



[4910-13-P]

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2018-0794; Product Identifier 2017-NM-175-AD; Amendment 39-19625; AD 2019-08-04]

RIN 2120-AA64

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

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2012-25-02, which applied to certain Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. AD 2012-25-02 required revising the airworthiness limitations section (AWL) of the instructions for continued airworthiness (ICA) of the maintenance requirements manual (MRM) by incorporating new procedures for repetitive inspections for cracking of the rear pressure bulkhead (RPB). AD 2012-25-02 also required revising the maintenance or inspection program to incorporate a revised task. This AD also mandates modification of the RPB and adds repetitive inspections for cracking of the RPB web, which terminates certain actions in this AD. This AD was prompted by additional in-service crack findings, which resulted in the development of a structural modification to the RPB. 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].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of January 16, 2013 (77 FR 73902, December 12, 2012).

**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 514-855-5000; fax 514-855-7401; e-mail [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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0794.

**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-2018-0794; 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 regulatory evaluation, any comments

received, and other information. The address for Docket Operations (phone: 800-647-5527) 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.

**FOR FURTHER INFORMATION CONTACT:** Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-25-02, Amendment 39-17283 (77 FR 73902, December 12, 2012) (“AD 2012-25-02”). AD 2012-25-02 applied to certain Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The NPRM published in the Federal Register on September 13, 2018 (83 FR 46428). The NPRM was prompted by additional in-service crack findings, which resulted in the development of a structural modification to the RPB. The NPRM proposed to continue to require revising the AWL of the ICA of the MRM by incorporating new procedures for repetitive inspections for cracking of the RPB. The NPRM also proposed to mandate modification of the RPB and add repetitive inspections for cracking of the RPB web, which would terminate certain actions in this AD. We are issuing this AD to address cracking in the RPB, which could result in reduced structural integrity and rapid decompression of the airplane.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2011-30R2, dated June 12,

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-600-2B19 (Regional Jet Series 100 & 440) airplanes. The MCAI states:

Cracks on the forward face of the Rear Pressure Bulkhead (RPB) web have been discovered on three CL-600-2B19 aeroplanes in-service.

A Temporary Revision has been made to Part 2 of the Maintenance Requirements Manual (MRM) to revise the existing AWL task by introducing an improved Non-Destructive Inspection (NDI) procedure to ensure that fatigue cracking of the RPB is detected and corrected.

The original issue of this [TCCA] AD [which corresponds to FAA AD 2012-25-02] mandated the incorporation of a new NDI procedure for AWL task number 53-61-153.

Additional in-service findings have resulted in the issue of revision 1 of this [TCCA] AD, which mandates a structural modification to the rear pressure bulkhead with revised threshold and repeat inspection intervals. This modification is intended to preclude the onset of multiple site fatigue damage for the remaining service life of the aeroplane. If not corrected, a failure of the RPB could result in loss of structural integrity of the aeroplane.

Revision 2 of this [TCCA] AD requires an inspection to be carried out prior to modification of the RPB. This revision also requires an additional modification to be completed on the RPB prior to terminating AWL task number 53-61-153. It also includes provisions to account for certain repairs as well as [alternative methods of compliance] AMOCs issued to earlier revisions of this [TCCA] AD.

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-2018-0794.

## **Comments**

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

### **Support for the NPRM**

Endeavor Air stated its support for the NPRM.

### **Request to Add Reference Terminating Action**

Bombardier requested that we revise paragraph (g) of the proposed AD to identify the terminating action provided in paragraph (o)(3) of the proposed AD. Bombardier pointed out that, since paragraph (g) of the proposed AD identifies terminating action in paragraph (m) of the proposed AD, paragraph (g) of the proposed AD should also identify the terminating action provided in paragraph (o)(3) of the proposed AD for consistency.

We do not agree to add reference to paragraph (o)(3) in the introductory text of paragraph (g) of this AD. Instead, because paragraph (o) of this AD already contains all of the terminating actions for paragraph (g) of this AD, for simplicity and consistency we have revised paragraph (g) of this AD to remove reference to terminating actions that were identified in the proposed AD. This change does not change the intent or requirements of paragraph (g) of this AD.

### **Request to Add Alternative Service Information for Repair**

Bombardier requested that we revise paragraph (k) of the proposed AD to reference Bombardier Repair Engineering Order (REO) 601R-53-61-1285, Revision E, dated October 31, 2016; and Bombardier REO 601R-53-61-1541, Revision F, dated

November 12, 2014; as alternative service information for the repair. Bombardier pointed out that this change corresponds with the provisions of Part I, section C., of the MCAI.

We agree with the request. We have determined that the actions specified in the alternative service information are acceptable for compliance for the repair. Therefore, we have revised paragraph (k)(2) of this AD to add the referenced REOs as alternative service information for the repair.

#### **Request to Add Credit for Previous Actions Using Previous Service Information**

Bombardier requested that we revise paragraph (p) of the proposed AD to provide credit for actions done before the effective date of the AD using earlier revisions of the service information specified in part III, section B., paragraphs (3), (5), (6), and (7) of the MCAI. Bombardier did not provide a justification for this request.

We partially agree with the request to provide credit for previously accomplished actions done using the earlier revisions of the specified service information. We have determined that the service information specified in part III, section B., paragraphs (3), (5), (6), and (7) of the MCAI is acceptable for accomplishing the applicable actions before the effective date of this AD, provided certain actions are done using the required service information. Therefore, we have added paragraph (p) to this AD to include the requested credit, and have redesignated subsequent paragraphs accordingly.

#### **Request to Allow Approved Alternative Actions and Intervals**

Endeavor Air requested that we revise paragraph (n) of the proposed AD, which would prohibit alternative actions and intervals once revision of the maintenance or inspection program is accomplished, except as approved in paragraph (p)(1) of the proposed AD (which specified approval by the FAA only). The commenter asserted that

alternative actions and intervals should be allowed if approved by specifying “paragraph (p)(1) or (p)(2)” (paragraph (p)(2) specified approval by the FAA, TCCA, or the TCCA Design Approval Organization (DAO)). The commenter stated that this change would reduce unnecessary time and paperwork by eliminating the need for AMOC approval by the FAA after the operator has already received a generic REO (GREO) or REO that is TCCA DAO approved.

We do not agree to add reference to paragraph (q)(2) of this AD (paragraph (p)(2) of the proposed AD) in paragraph (n) of this AD. Since we do not currently have the authority to delegate AMOC approvals to foreign civil aviation authorities, the FAA is responsible for these approvals. We have not changed this AD in this regard.

#### **Request to Allow Deviations to Certain Service Information**

Air Wisconsin requested that necessary deviations from the instructions in Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016, be acceptable along with this REO for compliance with the requirements of paragraph (j)(2) of the proposed AD. Air Wisconsin pointed out that paragraph (j)(2) of the proposed AD would require a modification in accordance with Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016, and reported that it has incorporated this REO on several of its airplanes. In some cases, Air Wisconsin stated that it found it necessary to deviate from the instructions of this REO (e.g., plugging holes with fasteners or installation of next oversize fastener). Therefore, since there are no approved deviations to the inspection procedures in this REO, Air Wisconsin suggested that necessary deviations to this REO be considered acceptable under the following conditions:

- The deviation is approved by signature by TCCA or Bombardier, Inc.'s TCCA DAO; and

- The damage-tolerance analysis was performed as shown by the entry in block 6 (Additional Limitations) of the REO and the entry was determined to be "None."

We do not agree with the commenter's request. We do not consider it appropriate to include various provisions in an AD applicable only to an operator's unique configuration of affected airplanes. However, if an operator with an affected airplane cannot accomplish the required actions specified in the service information, or prefers to use different service information that is specific to their design, an AMOC can be requested in accordance with the provisions specified in paragraph (q) of this AD.

Further, as we explained in the "Differences Between this Proposed AD and the Service Information" section in the NPRM, the MCAI includes the following statement: "If it is not possible to complete all of the instructions in Part II of this [Canadian] AD due to the configuration of the aeroplane . . . contact Bombardier Inc. . . . for approved instructions." This issue is addressed in 14 CFR 39.17, which states that "If a change in a product affects your ability to accomplish the actions required by the AD in any way, you must request FAA approval of an AMOC . . . ." Since we do not currently have the authority to delegate AMOC approvals to foreign civil aviation authorities, the FAA is responsible for these approvals.

We have not changed this AD regarding this issue.

### **Request to Extend Compliance Time**

SkyWest Airlines (SkyWest) requested that we extend the phase-in compliance times required by paragraph (j) of the proposed AD, which would require a modification

according to a schedule based on accumulated flight cycles. SkyWest reported that, due to its fleet utilization and the phase-in intervals, the work might need to be done outside of a scheduled heavy maintenance visit. SkyWest proposed an alternative phase-in schedule to allow a cushion of time in order for them to reach the next heavy maintenance visit.

We do not agree with the commenter's request to extend the phase-in compliance times specified in figure 1 to paragraph (j) of this AD. We have determined that the compliance times, as proposed, represent the maximum interval of time allowable for the affected airplanes to continue to safely operate before the modification is done. Since maintenance schedules vary among operators, there would be no assurance that the airplane would be modified during that maximum interval. Further, this commenter did not provide data verifying the safety of the proposed intervals. Although we have not changed the AD regarding this issue, under the provisions of paragraph (q)(1) of this AD, we will consider requests for approval of an alternative compliance time, if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety. We have not changed this AD in this regard.

#### **Request to Clarify Credit for Prior Accomplishment**

Air Wisconsin requested that we revise paragraph (j) of the proposed AD to specify that the actions are required "unless already accomplished." Air Wisconsin stated that several of its airplanes have been modified using the applicable service information.

We do not agree to revise paragraph (j) of this AD. Paragraph (f) of this AD requires compliance with all AD requirements "unless already done." Therefore, the

commenter's proposed wording is unnecessary. We have not changed this AD regarding this issue.

#### **Request for Clarification of Locations for Nondestructive Inspection (NDI)**

Air Wisconsin requested that we clarify whether the NDI specified in paragraph (j)(1) of the proposed AD is for areas that have not been modified using various REOs or Supplemental Type Certificate (STC) ST02308NY that would remain in place. The commenter added that the NDI may not be possible for those areas modified using Bombardier REO 601R-53-61-1541; or Bombardier REO 601R-53-61-1285, Revision D, dated October 31, 2011, or Revision E, dated October 31, 2016; which were approved by certain AMOCs; because the NDI has not yet been developed for those areas.

We agree that clarification is necessary. Unless this AD provides specific credit for an existing modification or repair NDI, an evaluation needs to be accomplished to determine whether the inspection associated with the existing modification or repair meets an acceptable level of safety. An AMOC is required for an alternative action based on the existing modification or repair. We have not changed this AD regarding this issue.

#### **Request for Clarification of Affected Serial Number**

Air Wisconsin noted that paragraph (m) of the proposed AD applies to "any airplane having serial number 7610," and asked whether more than one Model CL-600-2B19 airplane had that serial number.

We agree that clarification is necessary. There is only one airplane with serial number 7610. We have revised paragraph (m) of this AD to specify "For airplane serial number 7610."

### **Request to Clarify Terminating Requirements**

Air Wisconsin requested that we clarify paragraph (o)(1) of the proposed AD by explaining how compliance with paragraph (j) or (l) of the proposed AD would not entirely terminate the requirements of paragraph (g) of the proposed AD.

We agree that clarification may be necessary. Paragraph (o)(1) of this AD specifies that accomplishing the requirements of paragraph (j) or (l) terminates the requirements of paragraph (g) of this AD “for the repaired area only.” The inspections required by paragraph (g) of this AD must be repeated for non-repaired areas. This requirement corresponds with the MCAI. We have not changed this AD regarding this issue.

### **Request for Credit for Previous Repairs**

Bombardier requested that we revise paragraphs (k)(1) and (k)(2) of the proposed AD to give credit for repairs done before the effective date of the AD, if those repairs were approved by the FAA, TCCA, or Bombardier’s TCCA DAO and referred to the MCAI. Bombardier noted that this credit is provided in part I, section C., of the MCAI.

We partially agree. We agree to provide credit for repairs specified in paragraphs (k)(1) and (k)(2) of this AD, if those repairs were done before the effective date of this AD, and were done in accordance with a method approved by the Manager, New York ACO Branch, FAA; TCCA; or Bombardier's TCCA DAO; and the approval references TCCA AD CF-2011-30, dated August 24, 2011, or AD CF-2011-30R1, dated November 1, 2016. However, we do not agree to include that credit in paragraphs (k)(1) and (k)(2) of this AD. Instead, we have added paragraph (p)(1) to this AD to provide the requested credit. (As explained previously, we have redesignated paragraphs (p)(1) and (p)(2) of the proposed AD as paragraphs (q)(1) and (q)(2) of this AD.)

## **Request to Correct Paragraph References**

Bombardier noted a typographical error in paragraph (p)(1)(ii) of the proposed AD, which specified that previously approved AMOCs are acceptable for “paragraphs (g), (k), and (l)” of the proposed AD. Bombardier asserted that the correct paragraph references are (g), (h), and (i).

We agree that paragraph (p)(1)(ii) of the proposed AD included a typographical error in the paragraph references. We have revised paragraph (q)(1)(ii) of this AD (paragraph (p)(1)(ii) of the proposed AD) to reference the correct paragraphs.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

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

Bombardier, Inc., has issued the following service information.

- Bombardier REO 601R-53-61-1230, Revision F, dated October 31, 2011. This service information describes procedures for a repair to the pressure bulkhead web frame station (FS) 621.00, lintel installation.

- Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016. This service information describes procedures for a repair and modification to FS 621.00 pressure bulkhead web.

- Bombardier REO 601R-53-61-5828, Revision A, dated March 16, 2017. This service information describes procedures for a repair to FS 621.00 pressure bulkhead web at left buttock line (LBL) 27.5.

This AD also requires Bombardier Temporary Revision 2B-2187, dated June 22, 2011, to Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 MRM, which the Director of the Federal Register approved for incorporation by reference as of January 16, 2013 (77 FR 73902, December 12, 2012).

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 457 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

**Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Up to 917 work-hours X \$85 per hour = \$77,945	Up to \$6,000	Up to \$83,945	Up to \$38,362,865

We have determined that revising the maintenance or inspection program 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(s), 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).

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

### **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 and associated appliances 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 removing Airworthiness Directive (AD) 2012-25-02, Amendment 39-17283 (77 FR 73902, December 12, 2012), and adding the following new AD:

**2019-08-04 Bombardier, Inc.:** Amendment 39-19625; Docket No. FAA-2018-0794; Product Identifier 2017-NM-175-AD.

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

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2012-25-02, Amendment 39-17283 (77 FR 73902, December 12, 2012) (“AD 2012-25-02”).

#### **(c) Applicability**

This AD applies to Bombardier, Inc., Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, serial numbers 7002 through 8025 inclusive, 8030, and 8034.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

#### **(e) Reason**

This AD was prompted by multiple reports of cracks on the forward face of the rear pressure bulkhead (RPB) web, and additional in-service crack findings that resulted in the development of a structural modification to the RPB. We are issuing this AD to address cracking in the RPB, which could result in reduced structural integrity and rapid decompression of the airplane.

**(f) Compliance**

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

**(g) Retained Revision of the Maintenance Program with Minor Changes**

This paragraph restates the requirements of paragraph (i) of AD 2012-25-02, with minor changes. Except for the airplane having serial number 7002, within 60 days after January 16, 2013 (the effective date of AD 2012-25-02): Revise the maintenance program by incorporating the revised inspection requirements specified in airworthiness limitation section (AWL) 53-61-153 of Bombardier temporary revision (TR) 2B-2187, dated June 22, 2011, to Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 Maintenance Requirements Manual (MRM). The initial compliance times for the task are at the applicable time specified in paragraph (g)(1) or (g)(2) of this AD.

(1) For airplanes on which the special detailed inspection specified in AWL 53-61-153 of Bombardier TR 2B-2187, dated June 22, 2011; or Canadair Regional Jet TR 2B-2109, dated October 13, 2005; has not been done as of January 16, 2013 (the effective date of AD 2012-25-02): The initial compliance time for AWL 53-61-153 is at the applicable time specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD.

(i) For airplanes that have accumulated 10,500 total flight cycles or less as of January 16, 2013: Before the accumulation of 12,000 total flight cycles.

(ii) For airplanes that have accumulated more than 10,500 total flight cycles as of January 16, 2013: Within 1,500 flight cycles after January 16, 2013 (the effective date of AD 2012-25-02).

(2) For airplanes on which the special detailed inspection specified in AWL 53-61-153 of Bombardier TR 2B-2187, dated June 22, 2011; or Canadair Regional

Jet TR 2B-2109, dated October 13, 2005; has been done as of January 16, 2013 (the effective date of AD 2012-25-02): The initial compliance time for AWL 53-61-153 is within 4,360 flight cycles after accomplishing the most recent special detailed inspection, or within 1,500 flight cycles after accomplishing the most recent detailed inspection as specified in AWL 53-61-153 of Canadair Regional Jet TR 2B-2109, dated October 13, 2005, whichever occurs later.

**(h) Retained No Alternative Actions or Intervals, with New Exception**

This paragraph restates the requirements of paragraph (j) of AD 2012-25-02, with a new exception. Except as required by paragraphs (j)(3), (l)(2), and (m) of this AD, after accomplishing the revisions required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used other than those specified in Bombardier TR 2B-2187, dated June 22, 2011, to Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 MRM, unless the actions and intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (q)(1) of this AD.

**(i) Retained General Revision of the MRM, with No Changes**

This paragraph restates the requirements of paragraph (k) of AD 2012-25-02, with no changes. The maintenance program revision required by paragraph (g) of this AD may be done by inserting a copy of Bombardier TR 2B-2187, dated June 22, 2011, into Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 MRM. When this TR has been included in general revisions of the MRM, the general revisions may be inserted in the MRM, provided the relevant information in the general revision is identical to that in this TR.

**(j) New Requirements of this AD: Inspections, Modification, and Maintenance or Inspection Program Revision**

Accomplish the actions required by paragraphs (j)(1), (j)(2), and (j)(3) of this AD at the time specified, except as provided by paragraphs (l) and (m) of this AD.

(1) At the applicable time specified in figure 1 to paragraph (j) of this AD: Do a nondestructive inspection for cracking of the forward face of the fuselage station (FS) 621 pressure bulkhead, in accordance with AWL 53-61-153 of Bombardier TR 2B-2187, dated June 22, 2011, to Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 MRM.

(2) At the applicable time specified in figure 1 to paragraph (j) of this AD: Modify the RPB and do a nondestructive inspection for cracking of the FS 621 pressure bulkhead web, in accordance with Bombardier Repair Engineering Order (REO) 601R-53-61-1240, Revision D, dated October 31, 2016.

(3) Before further flight after accomplishing the modification required by paragraph (j)(2) of this AD: Revise the existing maintenance or inspection program, as applicable, by incorporating the inspection requirements at the threshold and repetitive inspection times specified in the in-service deviation inspection requirements (SDIR) of Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016.

**Figure 1 to Paragraph (j) of this AD – *Modification and Inspection Phase-In***

<b>Airplane Flight Cycles as of the Effective Date of this AD</b>	<b>Compliance Time</b>
For airplanes that have accumulated 35,000 total flight cycles or less	Prior to the accumulation of 40,000 total flight cycles
For airplanes that have accumulated more than 35,000 total flight cycles and less than 40,000 total flight cycles	Within 5,000 flight cycles after the effective date of this AD
For airplanes that have accumulated 40,000 total flight cycles or more	Prior to the accumulation of 45,000 total flight cycles

**(k) Corrective Action**

(1) If any crack is found during any inspection required by paragraph (j)(2), (l)(1), or (m) of this AD: Before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; 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.

(2) If any crack is found during any inspection required by paragraph (j)(1) of this AD: Before further flight, repair in accordance with the applicable service information specified in paragraph (k)(2)(i) or (k)(2)(ii) of this AD, or using a method approved by the Manager, New York ACO Branch, FAA; TCCA; or Bombardier, Inc.’s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(i) Bombardier REO 601R-53-61-1230, Revision F, dated October 31, 2011; or Bombardier REO 601R-53-61-1285, Revision E, dated October 31, 2016.

(ii) Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016; or Bombardier REO 601R-53-61-1541, Revision F, dated November 12, 2014.

**(l) Alternative Actions for Certain Airplanes**

For airplanes on which the actions required by paragraphs (j)(1) and (j)(2) of this AD were performed before the effective date of this AD using the REOs identified in figure 2 to paragraph (l) of this AD: In lieu of accomplishing the actions required by paragraph (j) of this AD, accomplish the actions required by paragraphs (l)(1) and (l)(2) of this AD within 6,000 flight cycles after the effective date of this AD.

(1) Perform a special detailed inspection for cracking of Zone B of the RPB web, in accordance with Part B of Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016.

(2) Revise the existing maintenance or inspection program, as applicable, by incorporating the inspection requirements at the threshold and repetitive inspection times specified in Part B of the SDIR of Bombardier REO 601R-53-61-1240, Revision D, dated October 31, 2016. The inspection threshold is measured from the time of incorporation of the applicable REO specified in figure 2 to paragraph (l) of this AD.

**Figure 2 to paragraph (l) of this AD –**  
*REOs Equivalent to Part A of REO 601R-53-61-1240*

<b>Serial Number</b>	<b>Bombardier REO</b>
7029	601R-53-61-3032, Revision D, dated May 6, 2014
	601R-53-61-3059, Revision D, dated November 1, 2011
	601R-53-61-5220, Revision A, dated March 20, 2014
7033	601R-53-61-4391, dated February 6, 2012
	601R-53-61-4405, dated February 16, 2012
7054	601R-53-61-4398, Revision A, dated August 23, 2016
	601R-53-61-5801, dated August 23, 2016
7058	601R-53-61-5480, dated May 22, 2015

<b>Serial Number</b>	<b>Bombardier REO</b>
7060	601R-53-61-4385, Revision A, dated August 25, 2016
7206	601R-53-61-4750, dated January 15, 2013
7212	601R-53-61-5137, Revision A, dated August 25, 2016
7312	601R-53-61-5738, dated June 23, 2016
7424	601R-53-61-5295, Revision A, dated July 2, 2014
7430	601R-53-61-4950, dated June 28, 2013
7433	601R-53-61-2039, Revision A, dated August 24, 2016
7452	601R-53-61-4821, Revision A, dated February 28, 2013
	601R-53-61-4572, Revision C, dated February 27, 2013
	601R-53-61-4584, Revision A, dated February 27, 2013
7463	601R-53-61-4712, dated November 15, 2012
	601R-53-61-5369, dated October 14, 2014
7466	601R-53-61-4884, dated April 25, 2013
7468	601R-53-61-5779, Revision A, dated August 16, 2016
7476	601R-53-61-5727, Revision B, dated June 8, 2016
7484	601R-53-61-5040, dated October 2, 2013
	601R-53-61-5049, Revision A, dated October 9, 2013
7513	601R-53-61-5498, dated June 23, 2015
7591	601R-53-61-2360, Revision A, dated August 24, 2016
	601R-53-61-2361, dated October 11, 2007
	601R-53-61-2364, dated October 11, 2007
	601R-53-61-2368, dated October 10, 2007
	601R-53-61-2373, dated October 17, 2007
	601R-53-61-2380, dated October 20, 2007
7616	601R-53-61-5250, dated April 15, 2014
7626	601R-53-61-5377, dated November 5, 2014
	601R-53-61-5383, dated November 7, 2014

<b>Serial Number</b>	<b>Bombardier REO</b>
7643	601R-53-61-5076, dated October 31, 2013
	601R-53-61-5085, Revision A, dated November 11, 2013
7658	601R-53-61-4942, Revision A, dated July 8, 2013
7660	601R-53-61-5494, dated June 8, 2015
7767	601R-53-61-5207, dated March 7, 2014
	601R-53-61-5213, Revision A, dated March 14, 2014
7834	601R-53-61-4932, dated June 15, 2013
	601R-53-61-4940, Revision A, dated July 1, 2013
7852	601R-53-61-4264, Revision A, dated August 21, 2013

**(m) Alternative Actions for Airplane Serial Number 7610**

For airplane serial number 7610: In lieu of accomplishing the actions required by paragraph (j) of this AD; within 6,000 flight cycles after the effective date of this AD, do a reinforcement of K601R36010 - A at left buttock line (LBL) 27.5 and perform a special detailed inspection for cracking of the FS 621 pressure bulkhead web at LBL 27.5, in accordance with Bombardier REO 601R-53-61-5828, Revision A, dated March 16, 2017. Before further flight after accomplishing the reinforcement, or within 60 days after the effective date of this AD, whichever occurs later: Revise the maintenance or inspection program, as applicable, by incorporating the inspection requirements that include threshold and repetitive inspection times as specified in the SDIR of Bombardier REO 601R-53-61-5828, Revision A, dated March 16, 2017.

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

After the maintenance or inspection program has been revised as required by paragraph (j)(3), (l)(2), or (m) of this AD, no alternative actions (e.g., inspections) or

intervals may be used unless the actions or intervals are approved as an AMOC in accordance with the procedures specified in paragraph (p)(1) of this AD.

**(o) Terminating Actions for Paragraph (g) of this AD**

(1) Accomplishment of the actions required by paragraph (j) or (l) of this AD terminates the requirements of paragraph (g) of this AD, for the repaired area only.

(2) Accomplishment of the actions required by paragraph (m) of this AD terminates the requirements of paragraph (g) of this AD.

(3) For airplanes on which the actions required by paragraph (j) or (l) of this AD have been done and on which the modification and inspection specified in REO 601R-53-61-1230, Revision F, dated October 31, 2011, have been done and there were no inspection findings: The actions required by paragraph (g) of this AD are terminated.

**(p) Credit for Previous Actions**

(1) This paragraph provides credit for the actions required by paragraphs (k)(1) and (k)(2) of this AD, if those repairs were done before the effective date of this AD using a method approved by the Manager, New York ACO Branch, FAA; TCCA; or Bombardier, Inc.'s TCCA DAO; which references TCCA AD CF-2011-30, dated August 24, 2011, or AD CF-2011-30R1, dated November 1, 2016.

(2) This paragraph provides credit for the actions required by paragraph (k)(2) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraph (p)(2)(i), (p)(2)(ii), (p)(2)(iii), (p)(2)(iv), (p)(2)(v), or (p)(2)(vi) of this AD, provided that the maintenance or inspection program is revised by incorporating the inspection requirements at the threshold and repetitive inspection times specified in the SDIR of Bombardier REO 601R-53-61-1230,

Revision F, dated November 7, 2011.

- (i) Bombardier REO 601R-53-61-1230, dated February 10, 2005.
- (ii) Bombardier REO 601R-53-61-1230, Revision A, dated November 6, 2009.
- (iii) Bombardier REO 601R-53-61-1230, Revision B, dated October 5, 2005.
- (iv) Bombardier REO 601R-53-61-1230, Revision C, dated November 10, 2005.
- (v) Bombardier REO 601R-53-61-1230, Revision D, dated July 19, 2006.
- (vi) Bombardier REO 601R-53-61-1230, Revision E, dated August 18, 2011.

(3) This paragraph provides credit for the actions required by paragraph (k)(2) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraph (p)(3)(i), (p)(3)(ii), (p)(3)(iii), (p)(3)(iv), or (p)(3)(v) of this AD, provided that the maintenance or inspection program is revised by incorporating the inspection requirements at the threshold and repetitive inspection times specified in the SDIR of Bombardier REO 601R-53-61-1285, Revision E, date October 31, 2016.

- (i) Bombardier REO 601R-53-61-1285, dated March 24, 2005.
- (ii) Bombardier REO 601R-53-61-1285, Revision A, dated November 6, 2009.
- (iii) Bombardier REO 601R-53-61-1285, Revision B, dated April 14, 2010.
- (iv) Bombardier REO 601R-53-61-1285, Revision C, dated August 19, 2011.
- (v) Bombardier REO 601R-53-61-1285, Revision D, dated October 31, 2011.

(4) This paragraph provides credit for the actions required by paragraph (k)(2) of this AD if those actions were performed before the effective date of this AD using the service information specified in paragraph (p)(4)(i), (p)(4)(ii), (p)(4)(iii), (p)(4)(iv), (p)(4)(v), or (p)(4)(vi) of this AD, provided that the maintenance or inspection program is

revised by incorporating the inspection requirements at the threshold and repetitive inspection times specified in the SDIR of Bombardier REO 601R-53-61-1541, Revision F, dated November 12, 2014.

- (i) Bombardier REO 601R-53-61-1541, dated November 27, 2005.
- (ii) Bombardier REO 601R-53-61-1541, Revision A, dated February 8, 2008.
- (iii) Bombardier REO 601R-53-61-1541, Revision B, dated March 16, 2009.
- (iv) Bombardier REO 601R-53-61-1541, Revision C, dated August 19, 2011.
- (v) Bombardier REO 601R-53-61-1541, Revision D, dated October 31, 2011.
- (vi) Bombardier REO 601R-53-61-1541, Revision E, dated November 5, 2013.

(5) This paragraph provides credit for the actions required by paragraph (m) of this AD, if those actions were performed before the effective date of this AD using Bombardier REO 601R-53-61-5828, dated November 1, 2016, provided that the maintenance or inspection program is revised by incorporating the inspection requirements at the threshold and repetitive inspection times specified in the SDIR of Bombardier REO 601R-53-61-5828, Revision A, dated March 16, 2017.

**(q) 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, 1600

Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: 516-228-7300; fax: 516-794-5531.

(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) AMOCs approved previously for AD 2012-25-02 are approved as AMOCs for the corresponding provisions in paragraphs (g), (h), and (i) 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 TCCA; or Bombardier Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

**(r) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2011-30R2, dated June 12, 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-2018-0794.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; 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 (s)(5) and (s)(6) of this AD.

**(s) 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.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Bombardier Repair Engineering Order 601R-53-61-1230, Revision F, dated October 31, 2011.

(ii) Bombardier Repair Engineering Order 601R-53-61-1240, Revision D, dated October 31, 2016.

(iii) Bombardier Repair Engineering Order 601R-53-61-1285, Revision E, dated October 31, 2016.

(iv) Bombardier Repair Engineering Order 601R-53-61-1541, Revision F, dated November 12, 2014.

(v) Bombardier Repair Engineering Order 601R-53-61-5828, Revision A, dated March 16, 2017.

(4) The following service information was approved for IBR on January 16, 2013 (77 FR 73902, December 12, 2012).

(i) Bombardier Temporary Revision 2B-2187, dated June 22, 2011, to Appendix B-Airworthiness Limitations, of Part 2 of the Bombardier CL-600-2B19 Maintenance Requirements Manual.

(ii) [Reserved]

(5) 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 514-855-5000; fax 514-855-7401; e-mail [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet <http://www.bombardier.com>.

(6) 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.

(7) 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 Des Moines, Washington, on April 19, 2019,

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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