AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.

Number:

CF-2011-30R1

Effective Date:

11 November 2016

ATA:

53

Type Certificate:

A-131

Subject:

Fuselage – Cracking on the Forward Face of the Rear Pressure Bulkhead Web

Replacement:

Supersedes AD CF-2005-13R1, issued 6 October 2005, and AD CF-2011-30, issued 11 August 2011.

Applicability:

Bombardier Inc. aeroplane model CL-600-2B19, serial numbers 7002 through 8025, 8030 and 8034.

Compliance:

As indicated below, unless already accomplished.

Background:

Cracks on the forward face of the Rear Pressure Bulkhead (RPB) web have been discovered on three CL-600-2B19 aeroplanes in-service. This indicates that the inspection requirements of Airworthiness Limitation (AWL) task 53-61-153 mandated by AD CF-2005-13R1 are not adequate.

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 AD mandated the incorporation of a new NDI procedure for AWL task number 53-61-153.

Additional in-service findings have resulted in the need for revision 1 of this AD, which mandates a structural modification to the rear pressure bulkhead with revised threshold and repeat inspection intervals. This modification will 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.

Corrective Actions:

Part I – Incorporation of New NDI Procedure

A. Within 60 days from the effective date of the original issue of this AD, 24 August 2011, amend the Transport Canada approved maintenance schedule by incorporating the revised inspection requirements of AWL task number 53-61-153, as introduced by TR 2B-2187, dated 22 June 2011, into Part 2 of the Canadair Regional Jet MRM.

B. Compliance with the above-mentioned task should be carried out in accordance with the following phase-in schedule. As of the effective date of the original issue of this AD, 24 August 2011:

   1. For aeroplanes that have accumulated 10 500 total flight cycles or less: prior to accumulating 12 000 total flight cycles;

   2. For aeroplanes that have accumulated more than 10 500 total flight cycles: within 1500 flight cycles after the effective date of the original issue of this AD, 24 August 2011, or at the next scheduled inspection interval for task number 53-61-153, whichever comes first.

C. Compliance in accordance with superseding Temporary Revisions or later revisions of the Airworthiness Limitations of the MRM, approved by Transport Canada, also satisfies the requirements of Part I of this AD.

Part II – Modification and Inspection of the Rear Pressure Bulkhead and Introduction of New Threshold and Repeat Inspections

A. Modification, Inspection, and Introduction of Threshold and Repeat Inspections

1. Unless already accomplished, incorporate the modification and carry out the inspection of the FS 621 pressure bulkhead web in accordance with Bombardier Aerospace Repair Engineering Order (REO) 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada in accordance with the schedule shown in Table 1:

Table 1: Modification and Inspection Phase-In

Aeroplane Cycles, as of the Effective Date of this AD	Compliance Time
For aeroplanes that have accumulated 35 000 total flight cycles or less	Prior to accumulating 40 000 total flight cycles
For aeroplanes that have accumulated more than 35 000 total flight cycles and less than 40 000 total flight cycles	Within 5000 flight cycles after the effective date of this AD
For aeroplanes that have accumulated 40 000 total flight cycles or more	Prior to accumulating 45 000 total flight cycles

2. At the time of completion of Part II.A.1. of this AD, modify the Transport Canada approved maintenance schedule by incorporating the threshold and repeat inspection requirements in accordance with In-Service Deviation Inspection Requirements (SDIR) of REO 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada.

B. Credit for Previous Actions. For aeroplanes which have previously incorporated any of the REOs indicated in Table 2 or later revisions approved by Transport Canada, the requirements of Part A of REO 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada, are satisfied. Perform the following tasks:

1. Within 6000 flight cycles from the effective date of this AD, perform the web special detailed inspection of Zone B identified within Part B of REO 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada.

2. At the time of completion of Part II.B.1. of this AD, modify the Transport Canada approved maintenance schedule by incorporating the threshold and repeat inspection requirements in accordance with Part B of the SDIR of REO 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada.

Table 2: REOs Equivalent to Part A of REO 601R-53-61-1240 Revision D, Dated 31 October 2016 or Later Revisions Approved by Transport Canada

Serial Number	Bombardier REO
7029	601R-53-61-3032 Revision –D, dated 2014-05-06
	601R-53-61-3059 Revision –D, dated 2011-11-01
	601R-53-61-5220 Revision –A, dated 2014-03-20
7033	601R-53-61-4391 Revision --, dated 2012-02-06
	601R-53-61-4405 Revision --, dated 2012-02-16
7054	601R-53-61-4398 Revision –A, dated 2016-08-23
	601R-53-61-5801 Revision -- , dated 2016-08-23
7058	601R-53-61-5480 Revision --, dated 2015-05-22

Serial Number	Bombardier REO
7060	601R-53-61-4385 Revision -A , dated 2016-08-25
7206	601R-53-61-4750 Revision --, dated 2013-01-15
7212	601R-53-61-5137 Revision -A , dated 2016-08-25
7312	601R-53-61-5738 Revision -- , dated 2016-06-23
7424	601R-53-61-5295 Revision –A, dated 2014-07-02
7430	601R-53-61-4950 Revision --, dated 2013-06-28
7433	601R-53-61-2039 Revision –A, dated 2016-08-24
7452	601R-53-61-4821 Revision –A, dated 2013-02-28
	601R-53-61-4572 Revision –C, dated 2013-02-27
	601R-53-61-4584 Revision –A, dated 2013-02-27
7463	601R-53-61-4712 Revision --, dated 2012-11-15
	601R-53-61-5369 Revision --, dated 2014-10-14
7466	601R-53-61-4884 Revision --, dated 2013-04-25
7468	601R-53-61-5779 Revision –A, dated 2016-08-16
7476	601R-53-61-5727 Revision –B, dated 2016-06-08
7484	601R-53-61-5040 Revision --, dated 2013-10-02
	601R-53-61-5049 Revision –A, dated 2013-10-09
7513	601R-53-61-5498 Revision --, dated 2015-06-23
7591	601R-53-61-2360 Revision –A, dated 2016-08-24
	601R-53-61-2361 Revision --, dated 2007-10-11
	601R-53-61-2364 Revision --, dated 2007-10-11
	601R-53-61-2368 Revision --, dated 2007-10-10
	601R-53-61-2373 Revision --, dated 2007-10-17
	601R-53-61-2380 Revision --, dated 2007-10-20
7616	601R-53-61-5250 Revision --, dated 2014-04-15
7626	601R-53-61-5377 Revision --, dated 2014-11-05
	601R-53-61-5383 Revision --, dated 2014-11-07
7643	601R-53-61-5076 Revision --, dated 2013-10-31
	601R-53-61-5085 Revision –A, dated 2013-11-11
7658	601R-53-61-4942 Revision –A, dated 2013-07-08

Serial Number	Bombardier REO
7660	601R-53-61-5494 Revision --, dated 2015-06-08
7767	601R-53-61-5207 Revision --, dated 2014-03-07
	601R-53-61-5213 Revision –A, dated 2014-03-14
7834	601R-53-61-4932 Revision --, dated 2013-06-15
	601R-53-61-4940 Revision –A, dated 2013-07-01
7852	601R-53-61-4264 Revision –A, dated 2013-08-21

C. Credit for Previous Actions: Aeroplane Serial Number 7610.

1. Within 6000 flight cycles from the effective date of this AD, incorporate REO 601R-53-61-5828 Revision --, dated 1 November 2016, or later revisions approved by Transport Canada.

2. At the time of completion of Part II.C.1. of this AD, modify the Transport Canada approved maintenance schedule by incorporating the threshold and repeat inspection requirements in accordance with the SDIR of REO 601R-53-61-5828 Revision --, dated 1 November 2016, or later revisions approved by Transport Canada.

D. Deviation from Part II Requirements of this AD

1. If it is not possible to complete all the instructions in Part II of this AD due to the configuration of the aeroplane, or for any questions regarding REO 601R-53-61-1240 Revision D, dated 31 October 2016, or later revisions approved by Transport Canada, contact Bombardier Inc. CRJ Technical Help Desk at 1-514-855-8500 or 1-844-272-2720 or thd.crj@aero.bombardier.com for approved instructions. Such instructions must specifically reference this AD.

E. Superseding of Airworthiness Limitations

1. Compliance with Part II.A. or Part II.B. of this AD introduces new threshold and repeat inspections documented within the SDIR of REO 601R-53-61-1240, Revision D, dated 31 October 2016 or later revisions approved by Transport Canada or the SDIR of the REOs in Table 2 or later revisions approved by Transport Canada, which supersede Airworthiness Limitation 53-61-153 introduced in Part I of this AD.

2. Compliance with Part II.C. of this AD introduces new threshold and repeat inspections documented within the SDIR of REO 601R-53-61-5828, Revision --, dated 1 November 2016 or later revisions approved by Transport Canada, which supersede Airworthiness Limitation 53-61-154.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 1 November 2016

Contact:

Daniel Gosselin, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.