

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT  
BIWEEKLY 2019-12**

*5/27/2019 - 6/9/2019*



Federal Aviation Administration  
Continued Operational Safety Policy Section, AIR-141  
P.O. Box 25082  
Oklahoma City, OK 73125-0460

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## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E – Emergency; COR – Correction; R – Replaces, A – Affects			
<b>Biweekly 2019-01</b>			
2018-22-07		Engine Alliance	GP7270, GP7272, and GP7277 model turbofan engines
2018-23-12	COR	Zodiac Aero Evacuation Systems	Fusible plugs installed on emergency evacuation equipment
2018-25-08	R 2017-22-07	Airbus SAS	A319, A320, A321 airplanes
2018-26-01	R 2018-18-01	CFM International S.A.	CFM56-7B turbofan engines
2018-26-03		The Boeing Company	757-200 series airplanes
2018-26-04		Airbus SAS	A350-941 and -1041 airplanes
2018-26-05	A 2015-19-01	The Boeing Company	777-200, 777-200LR, 777-300, 777-300ER, and 777F series airplanes
2018-26-06		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
<b>Biweekly 2019-02</b>			
2019-01-01		The Boeing Company	787-8 airplanes
<b>Biweekly 2019-03</b>			
2019-01-01	COR	The Boeing Company	787-8 airplanes
<b>Biweekly 2019-04</b>			
2018-23-04		Bombardier, Inc.	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes
2018-24-01		International Aero Engines	PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM turbofan engines
2019-01-03	R 2016-18-01	The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-01-04		The Boeing Company	787 series airplanes
2019-01-05	A 2017-05-10	Airbus SAS	A330-201, A330-202, A330-203, A330-223, A330-243, A330-223F, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes
2019-01-06		The Boeing Company	737-100, -200, -200C, -300, -400, and -500 series airplanes
2019-01-07		Airbus SAS	A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes
2019-01-08		The Boeing Company	777-200, -200LR, -300, and -300ER series airplanes
2019-02-01	R 2018-16-07	General Electric Company	GEnx-1B54, -1B58, -1B64, -1B67, -1B70, -1B54/P1, -1B58/P1, -1B64/P1, -1B67/P1, -1B70/P1, -1B54/P2, -1B58/P2, -1B64/P2, -1B67/P2, -1B70/P2, -1B70C/P1, -1B70/72/P1, -1B70/75/P1, -1B74/75/P1, -1B75/P1, -1B70C/P2, -1B70/72/P2, -1B70/75/P2, -1B74/75/P2, -1B75/P2, -1B76/P2, -1B76A/P2, -1B78/P2, -2B67, -2B67B, and -2B67/P turbofan engines
2019-02-03		The Boeing Company	787-8, 787-9, and 787-10 airplane
2019-02-04	R 2018-22-05	Engine Alliance	GP7270, GP7272, and GP7277 turbofan engines
2019-03-01		Pratt & Whitney Division	PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 turbofan engines
<b>Biweekly 2019-05</b>			
2018-21-14		Zodiac Aerotechnics	MC10 series crew oxygen mask regulators
2018-26-07		Airbus SAS	A350-941 and -1041 airplanes
2018-26-08		Airbus SAS	Note: Was missing from BW2019-01 A320-214, A320-232, A320-233, A321-211, and A321-231 airplanes
2019-03-03	A 2016-17-03	Airbus SAS	Note: Was missing from BW2019-01 A318, A319, A320, A321 airplanes
2019-03-04	R 2018-11-16	Engine Alliance	GP7270 and GP7277 model turbofan engines
2019-03-06		The Boeing Company	737-300, -400, and -500 series airplanes
2019-03-07	R 2017-16-05	The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-03-08		Airbus SAS	A350-941 airplanes
2019-03-09		Airbus SAS	A310-304, -322, -324, and -325 airplanes

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2019-03-10	R 2017-07-05	Airbus SAS	A300 airplanes
2019-03-11		Airbus SAS	A350-941 and -1041 airplanes
2019-03-15		Airbus SAS	A330-201, -202, and -203; A330-301, -302, and -303 airplanes
2019-03-17	A 2017-25-04	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-19		Saab AB, Saab Aeronautics	SAAB 2000 airplanes
2019-03-20	A 2014-16-23	Dassault Aviation	FALCON 7X airplanes
	A 2016-16-09		
2019-03-21		Embraer S.A.	ERJ 190-100 STD, -100 LR, and -100 IGW; ERJ 190-200 STD, -200 LR, and -200 IGW airplanes
2019-03-23		Airbus SAS	A330, A340 airplanes
<b>Biweekly 2019-06</b>			
2019-03-13		Gulfstream Aerospace LP	Gulfstream G150 airplanes
2019-03-14		Dassault Aviation	FAN JET FALCON and FAN JET FALCON SERIES C, D, E, F, and G airplanes
2019-03-16	A 2006-25-06	Fokker Services B.V.	F.27 Mark 100, 200, 300, 400, 500, 600, and 700 airplanes
	A 97-04-08		
2019-03-18		Airbus SAS	A318, A319, A320 airplanes
2019-03-22		Bombardier, Inc.	BD-700-1A10 and BD-700-1A11 airplanes
2019-03-24		The Boeing Company	737-400 series airplanes
2019-03-25	A 2008-02-15	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-26		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2019-03-27		Dassault Aviation	Falcon 10 airplanes
2019-03-28	R 2016-07-23	Airbus SAS	A318, A319, A320, A321 airplanes
2019-03-30		Empresa Brasileira de Aeronautica S.A.	EMB-135, EMB-145 airplanes
2019-05-01	R 2017-11-06	Pratt & Whitney Division	PW2037, PW2037D, PW2037M, PW2040, PW2040D, PW2043, PW2143, PW2643, and F117-PW-100 turbofan engines
2019-05-02	R 2017-22-13	Rolls-Royce plc	RB211-Trent 970-84 and RB211-Trent 972-84 turbofan engines
2019-05-08	R 2015-12-08	Airbus SAS	A318, A319, A320, A321 airplanes
<b>Biweekly 2019-07</b>			
2019-05-07	R 2017-20-01	Honeywell International Inc.	TFE731-20R, -20AR, -20BR, and TFE731-40, -40AR, -40BR, and -40R turbofan engines
2019-05-09		Airbus SAS	A320-251N and -271N, and A321-253N airplanes
2019-05-10		Airbus SAS	A350-941 airplanes
2019-05-12		Bombardier, Inc.	CL-600-2C10, -2D15, -2D24, -2E25 airplanes
2019-05-13	R 2007-22-05	Airbus SAS	A300-600 and A310 series airplanes
2019-05-14	R 2012-02-18	Dassault Aviation	MYSTERE-FALCON 50 airplanes
2019-06-01	R 2018-24-01	International Aero Engines	PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM turbofan engines
2019-06-02		Pratt & Whitney Division	PW4158 turbofan engines
2019-06-06		International Aero Engines AG	V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, V2533-A5 turbofan engines
2019-06-07	R 2016-22-05	Pratt & Whitney Division	Certain PW4000 engines (see AD)
<b>Biweekly 2019-08</b>			
2019-06-01	R 2018-24-01	International Aero Engines	PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM turbofan engines
2019-06-02	COR	Pratt & Whitney Division	PW4158 turbofan engines
2019-06-03	A 2017-01-08	Airbus SAS	A330 and A340 airplanes
2019-06-08		Airbus SAS	A330-223, A330-223F, A330-321, A330-322, and A330-323 airplanes
2019-06-09		Airbus SAS	A350-941 airplanes
2019-06-12		Airbus SAS	A330-201, -202, and -203; A330-301, -302, and -303 airplanes
2019-07-03		Zodiac Seats France	536-Series Cabin Attendant Seats

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<b>Biweekly 2019-09</b>			
2019-07-01	A 2014-26-07	Dassault Aviation	FAN JET FALCON and FAN JET FALCON SERIES C, D, E, F, and G airplanes
2019-07-04	COR	The Boeing Company	757-200, -200PF, -200CB, and -300 series airplanes
2019-07-05	R 2016-19-04	Airbus SAS	A318, A319, A320 and A321 airplanes
2019-07-06		Bombardier, Inc	Model BD-100-1A10 airplanes
2019-07-09		Rolls-Royce plc	Trent 1000-A2, Trent 1000-AE2, Trent 1000-C2, Trent 1000-CE2, Trent 1000-D2, Trent 1000-E2, Trent 1000-G2, Trent 1000-H2, Trent 1000-J2, Trent 1000-K2, and Trent 1000-L2 model turbofan engines
<b>Biweekly 2019-10</b>			
2019-03-29		Bombardier, Inc	Model BD-100-1A10 airplanes
2019-06-13		The Boeing Company	Model 787 series airplanes
2019-07-05	COR, A 2016-19-04	Airbus SAS	A318, A319, A320 airplanes
2019-08-01		RECARO Aircraft Seating GmbH & Co. KG	Passenger Compartment Equipment
2019-08-02		The Boeing Company	Model 737-100, -200, -200C, -300, -400, and -500 series airplanes
2019-08-05		The Boeing Company	Model 787-8 and 787-9 airplanes
2019-08-06	R 2016-16-01	Airbus SAS	A330-223F and -243F, A330-201, -202, -203, -223, -243 A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes
2019-08-09	A 2017-04-13	The Boeing Company	Model 747-8 and 747-8F series airplanes
2019-08-12		Viking Air Limited	Model CL-215-6B11 (CL-215T Variant) and CL-215-6B11 (CL-415 Variant)
<b>Biweekly 2019-11</b>			
2019-08-03		The Boeing Company	Model 737-100, -200, -200C, -300, -400, and -500 series airplanes
2019-08-07	R 2014-20-04	Airbus SAS	A318, A319, A320 and A321 airplanes
2019-08-08	R 2010-14-05	Bombardier, Inc.	Model CL-600-1A11 (600), Model CL-600-2A12 (601), Model CL-600-2B16 airplanes
2019-09-01		The Boeing Company	Model 737-100, -200, -200C, -300, -400, and -500 series airplanes
<b>Biweekly 2019-12</b>			
2019-08-04	R 2012-25-02	Bombardier, Inc.	Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes
2019-08-11	R 2008-24-14	Bombardier, Inc.	Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes
2019-10-03		The Boeing Company	Model 737-100, -200, -200C, -300, -400, and -500 series airplanes
2019-10-04		BRP-Rotax GmbH & Co KG	BRP-Rotax GmbH & Co KG (Rotax) 912 F2, 912 F3, and 912 F4 engines, Rotax 912 S2, 912 S3, and 912 S4 engines, Rotax 914 F2, 914 F3, and 914 F4 engines, and Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, and 914 F4 engines
2019-10-05		Viking Air Limited	Models DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300, and DHC-6-400 airplanes



**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 July 12, 2019.

**(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
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

<b>Serial Number</b>	<b>Bombardier REO</b>
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
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 July 12, 2019.

(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; email [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.  
[FR Doc. 2019-11956 Filed 6-6-19; 8:45 am]



**2019-08-11 Bombardier, Inc.:** Amendment 39-19632; Docket No. FAA-2018-0801; Product Identifier 2017-NM-147-AD.

**(a) Effective Date**

This AD is effective July 11, 2019.

**(b) Affected ADs**

This AD replaces AD 2008-24-14, Amendment 39-15758 (73 FR 73785, December 4, 2008) (“AD 2008-24-14”).

**(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 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Reason**

This AD was prompted by reports of cracks on the main landing gear (MLG) trunnion fitting during fatigue testing; the introduction of new airworthiness limitation (AWL) tasks with revised inspection, modification, and safe-life requirements; and a determination that the trunnion fitting lower flange and both forward and aft bore holes are also subject to fatigue cracking. We are issuing this AD to address fatigue cracking of the MLG trunnion fitting. Failure of the MLG trunnion fitting could result in MLG collapse.

**(f) Compliance**

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

**(g) Retained Revision of Airworthiness Limitation Section With No Changes**

This paragraph restates the requirements of paragraph (f)(1) of AD 2008-24-14, with no changes. Within 30 days after December 19, 2008 (the effective date of AD 2008-24-14), revise the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness to incorporate AWL 57-21-161, as identified in Bombardier Temporary Revision 2B-2136, dated May 1, 2008, to the Bombardier CL-600-2B19 Maintenance Requirements Manual, Part 2, Appendix B–

Airworthiness Limitations. The initial compliance time for the task starts from the applicable time specified in table 1 to paragraphs (g) and (j) of this AD or table 2 to paragraphs (g) and (j) of this AD,

as applicable. Repeat the inspection thereafter at the applicable interval specified in Bombardier Temporary Revision 2B-2136, dated May 1, 2008

**Table 1 to paragraphs (g) and (j) - Pre-modsum TC601R15827 airplanes**

<b>If the airplane has accumulated as of December 19, 2008 (the effective date of AD 2008-24-14)—</b>	<b>Then phase in the initial inspection—</b>
23,500 or fewer total flight cycles	Prior to the accumulation of 25,000 total flight cycles.
23,501 to 25,000 total flight cycles	Prior to the accumulation of 26,000 total flight cycles, or within 1,500 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14), whichever occurs first.
25,001 to 26,000 total flight cycles	Prior to the accumulation of 26,500 total flight cycles, or within 1,000 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14), whichever occurs first.
26,001 or more total flight cycles	Within 500 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14).

**Table 2 to paragraphs (g) and (j) - Post-modsum TC601R15827 airplanes**

<b>If the airplane has accumulated as of December 19, 2008 (the effective date of AD 2008-24-14)—</b>	<b>Then phase in the initial inspection—</b>
15,667 or fewer total flight cycles	Prior to the accumulation of 16,667 total flight cycles.
15,668 to 16,667 total flight cycles	Prior to the accumulation of 17,333 total flight cycles, or within 1,000 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14), whichever occurs first.
16,668 to 17,333 total flight cycles	Prior to the accumulation of 17,666 total flight cycles, or within 666 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14), whichever occurs first.
17,334 or more total flight cycles	Within 333 flight cycles after December 19, 2008 (the effective date of AD 2008-24-14).

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

This paragraph restates the requirements of paragraph (f)(2) of AD 2008-24-14, with a new exception: Except as required by paragraph (i) of this AD, after accomplishing the actions specified in paragraph (g) of this AD, no alternative inspections or inspection intervals may be used unless the inspection or inspection interval is approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (p)(1) of this AD.

**(i) New Requirement of This AD: Revision of Existing Maintenance or Inspection Program**

(1) Within 60 days after the effective date of this AD: Revise the existing maintenance or inspection program, as applicable, by incorporating the AWL tasks specified in figure 1 to paragraphs (i)(1) and (o) of this AD. Except as specified in paragraph (j) of this AD, the initial compliance times for the tasks are at the applicable times specified in the temporary revisions (TRs) identified in figure 1 to paragraphs (i)(1) and (o) of this AD, or within 60 days after the effective date of this AD, whichever occurs later. When the information in AWL tasks identified in the TRs specified in figure 1 to paragraphs (i)(1) and (o) of this AD has been included in the general revisions of Bombardier Maintenance Requirements Manual (MRM), CSP A-053, Part 2, Appendix B, the general revisions may be inserted in the MRM, and the TRs may be removed. Accomplishing the revision required by this paragraph terminates the actions required by paragraph (g) of this AD. Where the compliance times for the repetitive inspections and life limits specified in the TRs identified in figure 1 to paragraphs (i)(1) and (o) of this AD specify “landings,” those compliance times are based on the landings of the affected part.

**Figure 1 to paragraphs (i)(1) and (o) - AWL Tasks to be Incorporated**

<b>Section Within MRM, CSP A-053, Part 2, Appendix B</b>	<b>AWL Task</b>	<b>TR Number</b>	<b>TR Issue Date</b>
Structural AWLs	57-21-145	TR 2B-2237	June 19, 2014
	57-21-161	TR 2B-2238	June 19, 2014
	57-21-155	TR 2B-2239	June 19, 2014
Structural Life Limits	57-21-162	TR 2B-2246	November 7, 2014
	57-21-163		
Structural Life Limits, High Altitude Airfield Operations (HAAO)	57-21-162	TR 2B-2241	June 19, 2014
	57-21-163		

(2) Within 60 days after the effective date of this AD: Revise the existing maintenance or inspection program, as applicable, by removing the AWL tasks specified in figure 2 to paragraph (i)(2) of this AD.

**Figure 2 to paragraph (i)(2) - AWL Tasks to be Removed**

<b>Section Within MRM, CSP A-053, Part 2, Appendix B</b>	<b>AWL Task</b>	<b>TR Number</b>	<b>TR Issue Date</b>
Structural AWLs	57-21-164	TR 2B-2242	June 19, 2014
	57-21-165		
	57-21-166		

**(j) New Requirement of This AD: Initial Compliance Times for AWL Tasks**

(1) For AWL 57-21-161, the compliance time for the initial inspection of AWL 57-21-161 is as specified in table 1 to paragraphs (g) and (j) of this AD or table 2 to paragraphs (g) and (j) of this AD, as applicable, or within 60 days after the effective date of this AD, whichever occurs later.

(2) For AWL 57-21-161, the compliance time for the limitation section is at the applicable time specified in AWL 57-21-161 or within 2,000 flight cycles after the effective date of this AD, whichever occurs later.

(3) For AWL 57-21-145 and AWL 57-21-155, the compliance times for the initial inspections are at the applicable times specified in AWL 57-21-145 and AWL 57-21-155 or within 2,000 flight

cycles after the effective date of this AD, whichever occurs later. Where the compliance times for the initial inspections in the AWLs specify “landings,” those compliance times are based on the landings of the airplane.

(4) For AWL 57-21-145 and AWL 57-21-155, the compliance times for the limitation sections is at the applicable time specified in AWL 57-21-145 and AWL 57-21-155 or within 2,000 flight cycles after the effective date of this AD, whichever occurs later.

**(k) New Requirement of This AD: No Alternative Actions or Intervals**

After the maintenance or inspection program has been revised as required by paragraph (i) 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.

**(l) New Requirement of This AD: Rework of MLG Trunnion To Meet Structural Safe-Life Limits**

(1) Except as specified in paragraph (m)(1) of this AD: At or before the accumulation of 34,900 total flight cycles, or within 2,000 flight cycles after the effective date of this AD, whichever occurs later, rework the MLG trunnion (cold working of fastener holes in the MLG trunnion fitting, and all applicable related investigative and corrective actions) in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-046, Revision C, dated December 20, 2012. Do all applicable related investigative and corrective actions before further flight.

(2) At or before the accumulation of 38,900 total flight cycles, or within 2,000 flight cycles after the effective date of this AD, whichever occurs later, rework the MLG trunnion (installation of forcemate bushings in the MLG trunnion, and all applicable related investigative and corrective actions) in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-047, Revision B, dated October 2, 2012. Do all applicable related investigative and corrective actions before further flight.

(3) Except as specified in paragraph (m)(2) of this AD: At or before the accumulation of 34,900 total flight cycles, or within 2,000 flight cycles after the effective date of this AD, whichever occurs later, rework the MLG trunnion (cold work of holes on the web of the MLG trunnion, and all applicable related investigative and corrective actions) in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-048, Revision C, dated June 6, 2013. Do all applicable related investigative and corrective actions before further flight.

**(m) Exceptions To Rework Specified in Paragraph (l) of This AD**

(1) For airplanes on which Bombardier Service Bulletin 601R-57-046, Revision A, dated December 21, 2009; or Bombardier Service Bulletin 601R-57-046, Initial Issue, dated July 17, 2009; was accomplished prior to the effective date of this AD: Within 6 months after the effective date of this AD, do Part G of the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-046, Revision C, dated December 20, 2012.

(2) For airplanes on which Bombardier Service Bulletin 601R-57-048, Revision A, dated November 24, 2009; or Bombardier Service Bulletin 601R-57-048, Initial Issue, dated July 17, 2009; was accomplished prior to the effective date of this AD: Within 6 months after the effective date of this AD, do Part C of the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-048, Revision C, dated June 6, 2013.

**(n) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (l)(1) of this AD, if those actions were performed before the effective date of this AD, using Bombardier Service Bulletin 601R-57-046, Revision B, dated August 24, 2012.

(2) This paragraph provides credit for actions required by paragraph (l)(2) of this AD, if those actions were performed before the effective date of this AD, using the service information specified in paragraph (n)(2)(i) or (n)(2)(ii) of this AD.

(i) Bombardier Service Bulletin 601R-57-047, Revision A, dated February 1, 2012.

(ii) Bombardier Service Bulletin 601R-57-047, Initial Issue, dated June 29, 2011.

(3) This paragraph provides credit for actions required by paragraph (l)(3) of this AD, if those actions were performed before the effective date of this AD, using Bombardier Service Bulletin 601R-57-048, Revision B, dated August 24, 2012.

(4) This paragraph provides credit for actions required by paragraph (m)(1) of this AD, if those actions were performed before the effective date of this AD, using Part G of the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-046, Revision B, dated August 24, 2012.

(5) This paragraph provides credit for actions required by paragraph (m)(2) of this AD, if those actions were performed before the effective date of this AD, using Part C of the Accomplishment Instructions of Bombardier Service Bulletin 601R-57-048, Revision B, dated August 24, 2012.

**(o) Repairs and Alternative Actions or Intervals**

(1) If any damage is found during an inspection required by the AWLs identified in figure 1 to paragraphs (i)(1) and (o) of this AD, repair before further flight 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. The approved repair instructions must specifically refer to this AD or Canadian AD CF-2017-27, dated August 2, 2017.

(2) Repairs approved by Bombardier, Inc., that deviate from the AWLs identified in figure 1 to paragraphs (i)(1) and (o) of this AD are acceptable methods of compliance if 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. The approved repair instructions must specifically refer to this AD or Canadian AD CF-2017-27, dated August 2, 2017.

(3) For repairs approved before the effective date of this AD that affect the AWLs identified in figure 1 to paragraphs (i)(1) and (o) of this AD and the approved repair instructions do not specifically refer to Canadian AD CF-2017-27, dated August 2, 2017: Within 6 months of the effective date of this AD, contact the Manager, New York ACO Branch, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO Inc., for new or revised limitations or inspection requirements on the repair area and comply with the revised limitations or inspection requirements. The new or revised limitations or inspection requirements must specifically refer to this AD or Canadian AD CF-2017-27, dated August 2, 2017.

(4) Canadian AMOC No. AARDG-2018/A21, dated May 1, 2018, which was approved before the effective date of this AD by TCCA, is an acceptable method of compliance to the corresponding requirements of this AD.

**(p) 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, 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 TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature. The approved corrective action instructions must specifically refer to this AD or Canadian AD CF-2017-27, dated August 2, 2017.

#### **(q) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2017-27, dated August 2, 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-2018-0801.

(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 (r)(5) and (r)(6) of this AD.

#### **(r) 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 July 11, 2019.

(i) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2237, dated June 19, 2014.

(ii) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2238, dated June 19, 2014.

(iii) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2239, dated June 19, 2014.

(iv) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2241, dated June 19, 2014.

(v) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2242, dated June 19, 2014.

(vi) Bombardier Maintenance Requirements Manual Temporary Revision 2B-2246, dated November 7, 2014.

(vii) Bombardier Service Bulletin 601R-57-046, Revision C, dated December 20, 2012.

(viii) Bombardier Service Bulletin 601R-57-047, Revision B, dated October 2, 2012.

(ix) Bombardier Service Bulletin 601R-57-048, Revision C, dated June 6, 2013.

(4) The following service information was approved for IBR on December 19, 2008 (73 FR 73785, December 4, 2008).

(i) Bombardier Temporary Revision 2B-2136, dated May 1, 2008, to the Bombardier CL-600-2B19 Maintenance Requirements Manual, Part 2, Appendix B—Airworthiness Limitations.

(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 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>.

(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 May 15, 2019.

Michael Kaszycki,  
Acting Director, System Oversight Division, Aircraft Certification Service.  
[FR Doc. 2019-11830 Filed 6-5-19; 8:45 am]



**2019-10-03 The Boeing Company:** Amendment 39-19642; Docket No. FAA-2018-1004; Product Identifier 2018-NM-106-AD.

**(a) Effective Date**

This AD is effective July 11, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of cracks caused by corrosion of the edge of the bore of the spot face and corrosion of the lug bore of the body station (BS) 685 side-strut support fitting lugs. We are issuing this AD to address cracks caused by corrosion, which could result in sudden loss of the side-strut support fitting joint and main landing gear attachment to the airplane, resulting in the collapse of a main landing gear.

**(f) Compliance**

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

**(g) Required Actions for Group 7 Airplanes**

For airplanes identified as Group 7 in Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018: Within 120 days after the effective date of this AD, inspect the left and right side-strut support fitting lugs at BS 685 and do all applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

## **(h) Required Actions for Groups 1 Through 6 Airplanes**

For airplanes identified as Groups 1 through 6 in Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018, except as specified in paragraph (i) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018.

## **(i) Exceptions to Service Information Specifications**

(1) For purposes of determining compliance with the requirements of this AD: Where Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018, uses the phrase “the Revision 1 date of this service bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018, specifies contacting Boeing for repair instructions or for work instructions: This AD requires doing the repair or the work instructions and doing applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

## **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles 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 the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) 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.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as required by paragraph (i) of this AD: For service information that contains steps that are labeled as RC, the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

## **(k) Related Information**

For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5232; fax: 562-627-5210; email: george.garrido@faa.gov.

**(I) 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 the AD specifies otherwise.

(i) Boeing Service Bulletin 737-53-1246, Revision 1, dated May 30, 2018.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; internet: <https://www.myboeingfleet.com>.

(4) 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.

(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 Des Moines, Washington, on May 20, 2019.

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



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2019-10-04 BRP-Rotax GmbH & Co KG (formerly BRP-Powertrain GmbH & Co KG; Bombardier-Rotax GmbH & Co KG; Bombardier-Rotax GmbH):** Amendment 39-19643; Docket No. FAA-2018-0916; Product Identifier 2018-NE-33-AD.

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

This AD is effective July 10, 2019.

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

None.

### **(c) Applicability**

This AD applies to:

- (1) BRP-Rotax GmbH & Co KG (Rotax) 912 F2, 912 F3, and 912 F4 engines, with serial number (S/N) 4 413 066 to 4 413 067, inclusive; and S/N 4 413 101 to 4 413 111, inclusive;
- (2) Rotax 912 S2, 912 S3, and 912 S4 engines, with S/Ns 9 563 826 to 9 563 849, inclusive; S/Ns 9 564 301 to 9 564 508, inclusive; and S/N 9 564 510 to 9 564 534, inclusive;
- (3) Rotax 914 F2, 914 F3, and 914 F4 engines, with S/Ns 4 421 581 to 4 421 597, inclusive; and S/N 4 421 701 to 4 421 833, inclusive; and
- (4) Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, and 914 F4 engines (all S/Ns) on which a valve push-rod assembly has been replaced with one manufactured between June 8, 2016, and October 2, 2017.

### **(d) Subject**

Joint Aircraft System Component (JASC) Code 8530, Reciprocating Engine Cylinder Section.

### **(e) Unsafe Condition**

This AD was prompted by power loss and engine revolutions per minute drop on Rotax 912 and 914 model engines due to a quality control deficiency in the manufacturing process of certain valve push-rod assemblies resulting in partial wear on the rocker arm ball socket and possible malfunction of the valve. We are issuing this AD to prevent failure of the valve push-rod assembly and the left and right rocker arms. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

### **(f) Compliance**

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

**(g) Required Actions**

(1) Visually inspect the push-rod ball sockets of each valve push-rod assembly in accordance with the Accomplishment Instructions, paragraph 3.1.2, of BRP-Rotax Service Bulletin (SB) SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1 (single document), Revision 1, dated October 12, 2017, and within the following compliance times.

(i) For engines with 160 engine flight hours (FHs) or fewer since new, inspect before exceeding 170 FHs since new, or within three months after the effective date of this AD, whichever occurs first.

(ii) For engines with greater than 160 engine FHs since new, inspect within 10 FHs, or three months after the effective date of this AD, whichever occurs first.

(2) If the inspection required by paragraph (g)(1) of this AD finds a black surface color on a valve push-rod assembly, part number (P/N) 854861, then before further flight, remove the valve push-rod assembly and the left and right rocker arm ball sockets, P/Ns 854383 and 854393, from service, and replace with parts eligible for installation.

**(h) Installation Prohibition**

After the effective date of this AD, do not install a valve push-rod assembly, P/N 854861, that was manufactured between June 8, 2016, and October 2, 2017, or that exhibits a black surface color on the push-rod rocker arm ball sockets, on any engine.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO 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 ECO Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) 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.

**(j) Related Information**

(1) For more information about this AD, contact Wego Wang, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7134; fax: 781-238-7199; email: [wego.wang@faa.gov](mailto:wego.wang@faa.gov).

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2017-0208, dated October 13, 2017, for more information. You may examine the EASA AD in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2018-0916.

**(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 the AD specifies otherwise.

(i) Rotax Service Bulletin (SB) SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1 (single document), Revision 1, dated October 12, 2017.

(ii) [Reserved]

(3) For Rotax service information identified in this AD, contact BRP-Rotax GmbH & Co KG, Rotaxstrasse 1, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; email: [airworthiness@brp.com](mailto:airworthiness@brp.com); internet: [www.flyrotax.com](http://www.flyrotax.com).

(4) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(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 Burlington, Massachusetts, on May 24, 2019.

Karen M. Grant,  
Acting Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.



**2019-10-05 Viking Air Limited (type certificate previously held by Bombardier Inc.; de Havilland, Inc.):** Amendment 39-19644; Docket No. FAA-2019-0410; Product Identifier 2018-CE-059-AD.

**(a) Effective Date**

This AD becomes effective June 20, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Viking Air Limited (type certificate previously held by Bombardier Inc.; de Havilland, Inc.) Models DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300, and DHC-6-400 airplanes, all serial numbers, certificated in any category.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as occurrences of excessive wear of elevator cables at pulley location station (STA) 270.3. The FAA is issuing this AD to prevent failure of the elevator and rudder control cables, which could result in loss of control of the airplane.

**(f) Actions and Compliance**

Unless already done, do the following actions in paragraphs (f)(1) and (2) of this AD.

(1) Within the next 90 days after the effective date of this AD or upon reaching the life limit for replacing an elevator or rudder control cable, whichever occurs first, inspect the cables for abnormal wear at pulley location STA 270.3. If there is abnormal wear on a cable, before further flight, in addition to replacing the life-limited cable from service, replace the corresponding pulley. For purposes of this AD, abnormal wear is defined as either of the following:

- (i) Wear on an individual wire exceeding 40 percent of the original wire size or the blending of worn areas on the adjacent wires exceeding 40 percent; or
- (ii) More than three broken wires in a one-inch span of 7 x 7 cable or six broken wires in a one-inch span of 7 x 19 cable.

(2) Within the next 90 days after the effective date of this AD, revise the Airworthiness Limitations section of your maintenance program by adding the following requirements:

(i) At the scheduled replacement of each life-limited elevator and rudder control cable, inspect the cable for abnormal wear at pulley location STA 270.3.

(ii) If there is abnormal wear on the cable at the pulley location, before further flight, in addition to removing the life-limited cable from service, replace the corresponding pulley.

**(g) 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, New York 11590; telephone: (516) 228-7300; fax: (516) 794-5531; email: 9-avs-nyaco-cos@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must instead be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Viking Air Limited's Design Organization Approval (DOA). If approved by the DOA, the approval must include the DAO-authorized signature.

**(h) Related Information**

(1) Refer to MCAI TCCA AD Number CF-2018-28, dated October 15, 2018, and Viking DHC-6 Twin Otter Service Bulletin Number: V6/0062, dated July 31, 2017, for related information. You may examine the MCAI on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0410. For Viking Air Limited service information identified in this AD, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; telephone: (North America) (800) 663-8444; fax: (250) 656-0673; email: [technical.support@vikingair.com](mailto:technical.support@vikingair.com); internet: <http://www.vikingair.com/support/service-bulletins>.

(2) For more information about this AD, contact Darren Gassetto, Aerospace Engineer, Mechanical Systems and Admin Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: (516) 228-7323; fax: (516) 794-5531; email: 9-avs-nyaco-cos@faa.gov.

Issued in Kansas City, Missouri, on May 23, 2019.

Melvin J. Johnson,

Aircraft Certification Service, Deputy Director, Policy and Innovation Division, AIR-601.

[FR Doc. 2019-11298 Filed 5-30-19; 8:45 am]