

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

[Docket No. FAA-2018-0790; Product Identifier 2018-NM-078-AD]

RIN 2120-AA64

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

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2010-14-05, which applies 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. AD 2010-14-05 requires inspection for the part numbers of the system and brake accumulators, and repetitive replacement of affected accumulators. Since we issued AD 2010-14-05, we have determined that new or more restrictive airworthiness limitations, as well as additional actions, are necessary to address the unsafe condition. In addition to the requirements of AD 2010-14-05, this proposed AD would require relocating the accumulators and revising the maintenance or inspection program to incorporate new or more restrictive airworthiness limitations. This proposed AD would also add optional terminating action for certain airplanes. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by October 29, 2018.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 202-493-2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, 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, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

**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-2018-0790; 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 NPRM, 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. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Neil Doh, Aerospace Engineer, Aviation Safety Section AIR-7B1, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7757.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2018-0790; Product Identifier 2018-NM-078-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We issued AD 2010-14-05, Amendment 39-16350 (75 FR 37994, July 1, 2010) ("AD 2010-14-05"), for certain Bombardier Model CL-600-1A11 (600), CL-600-2A12 (601), CL-600-2B16 (601-3A, 601-3R, and 604 Variants (including CL-605 Marketing Variant)) airplanes. AD 2010-14-05 requires an inspection to determine the part numbers of the system

accumulators numbers 1, 2, and 3 and brake accumulators numbers 2 and 3, and repetitive replacement of the accumulator. AD 2010-14-05 resulted from reports of the on-ground failure of the hydraulic accumulator screw cap or end cap, resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. We issued AD 2010-14-05 to address failure of one of the brake accumulator screw caps/end caps, resulting in impact damage causing loss of both hydraulic systems No. 2 and No. 3, with consequent loss of both braking and nose wheel steering and the potential for a runway excursion.

**Actions Since AD 2010-14-05 Was Issued**

Since we issued AD 2010-14-05, we have determined that new or more restrictive airworthiness limitations and additional actions are necessary to address the unsafe condition.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2009-39R1, issued October 13, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. The MCAI states:

Seven cases of on-ground hydraulic accumulator screw cap or end cap failure have been experienced on CL-600-2B19 (CRJ) aircraft, resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. The lowest number of flight cycles accumulated at the time of failure, to date, has been 6991 flight cycles.

Although there have been no failures to date on any CL-600-1A11, CL-600-2A12 or CL-600-2B16 aircraft, the same accumulators as those installed on the CL-600-2B19, Part Numbers (P/N) 08-60163-002 and 08-60164-002 are installed on some of the aircraft listed in the Applicability section of this directive.

**Notes:**

1. Earlier accumulators, P/Ns 2770571-102, 2770571-103, 2770571-104 and 2770571-105, were installed in production on the following aircraft: CL-600-1A11 [all Serial Numbers (S/Ns)], CL-600-2A12 (all S/Ns) and CL-600-2B16 (S/Ns 5001 through 5194 and 5301 through 5524 only). These accumulators do not require inspection or replacement. However, if any of the accumulators with the above P/Ns have been replaced in-service by P/Ns 08-60163-002 and 08-60164-002, these latter accumulators require replacement.

2. Prior to issuance of [Canadian] AD CF-2009-39, the only accumulators ever installed in production on CL-600-2B16

aircraft, S/Ns 5525 through 5665 and 5701 through 5908, are P/Ns 08-60163-002 and 08-60164-002; these accumulators require replacement.

3. After issuance of [Canadian] AD CF-2009-39 [which corresponded to FAA AD 2010-14-05, Amendment 39-16350 (75 FR 37994, July 1, 2010)], accumulators with P/Ns specified in Note 2, above, began to feature various S/N suffixes. Only accumulators with S/N suffix "TNAE" do not require replacement, but they are subject to other mandatory actions detailed in this AD.

4. Stainless steel accumulators P/Ns 601R75139-3 (11094-4) and 601R75139-1 (11093-4) were installed in production on CL-600-2B16 aircraft, S/Ns 5909 and subsequent. These accumulators do not require replacement, but they are subjected to other mandatory actions detailed in this AD.

A detailed analysis of the systems and structure in the potential line of trajectory of a failed screw cap/end cap for each accumulator, P/Ns 08-60163-002 and 08-60164-002, has been conducted. On the Challengers, it has been identified that the worst case scenario would be a failure of system No. 1, 2 or 3 accumulator screw caps/end caps (depending on the model), resulting in a potential uncontrolled fire in a non-designated fire zone.

The original version of this [Canadian] AD gave instructions to perform identification and records checks, where applicable, and replace accumulators, P/Ns 08-60163-002 and 08-60164-002 within the time compliance specified.

\* \* \* \* \*

The unsafe condition is potential impact damage that could cause loss of both hydraulic systems No. 2 and No. 3, and the consequent loss of both braking and nose wheel steering, the potential for a runway excursion, and damage to the airplane. Required actions include relocating certain accumulators. 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-2018-0790.

**Related Service Information Under 1 CFR Part 51**

The following Bombardier service information describes procedures for replacing hydraulic system accumulators with new, overhauled, or refurbished accumulators. These documents are distinct since they apply to different airplane models.

- Service Bulletin 600-742, Revision 4, dated June 11, 2015
- Service Bulletin 601-597, Revision 4, dated June 11, 2015
- Service Bulletin 604-29-008, Revision 4, dated June 11, 2015
- Service Bulletin 605-29-001, Revision 4, dated June 10, 2015

The following Bombardier service information describes procedures for relocating hydraulic system accumulators. These documents are distinct since they apply to different airplane models in different configurations.

- Service Bulletin 600-0764, dated October 8, 2015
- Service Bulletin 600-0767, dated August 25, 2016
- Service Bulletin 601-0633, dated October 8, 2015
- Service Bulletin 601-0637, dated August 25, 2016
- Service Bulletin 604-29-013, Revision 2, dated April 18, 2016
- Service Bulletin 605-29-006, Revision 2, dated April 19, 2016

The following Bombardier Time Limits/Maintenance Checks describe certain systems life limits of the safe life items. These documents are distinct since they apply to different airplane models in different configurations.

- Bombardier Challenger 600 Time Limits/Maintenance Checks, PSP 605, Revision 39, dated January 8, 2018
- Bombardier Challenger 601 Time Limits/Maintenance Checks, PSP 601-5, Revision 46, dated January 8, 2018
- Bombardier Challenger 601 Time Limits/Maintenance Checks, PSP 601A-5, Revision 42, dated January 8, 2018
- Bombardier Challenger 604 CL-604 Time Limits/Maintenance Checks, Revision 30, dated December 4, 2017
- Bombardier Challenger CL-605 Time Limits/Maintenance Checks, Revision 18, dated December 4, 2017

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.

**FAA's Determination and Requirements of This Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type designs.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (n)(1) of this proposed AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Difference Between Proposed AD and MCAI**

Although the MCAI placed no restrictions on special flight permits, this proposed AD would limit ferry flights by requiring an engineering recommendation from Bombardier as well as approval from the Flight Standards District Office. This difference has been coordinated with TCCA.

**Costs of Compliance**

We estimate that this proposed AD affects 130 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

**ESTIMATED COSTS FOR REQUIRED ACTIONS**

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions: 20 work-hours × \$85 per hour = \$1,700.	\$7,717 .....	\$9,417 .....	\$1,224,210.
New actions: Up to 170 work-hours × \$85 per hour = Up to \$14,450.	Up to \$41,635 .....	Up to \$56,085 .....	Up to \$7,291,050.

For the new maintenance/inspection program revision, we have determined that this action takes an average of 90 work-hours per operator, although we recognize that this number may vary from operator to operator. In the past, we have estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet, we have determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, we estimate the total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

According to the manufacturer, some or all of the costs of this proposed 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 known 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 proposed 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

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.

#### The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 removing Airworthiness Directive (AD) 2010-14-05, Amendment 39-16350 (75 FR 37994, July 1, 2010), and adding the following new AD:

**Bombardier, Inc.:** Docket No. FAA-2018-0790; Product Identifier 2018-NM-078-AD.

#### (a) Comments Due Date

We must receive comments by October 29, 2018.

#### (b) Affected ADs

This AD replaces AD 2010-14-05, Amendment 39-16350 (75 FR 37994, July 1, 2010) ("AD 2010-14-05").

#### (c) Applicability

This AD applies to the Bombardier, Inc., airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(5) 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 airplanes (601-3A Variant), serial numbers 5001 through 5134 inclusive.
- (4) Model CL-600-2B16 airplanes (601-3R Variant), serial numbers 5135 through 5194 inclusive.

(5) Model CL-600-2B16 airplanes (604 Variant), serial numbers 5301 through 5665 inclusive and 5701 and subsequent.

**Note 1 to paragraph (c) of this AD:** Certain Model CL-600-2B16 (604 Variant) airplanes might be referred to by the marketing designation CL-605.

#### (d) Subject

Air Transport Association (ATA) of America Code 29, Hydraulic power.

#### (e) Reason

This AD was prompted by reports of on-ground hydraulic accumulator screw cap or end cap failure that resulted in the loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. We are issuing this AD to address failure of one of the brake accumulator screw caps/end caps, which could result in impact damage causing loss of both hydraulic systems No. 2 and No. 3, and the consequent loss of both braking and nose wheel steering, the potential for a runway excursion, and damage to the airplane.

#### (f) Compliance

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

#### (g) Retained Part Number Inspection and Accumulator Replacement, With Revised Formatting, Service Information, and Affected Part Numbers

This paragraph restates the requirements of paragraph (g) of AD 2010-14-05, with revised formatting, service information, and affected part numbers. Do the following actions as applicable.

(1) Within 50 flight hours after August 5, 2010 (the effective date of AD 2010-14-05), inspect to determine the part numbers of the system accumulators numbers 1, 2, and 3, and brake accumulators numbers 2 and 3 that are installed on the airplane. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of each accumulator can be conclusively determined from that review. If all of the installed accumulators have part number (P/N) 2770571-102, 2770571-103, 2770571-104, 2770571-105, 601R75139-3 (11094-4), or 601R75139-1 (11093-4), no further action is required by paragraph (g) of this AD.

(2) Except as provided in paragraph (g)(1) of this AD: At the applicable time in paragraph (g)(2)(i), (g)(2)(ii), or (g)(2)(iii) of this AD, replace the accumulator with a new, overhauled, or refurbished accumulator with the same part number, in accordance with the Accomplishment Instructions of the applicable service bulletin listed in figure 1 to paragraphs (g)(2) and (g)(3) of this AD.

(i) For each accumulator having P/Ns 08-60163-002 (601R75138-1), and 08-60164-002 (601R75138-3), as applicable, that has accumulated more than 3,650 total flight cycles as of August 5, 2010 (the effective date of AD 2010-14-05): Replace the accumulator within 100 flight cycles after August 5, 2010.

(ii) For each accumulator having P/N 08-60163-002 (601R75138-1), and 08-60164-002 (601R75138-3), as applicable, that has accumulated 3,650 total flight cycles or fewer

as of August 5, 2010: Replace the accumulator before the accumulation of 3,750 total flight cycles on the accumulator.

(iii) For each accumulator having P/N 08-60163-002 (601R75138-1), and 08-60164-002 (601R75138-3), as applicable, for which it is not possible to determine the number of

flight cycles accumulated: Replace the accumulator within 100 flight cycles after August 5, 2010.

**Figure 1 to paragraphs (g)(2) and (g)(3) of this AD –  
Service bulletins for accumulator replacement**

<b>Airplane Model –</b>	<b>Bombardier Service Bulletin –</b>	<b>Revision –</b>	<b>Dated –</b>
CL-600-1A11 (600)	600-0742	04	June 11, 2015
CL-600-2A12 (601)			
CL-600-2B16 (601-3A and 601-3R Variants)	601-0597	04	June 11, 2015
CL-600-2B16 (604 Variant)	604-29-008	04	June 11, 2015
CL-600-2B16 (605*)	605-29-001	04	June 10, 2015

\*Model CL-600-2B16 (604 Variant), referred to by the marketing designation CL-605.

(3) Thereafter, before the accumulation of 3,750 total flight cycles on any accumulator having P/Ns 08-60163-002 (601R75138-1), and 08-60164-002 (601R75138-3), as applicable, replace the accumulator with a new, overhauled, or refurbished accumulator having the same part number, in accordance with the Accomplishment Instructions of the applicable service bulletin listed in figure 1 to paragraphs (g)(2) and (g)(3) of this AD.

**(h) New Provision of This AD: Terminating Action for Certain Accumulators**

For each accumulator with one of the following part number and serial number (S/N) suffixes, the repetitive replacement specified in paragraphs (g)(2) and (g)(3) of this AD is not required.

- (1) P/N 08-60163-002 with S/N suffix TNAE
- (2) P/N 08-601-002 with S/N suffix TNAE
- (3) P/N 601R75139-3 (11094-4)
- (4) P/N 601R75139-1 (11093-4)

**(i) New Requirement of This AD: Relocation of Accumulators**

Within 60 months or 2,400 flight cycles, whichever occurs first after the effective date of this AD, relocate the hydraulic system accumulators as specified in paragraphs (i)(1) through (i)(4) of this AD, as applicable. Relocation of the hydraulic system

accumulators as required by this paragraph does not terminate any repetitive replacement required by paragraph (g)(2) or (g)(3) of this AD.

(1) For Model CL-600-1A11 (600) airplanes, S/Ns 1004 through 1085 inclusive: Relocate accumulators as specified in paragraphs (i)(1)(i) and (i)(1)(ii) of this AD.

(i) Relocate hydraulic system Nos. 1 and 2 accumulators, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601-0764, dated October 8, 2015.

(ii) Relocate hydraulic system No. 3 accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 600-0767, dated August 25, 2016.

(2) For Model CL-600-2A12 (601) airplanes, S/Ns 3001 through 3066 inclusive, and Model CL-600-2B16 (601-3A and 601-3R Variants) airplanes, S/Ns 5001 through 5194 inclusive: Relocate accumulators as specified in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD.

(i) Relocate hydraulic system Nos. 1 and 2 accumulators, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601-0633, dated October 8, 2015.

(ii) Relocate hydraulic system No. 3 accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601-0637, dated August 25, 2016.

(3) For Model CL-600-2B16 (604 Variant) airplanes, S/Ns 5301 through 5665 inclusive: Relocate hydraulic system No. 3 accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 604-29-013, Revision 2, dated April 18, 2016.

(4) For Model CL-600-2B16 (605) airplanes, S/Ns 5701 and subsequent (*i.e.*, Model CL-600-2B16 (604 Variant), referred to by the marketing designation CL-605): Relocate hydraulic system No. 3 accumulator, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 605-29-006, Revision 2, dated April 19, 2016.

**(j) New Requirement of This AD: Revision of Maintenance/Inspection Program**

Within 50 flight hours after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the tasks specified in figure 2 to paragraph (j) of this AD.

**Figure 2 to paragraph (j) of this AD: Time Limits / Maintenance Checks (TLMC) tasks**

<b>Airplane model</b>	<b>TLMC manual number</b>	<b>Section</b>	<b>Part number / task number</b>
CL-600-1A11 (600)	Bombardier Challenger 600 Time Limits / Maintenance Checks, PSP 605, Revision 39, dated January 8, 2018	5-10-20	601R75138-1 (08-60163-002) with “TNAE” after the S/N
			601R75138-3 (08-60164-002) with “TNAE” after the S/N
CL-600-2A12 (601)	Bombardier Challenger 601 Time Limits / Maintenance Checks, PSP 601-5, Revision 46, dated January 8, 2018	5-10-20	601R75138-1 (08-60163-002) with “TNAE” after the S/N
			601R75138-3 (08-60164-002) with “TNAE” after the S/N
CL-600-2B16 (601-3A and 601-3R Variants)	Bombardier Challenger 601 Time Limits / Maintenance Checks, PSP 601A-5, Revision 42, dated January 8, 2018	5-10-20	601R75138-1 (08-60163-002) with “TNAE” after the S/N
			601R75138-3 (08-60164-002) with “TNAE” after the S/N
CL-600-2B16 (604 Variant)	Bombardier Challenger 604 CL-604 Time Limits / Maintenance Checks, Revision 30, dated December 4, 2017	5-10-11	29-10-00-101
			29-10-00-102
CL-600-2B16 (605*)	Bombardier Challenger CL-605 Time Limits / Maintenance Checks, Revision 18, dated December 4, 2017	5-10-11	29-10-00-101
			29-10-00-102

\*Model CL-600-2B16 (604 Variant), referred to by the marketing designation CL-605.

**(k) No Alternative Actions or Intervals**

After the maintenance or inspection program has been revised as required by paragraph (j) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions or intervals are approved as an alternative method of

compliance (AMOC) in accordance with the procedures specified in paragraph (n)(1) of this AD.

**(l) Credit for Previous Actions**

(1) Replacement of an accumulator with a new accumulator having the same part number is also acceptable for compliance

with the requirements of paragraphs (g)(2) and (g)(3) of this AD, if done before August 5, 2010 (the effective date of AD 2010-14-05), in accordance with the applicable service bulletin listed in figure 3 to paragraph (l)(1) of this AD. This service information is not incorporated by reference in this AD.

**Figure 3 to paragraph (l)(1) of this AD – Previous service bulletins for AD 2010-14-05**

<b>Airplane Model –</b>	<b>Bombardier Service Bulletin –</b>	<b>Revision –</b>	<b>Dated –</b>
CL-600-1A11 (600)	600-0742	Original	November 10, 2008
		01	July 6, 2009
CL-600-2A12 (601) CL-600-2B16 (601-3A and 601-3R Variants)	601-0597	Original	November 10, 2008
		01	July 6, 2009
CL-600-2B16 (604 Variant)	604-29-008	Original	November 10, 2008
		01	July 6, 2009
CL-600-2B16 (605*)	605-29-001	Original	November 10, 2008
		01	July 6, 2009

\*Model CL-600-2B16 (604 Variant), referred to by the marketing designation CL-605.

(2) Replacement of an accumulator with a new accumulator having the same part number is also acceptable for compliance with the requirements of paragraphs (g)(2)

and (g)(3) of this AD, if done before the effective date of this AD in accordance with the applicable service bulletin listed in figure 4 to paragraph (l)(2) of this AD. This service

information is not incorporated by reference in this AD.

**Figure 4 to paragraph (l)(2) of this AD – Previous service bulletins for this AD**

<b>Airplane Model –</b>	<b>Bombardier Service Bulletin –</b>	<b>Revision –</b>	<b>Dated –</b>
CL-600-1A11 (600)	600-0742	02**	May 10, 2010
		03*	April 10, 2012
CL-600-2A12 (601) CL-600-2B16 (601-3A and 601-3R Variants)	601-0597	02**	May 10, 2010
		03*	April 10, 2012
CL-600-2B16 (604 Variant)	604-29-008	02**	May 10, 2010
		03*	April 10, 2012
CL-600-2B16 (605***)	605-29-001	02**	May 10, 2010
		03*	April 10, 2012

\*This service information is not incorporated by reference in this AD.

\*\*This service information was incorporated by reference in AD 2010-14-05.

\*\*\*Model CL-600-2B16 (604 Variant), referred to by the marketing designation CL-605.

(3) This paragraph provides credit for actions required by paragraph (i)(3) of this AD, if those actions were performed before the effective date of this AD, in accordance with Bombardier Service Bulletin 604–29–013, dated April 30, 2015; or Bombardier Service Bulletin 604–29–013, Revision 1, dated October 19, 2015. This service information is not incorporated by reference in this AD.

(4) This paragraph provides credit for actions required by paragraph (i)(4) of this AD, if those actions were performed before the effective date of this AD, in accordance with Bombardier Service Bulletin 605–29–006, dated April 30, 2015; or Bombardier Service Bulletin 605–29–006, Revision 1, dated October 19, 2015. This service information is not incorporated by reference in this AD.

#### **(m) Special Flight Permit**

Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified, provided the following conditions are met:

(1) An engineering recommendation must be obtained via the Bombardier process Service Request for Product Support Action (SRPSA) at [SRPSA@aerobombardier.com](mailto:SRPSA@aerobombardier.com).

(2) Approval of the special flight permit must be obtained from the Flight Standards District Office.

#### **(n) Other FAA AD Provisions**

(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.

(i) 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.

(ii) AMOC 15–76R1 and AMOC 15–53, approved previously for AD 2010–14–05, are approved as AMOCs for the corresponding provisions of paragraph (g)(2) of 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 Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

#### **(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF–2009–39R1, dated October 13, 2017, 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–2018–0790.

(2) For more information about this AD, contact Neil Doh, Aerospace Engineer, Aviation Safety Section AIR–7B1, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781–238–7757.

(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>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

Issued in Des Moines, Washington, on August 24, 2018.

**James Cashdollar,**

*Acting Director, System Oversight Division, Aircraft Certification Service.*

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