to detect and correct fuel leaks in certain fuel pumps to remove a potential fuel ignition hazard.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2016-32R1, dated October 12, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes. The MCAI states:

Fuel leaks have been reported in the engine and auxiliary power unit (APU) electrical fuel pump (EFP) cartridge/canister electrical connectors and conduits on production aeroplanes. Initially, Bombardier had

determined that the subject discrepancy was limited to the new pump canister installations on 24 production aeroplanes. Bombardier also reported the possibility of cut insulation on the electric harness wires of the newly installed canister housing assemblies.

Emergency [Canadian] AD CF-2014-17 [which corresponds to FAA AD 2014-15-17, Amendment 39-17919 (79 FR 44268, July 31, 2014)] was issued to limit landing light operation on-ground in order to address a potential fire hazard as result of possible fuel leak from APU, EFP electrical conduit in the landing light compartment. In addition, [Canadian] AD CF-2014-21 [which corresponds to FAA AD 2014-20-01, Amendment 39-17974 (79 FR 59640, October 3, 2014), superseded by FAA AD 2016-10-10, Amendment 39-18521 (81 FR 31497, May 19, 2016) (“AD 2016-10-10”)] was issued to mandate removal of then identified 24 discrepant EFP canister assemblies from service.

Bombardier has recently determined that the subject fuel leaks may not be limited to the 24 units affected by [Canadian] AD CF-2014-21 [(AD 2016-10-10)], but may potentially affect other in-service [Bombardier Model] CL-600-2B16 aeroplanes. Until such time that a final fix for the fuel leak problem is realized, Bombardier as an interim mitigating action, has issued [Service Bulletin] SB 604-28-022 and SB 605-28-010 that introduces [a] repeat [general visual] inspection and if required, rectification [related investigative and corrective actions] of subject fuel leaks on affected aeroplanes. [Canadian] AD CF-2016-32 was issued on 29 September 2016 to mandate compliance with applicable Bombardier SBs, to mitigate any potential safety hazard resulting from fuel leaks.

Revision 1 of this [Canadian] AD is being issued to correct a typographic error in paragraph B.1. of the [Canadian AD] Corrective Actions.

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-2017-0521.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comment received on the NPRM and the FAA's response.

### **Request to Delay Issuance until the Release of New Service Information**

Bombardier, Inc., indicated its intent to revise Bombardier Service Bulletin 604-28-022, dated October 19, 2015; and Bombardier Service Bulletin 605-28-010, dated October 19, 2015. Bombardier, Inc., stated that these revisions will change the inspection instructions. Bombardier, Inc., further added that it plans to publish new service information to introduce similar inspections on Model CL-650 airplanes.

We infer that Bombardier, Inc., is requesting that we delay the issuance of this final rule until after the revised service information is released and then refer to the revised service information. We disagree with the commenter's request. We do not consider that delaying this action until release of the planned service information is warranted since the service information incorporated by reference in this AD adequately addresses the unsafe condition. We might consider additional rulemaking once the revised service information is released, or if new service information is issued for Model CL-650 airplanes, which are not included in the applicability of this AD. We have not changed this AD in this regard.

### **Conclusion**

We reviewed the relevant data, considered the comment received, 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 for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM.

**Related Service Information under 1 CFR part 51**

Bombardier, Inc., has issued Service Bulletin 604-28-022, dated October 19, 2015; and Service Bulletin 605-28-010, dated October 19, 2015. This service information describes procedures for repetitive general visual inspections for fuel leakage at the engine and APU fuel pumps, and related investigative and corrective actions if necessary. These documents are distinct since they apply to airplanes in different configurations. 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**

We estimate that this AD affects 121 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspections	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0	\$85 per inspection cycle	\$10,285 per inspection cycle

For Model CL-600-2B16 airplanes having serial numbers 5701 through 5955 inclusive, 5957, 5960 through 5966 inclusive, 5968 through 5971 inclusive, and 5981, we estimate the following costs to do any necessary replacements that would be required based on the results of the required inspection. We have no way of determining the number of aircraft that might need these replacements:

**On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Replace o-ring in affected pump	3 work-hours X \$85 per hour = \$255	\$17	\$272
Replace cartridge in affected pump	2 work-hours x \$85 per hour = \$170	\$8,618	\$8,788

For Model CL-600-2B16 airplanes having serial numbers 5301 through 5665 inclusive, we have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

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.

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 to the Director of the System Oversight Division.

### **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.

## **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):

**2017-22-06 Bombardier, Inc.:** Amendment 39-19086; Docket No. FAA-2017-0521; Product Identifier 2016-NM-189-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-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes, certificated in any category, having serial

numbers 5301 through 5665 inclusive, 5701 through 5955 inclusive, 5957, 5960 through 5966 inclusive, 5968 through 5971 inclusive, and 5981.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Reason**

This AD was prompted by reports of fuel leaks in the engine and auxiliary power unit (APU) electrical fuel pump (EFP) cartridge/canister electrical connectors and conduits. We are issuing this AD to detect and correct fuel leaks in certain fuel pumps to remove a potential fuel ignition hazard.

**(f) Compliance**

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

**(g) General Visual Inspections and Corrective Actions - Model CL-600-2B16 Airplanes, Serial Numbers 5301 through 5665 Inclusive**

For Model CL-600-2B16 airplanes having serial numbers 5301 through 5665 inclusive: Within 600 flight hours or 12 months, whichever occurs first, after the effective date of this AD, do the inspections specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 604-28-022, dated October 19, 2015; except where Bombardier Service Bulletin 604-28-022, dated October 19, 2015, specifies to contact the manufacturer, before further flight accomplish corrective actions in accordance with the procedures specified in paragraph (i)(2) of this AD. Do all applicable corrective actions before further flight. Repeat the inspections at intervals not to exceed 600 flight hours or 12 months, whichever occurs first.

(1) Do a general visual inspection for traces of fuel coming from the right-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(2) Do a general visual inspection for traces of fuel coming from the left-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(3) Do a general visual inspection for traces of fuel coming from the EFP electrical wiring conduit outlet at the lower body fairing area for engine EFPs and at the right-hand landing light compartment for the APU EFP.

**(h) General Visual Inspections and Related Investigative and Corrective Actions - Model CL-600-2B16 Airplanes Having Serial Numbers 5701 through 5955 Inclusive, 5957, 5960 through 5966 Inclusive, 5968 through 5971 Inclusive, and 5981**

For Model CL-600-2B16 airplanes having serial numbers 5701 through 5955 inclusive, 5957, 5960 through 5966 inclusive, 5968 through 5971 inclusive, and 5981: Within 600 flight hours or 12 months, whichever occurs first, after the effective date of this AD, do the inspections specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions in Bombardier Service Bulletin 605-28-010, dated October 19, 2015; except where Bombardier Service Bulletin 605-28-010, dated October 19, 2015, specifies to contact the manufacturer, before further flight accomplish corrective actions in accordance with the procedures specified in paragraph (i)(2) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at intervals not to exceed 600 flight hours or 12 months, whichever occurs first.

(1) Do a general visual inspection for traces of fuel coming from the right-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(2) Do a general visual inspection for traces of fuel coming from the left-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(3) Do a general visual inspection of the right-hand landing light compartment for traces of fuel coming from the APU EFP.

**(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-2016-32R1, dated October 12, 2016, 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-2017-0521.

(2) For more information about this AD, contact Steven Dzierzynski, Aerospace Engineer, Avionics and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; fax 516-794-5531.

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

**(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 604-28-022, dated October 19, 2015.

(ii) Bombardier Service Bulletin 605-28-010, dated October 19, 2015.

(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, 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 October 17, 2017.

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

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