

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT  
BIWEEKLY 2013-14**

*7/1/2013 - 7/14/2013*



Federal Aviation Administration  
Engineering Procedures Office, AIR-110  
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Oklahoma City, OK 73125-0460

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# LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S - Supersedes			
<b>Biweekly 2013-01</b>			
2012-25-09		Rolls-Royce plc	RB211-524G2-19; RB211-524G2-T-19; RB211-524G3-19; RB211-524G3-T-19; RB211-524H2-19; RB211-524H2-T-19; RB211-524H-36; RB211-524H-T-36; RB211-535E4-37; RB211-535E4-B-37; RB211-535E4-B-75; and RB211-535E4-C-37 turbofan engines
2012-26-01	S 2005-13-27	Saab AB, Saab Aerosystems	SAAB 2000
2012-26-02		Boeing	737-300, -400, and -500 series
2012-26-03		Airbus	A330-202, -203, -223, -243, -302, -323, -342, -343, and A340-313
2012-26-05		Airbus	A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, A330-343, A340-211, A340-212, A340-213, A340-311, A340-312, and A340-313
2012-26-08		Pratt & Whitney Canada Corp	PW118, PW118A, PW118B, PW119B, PW119C, PW120, PW120A, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW123AF, PW124B, PW125B, PW126A, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines
2012-26-14		Rolls-Royce Deutschland Ltd & Co KG	BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines
2012-26-15		Honeywell International Inc	See AD
2012-26-51		Airbus	A318-111, -112, -121, -122; A319-111, -112, -113, -114, -115, -131, -132, -133; A320-111, -211, -212, -214, -231, -232, -233; A321-111, -112, -131, -211, -212, -213, -231, and -232
2012-27-01		Rolls-Royce Deutschland Ltd & Co KG	Tay 620-15 turbofan engines
<b>Biweekly 2013-02</b>			
2012-25-13		The Boeing Company	747-100, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400F, and 747SR series
2012-26-04	S 2008-05-10	The Boeing Company	757-200, -200PF, and -200CB series
2013-01-02	S 2009-22-08	The Boeing Company	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP; and Model 757-200, -200PF, and -300 series
2013-01-03		The Boeing Company	737-300, -400, and -500; and Model 757-200 series
2013-02-03		Rolls-Royce plc	RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines
2013-02-51		The Boeing Company	787-8
<b>Biweekly 2013-03</b>			
2013-02-02		CFM International, S.A.	CFM56-3, CFM56-3B, and CFM56-3C turbofan engines
2013-02-04		Rolls-Royce plc	RB211-Trent 970-84, RB211-Trent 970B-84, RB211-Trent 972-84, RB211-Trent 972B-84, RB211-Trent 977-84, RB211-Trent 977B-84, and RB211-Trent 980-84 engines
2013-02-05		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-02-06		Engine Alliance	GP7270 and GP7277 turbofan engines
2013-02-07		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-02-08		Bombardier, Inc	CL-600-2B19 (Regional Jet Series 100 & 440)
2013-02-09		BAE SYSTEMS (OPERATIONS) LIMITED	BAe 146-100A, -200A, -300A; Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2013-02-10		Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2013-02-11		Airbus	A310-203
2013-02-12		EADS CASA	CN-235, CN-235-100, CN-235-200, and CN-235-300

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<b>Biweekly 2013-04</b>			
2013-02-51		The Boeing Company	787-8
2013-03-05		Airbus	A300 B4-601, B4-603, B4-620, B4-622, A300 B4-605R, B4-622R, A300 F4-605R, F4-622R, A300 C4-605R Variant F, A310-203, -204, -221, -222, -304, -322, -324, and -325
2013-03-07		Hawker Beechcraft Corporation	400A
2013-03-08		Bombardier, Inc.	CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A, CL-601-3R Variants), and CL-600-2B16 (CL-604 Variants)
2013-03-11		Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, C4-605R Variant F; A310-203, -204, -221, -222, -304, -322, -324, and -325
2013-03-12		Dassault Aviation	Mystere-Falcon 50
2013-03-13		Embraer S.A.	ERJ 170-100 LR, -100 STD, -100 SE., -100 SU, ERJ 170-200 LR, -200 SU, -200 STD, ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, ERJ 190-200 STD, -200 LR, and -200 IGW
2013-03-17		Rolls-Royce Deutschland Ltd & Co KG	RRD BR700-710A1-10, BR700-710A2-20, and BR700-710C4-11 engines
2013-03-19	S 2001-17-20	The Boeing Company	707-100 long body, -200, -100B long body, -100B short body series, 707-300, -300B, -300C, -400 series, 720 and 720B series
2013-03-20		The Boeing Company	757-200, -200PF, -200CB, and -300 series
2013-03-23		Gulfstream Aerospace LP	G150
2013-04-01	S 2011-13-01	Rolls-Royce plc	RB211-524D4-19, -524D4-B-19, -524D4-39, -524D4-B-39, -524D4X-19, -524D4X-B-19, -524H-36, -524H2-19, -524H-T-36, -524H2-T-19, -524G2-19, -524G3-19, -524G2-T-19, and -524G3-T-19 turbofan engines
2013-04-05		The Boeing Company	737-200, -200C, -300, -400, and -500 series
<b>Biweekly 2013-05</b>			
2012-25-03	Cor	The Boeing Company	757-200, -200PF, -200CB series, and 757-300
2013-03-06		Airbus	A330-223F, -243F, A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, -541, and -642
2013-04-03		Cessna Aircraft Company	750
2013-04-07		Bombardier, Inc.	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315
2013-04-10		Airbus	A310-203, -204, -222, -304, -322, and -324
2013-04-11		The Boeing Company	737-600, -700, -800, and -900ER series
2013-04-12		Airbus	A310-204, -222, -304, -322, and -324
2013-04-13		BAE SYSTEMS (OPERATIONS) LIMITED	BAe 146-100A, -200A, and -300A airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2013-05-02		The Boeing Company	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88
<b>Biweekly 2013-06</b>			
2013-03-06		Airbus	A330-223F, -243F, A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, -541, and -642
2013-03-22		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2013-04-14		Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, C4-605R Variant F, A310-203, -204, -221, -222, -304, -322, -324, and -325
2013-05-02		The Boeing Company	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88
2013-05-03		The Boeing Company	777-200, -200LR, -300, and -300ER series
2013-05-05		The Boeing Company	777-200, -200LR, -300, and -300ER series
2013-05-06		Bombardier, Inc.	CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants)
2013-05-07		The Boeing Company	767-200, -300, -300F, and -400ER series
2013-05-09		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A330-223F, -243F, A340-211, -212, -213, -311, -312, and -313
2013-05-13		Rolls-Royce Deutschland Ltd & Co KG	BR700-710A1-10, BR700-710A2-20, and BR700-710C4-11 turbofan engines

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2013-05-18	S 2012-02-04	Rolls-Royce plc	RB211 Trent 553-61, RB211 Trent 553A2-61, RB211 Trent 556-61, RB211 Trent 556A2-61, RB211 Trent 556B-61, RB211 Trent 556B2-61, RB211 Trent 560-61, and RB211 Trent 560A2-61 turbofan engine
2013-05-19		Rolls-Royce Deutschland Ltd & Co KG	Tay 611-8 turbofan engines
2013-05-20		Rolls-Royce Deutschland Ltd & Co KG	Spey 511-8 turbojet engines
2013-06-01		Rolls-Royce Deutschland Ltd & Co KG	Tay 620-15 and Tay 650-15 turbofan engines
<b>Biweekly 2013-07</b>			
2013-05-10		The Boeing Company	777-200, -200LR, -300, -300ER, and 777F series
2013-05-12		Embraer S.A.	ERJ 170-100 LR, -100 STD, -100 SE., -100 SU, ERJ 170-200 LR, -200 SU, -200 STD, ERJ 190-100 STD, -100 LR, -100 IGW, ERJ 190-200 STD, -200 LR, -200 IGW, and ERJ 190-100 ECJ
2013-06-03		Airbus	A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-06-05		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-06-06		General Electric Company	CF34-8C1, CF34-8C5, CF34-8C5A1, CF34-8C5A2, CF34-8C5A3, CF34-8C5B1, CF34-8E2, CF34-8E2A1, CF34-8E5, CF34-8E5A1, CF34-8E5A2, CF34-8E6, and CF34-8E6A1 turbofan engines
<b>Biweekly 2013-08</b>			
2013-04-04	S 2008-13-20	The Boeing Company	757-200, -200CB, -200PF, and -300 series
2013-05-04		Rolls-Royce plc	RB211-Trent 970-84, RB211-Trent 970B-84, RB211-Trent 972-84, RB211-Trent 972B-84, RB211-Trent 977-84, RB211-Trent 977B-84, and RB211-Trent 980-84 turbofan engines
2013-07-02		Airbus	A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, and -233
2013-07-03		Airbus	A330-201, -202, -203, -223, -243, -223F, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, A340-541 and A340-642
2013-07-04	S 2007-05-13	Airbus	A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-07-07		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-07-08		The Boeing Company	757-200, 757-200PF, 757-200CB, 757-300 series
2013-07-09		The Boeing Company	737-700, -700C, -800, -900ER, 747-400F, 767-200 and -300 series
2013-07-10		International Aero Engines	V2525-D5 and V2528-D5 turbofan engines
2013-07-11	S 2009-24-08	The Boeing Company	777-200, -200LR, -300, and -300ER series
2013-07-13		Dassault Aviation	Falcon 7X
2013-08-02	S 2007-26-05	The Boeing Company	777-200, -200LR, -300, and -300ER series
2013-08-03		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2013-08-08		The Boeing Company	737-600 series
2013-08-09		The Boeing Company	777-200, -200LR, -300, -300ER, and 777F series

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<b>Biweekly 2013-09</b>			
2013-08-10		Kelowna Flightcraft R & D Ltd.	340 and 440
2013-08-11		The Boeing Company	737-900 and -900ER series
2013-08-12		The Boeing Company	787-8
2013-08-13		The Boeing Company	767-300 series
2013-08-15		The Boeing Company	737-800 series
2013-08-16		The Boeing Company	737-700 and -700C series
2013-08-18		The Boeing Company	737-600, -700, -700C, -800, -900 and -900ER series
2013-08-20	S 2000-04-14	General Electric Company	CF6-80C2 A1/A2/A3/A5/A8/A5F/B1/B2/B4/B5F/B6/B1F/B2F/B4F/B6F/B7F/D1F turbofan engines
2013-08-23		The Boeing Company	DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, MD-10-30F, MD-11, and MD-11F
<b>Biweekly 2013-10</b>			
2012-18-13 R1		The Boeing Company	737-100, -200, -200C, -300, -400, and -500 series
2013-05-08		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -, A340-211, -212, -213, -311, -312, and -313
2013-08-01		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-09-01	S 2003-08-15	The Boeing Company	737-200, -200C, -300, -400, and -500 series
2013-09-02	S 2000-25-07 S 2002-05-07	The Boeing Company	737-100, -200, -200C, -300, -400, and -500 series
2013-09-07		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2013-09-08		The Boeing Company	737-300, -400, and -500 series
2013-10-02	S 2003-18-05	The Boeing Company	757-200 and -200PF series
2013-10-52	E	General Electric Company	GE90-110B1 and GE90-115B turbofan engines
<b>Biweekly 2013-11</b>			
2013-09-08	COR	The Boeing Company	737-300, -400, and -500 series
2013-09-10	S 2000-07-06	The Boeing Company	737-100, -200, -200C, -300, -400, and -500 series
2013-09-11		Cessna Aircraft Company	500, 501, 550, 551, S550, 560, 560XL, and 650
2013-10-03	S 2010-02-10	Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, A340-541 and -642
2013-10-06		Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, -541, and -642
2013-10-07		Airbus	A300 B4-601, B4-603, B4-620, B4-605R, and B4-622R
2013-11-03		Bombardier, Inc.	CL-215-1A10 and CL-215-6B11 (CL-215T Variant)
<b>Biweekly 2013-12</b>			
2013-11-04		The Boeing Company	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, 747SP, 767-200, -300, -300F, -400ER, 777-200, -200LR, -300, and -300ER series
2013-11-06		Dassault Aviation	Mystere-Falcon 900 and Falcon 900EX
2013-11-07		Embraer S.A.	ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, ERJ 190-200 STD, -200 LR, and -200 IGW
2013-11-12		Bombardier, Inc.	BD-100-1A10 (Challenger 300)
2013-11-13		Rolls-Royce plc	Viper Mk. 601-22 turbojet engines
2013-11-14		The Boeing Company	777-200 and -300 series
2013-12-02		Engine Alliance	GP7270 and GP7277 turbofan engines
2013-12-03		Rolls-Royce Deutschland Ltd & Co KG	BR700-725A1-12 turbofan engines

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<b>Biweekly 2013-13</b>			
2013-01-01	S 2011-23-08	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2013-05-11	S 2010-23-07	Airbus	A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-09-04		Bombardier, Inc	DHC-8-400, -401, and -402
2013-10-52		General Electric Company	GE90-110B1 and GE90-115B turbofan engines
2013-11-16		Hawker Beechcraft Corporation	BAe.125 Series 800A (including C-29A and U-125), 800B, Hawker 800 (including variant U-125A) and 800XP
2013-12-01		Rolls-Royce plc	RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines
2013-13-05		The Boeing Company	747SP, 747-100B SUD, and 747-300
<b>Biweekly 2013-14</b>			
2010-17-11R1		Dowty Propellers	R408/6-123-F/17 model propellers
2013-09-03		Dassault Aviation	Falcon 2000, Falcon 2000EX, Mystere-Falcon 50, Mystere-Falcon 900 and Falcon 900EX
2013-11-17	S 2010-14-14	Embraer S.A.	ERJ 170-100 LR, -100 STD, -100 SE., -100 SU, ERJ 170-200 LR, -200 SU, -200 STD, ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, ERJ 190-200 STD, -200 LR, and -200 IGW
2013-13-03		Airbus	A319-112, -113, -132, A320-211, -212, -214, -231, -232, A321-111 and -131
2013-13-04		Airbus	A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231, and A321-232
2013-13-09		Learjet Inc.	60
2013-13-11		The Boeing Company	747-400, -400D, and -400F series
2013-14-51		General Electric Company	GE90-110B1 and GE90-115B turbofan engines



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**2010-17-11R1 Dowty Propellers:** Amendment 39-17481; Docket No. FAA-2009-0776; Directorate Identifier 2009-NE-32-AD.

**(a) Effective Date**

This AD is effective August 14, 2013.

**(b) Affected ADs**

This AD revises AD 2010-17-11, Amendment 39-16403 (75 FR 51656, August 23, 2010).

**(c) Applicability**

This AD applies to Dowty Propellers R408/6-123-F/17 model propellers.

**(d) Unsafe Condition**

This AD was prompted by the need to add an optional terminating action to the applications of sealant. We are issuing this AD to prevent an in-flight double generator failure, which could result in reduced control of the airplane.

**(e) Compliance**

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

(1) For R408/6-123-F/17 model propellers with a hub, actuator, and backplate assembly line-replaceable unit serial number below DAP0347, do the following initial sealant application within 5,000 flight hours (FHs) after September 27, 2010, or within 100 FHs from the effective date of this AD, whichever occurs later:

(i) Apply 3M 5300 or 3M 4200 sealant between the bus bar assemblies and the backplate assembly.

(ii) Use paragraph 3 of the Accomplishment Instructions of Dowty Propellers Alert Service Bulletin (ASB) No. D8400-61-A66, Revision 7, dated December 1, 2011, to apply the sealant.

(2) Thereafter, for all R408/6-123-F/17 model propellers, re-apply sealant as specified in paragraphs (e)(1)(i) through (e)(1)(ii) of this AD within every additional 10,000 FHs.

**(f) Installation Prohibition**

After the effective date of this AD, do not install any Dowty Propellers R408/6-123-F/17 model propeller unless 3M 5300 or 3M 4200 sealant has been applied between the bus bar assembly and the backplate assembly as specified by this AD, or unless the optional terminating action as specified in paragraph (h) of this AD has been performed.

**(g) Credit for Previous Actions**

Sealant applications performed before the effective date of this AD that followed Dowty Propellers Service Bulletin (SB) No. D8400-61-66, dated February 9, 2007, Revision 1, dated May 4, 2007; ASB No. D8400-61-A66, Revision 2, dated August 19, 2009; Revision 3, dated November 10, 2009; Revision 4, dated January 19, 2010; Revision 5, dated June 16, 2010, or Revision 6, dated August 17, 2011 satisfy the initial sealant application requirement of this AD.

**(h) Optional Terminating Action**

As optional terminating action to the sealant application requirements of this AD, replace the bus bar assembly with a slip ring de-icer harness. Use paragraph 3.A. of the Accomplishment Instructions of Dowty Propellers SB No. D8400-61-94, Revision 2, dated August 29, 2012, or Revision 3, dated October 23, 2012, to do the replacement.

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

The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(j) Related Information**

(1) Refer to European Aviation Safety Agency AD 2009-0114R1 (correction: dated December 12, 2012) for related information.

(2) For more information about this AD, contact Michael Schwetz, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7761; fax 781-238-7170; email: michael.schwetz@faa.gov.

**(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.

(3) The following service information was approved for IBR on August 14, 2013.

(i) Dowty Propellers Alert Service Bulletin No. D8400-61-A66, Revision 7, dated December 1, 2011.

(ii) Dowty Propellers Service Bulletin No. D8400-61-94, Revision 2, dated August 29, 2012.

(iii) Dowty Propellers Service Bulletin No. D8400-61-94, Revision 3, dated October 23, 2012.

(4) For service information identified in this AD, contact Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL 29QN, UK; phone: 44 (0) 1452 716000; fax: 44 (0) 1452 716001.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(6) You may view this service information 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 June 18, 2013.  
Robert Ganley,  
Acting Assistant Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2013-09-03 Dassault Aviation:** Amendment 39-17444. Docket No. FAA-2012-1067; Directorate Identifier 2011-NM-231-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective August 14, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the airplanes specified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, certificated in any category.

(1) Dassault Aviation Model FALCON 2000 and FALCON 2000EX airplanes, all serial numbers, except those on which modification M3072 has been installed.

(2) DASSAULT AVIATION Model MYSTERE-FALCON 50 airplanes, all serial numbers.

(3) DASSAULT AVIATION Model MYSTERE-FALCON 900 and FALCON 900EX airplanes, all serial numbers, except those on which modification M5413 has been installed.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by reports that collapse of the main landing gear (MLG) could cause wing tank structure failure, which could result in fuel spillage and a consequent fire hazard. We are issuing this AD to prevent fuel spillage in the event of a MLG collapse, and consequent fire hazard.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Modification**

Within 150 months after the effective date of this AD, do the modification of the right-hand and left-hand wing fuel tanks, in accordance with the Accomplishment Instructions of the applicable service information specified in paragraph (g)(1), (g)(2), (g)(3), (g)(4), or (g)(5) of this AD, as applicable. The service information specified in paragraphs (g)(1) through (g)(5) of this AD contains a paragraph which states that each person applying the service bulletins must have successfully completed a training program. This training is recommended, but is not required by this AD.

(1) For Model MYSTERE-FALCON 50 airplanes: Dassault Mandatory Service Bulletin F50-496, Revision 2, dated March 10, 2010, which includes the following appendices:

- (i) Appendix 1, Revision 2, dated February 15, 2010;
- (ii) Appendix 2, Revision 3, dated February 15, 2009;
- (iii) Appendix 3, Revision 2, dated October 21, 2009;
- (iv) Appendix 4, Revision 1, dated October 20, 2009; and
- (v) Appendix 5, Revision 3, dated February 15, 2010.

(2) For Model FALCON 900EX airplanes: Dassault Mandatory Service Bulletin F900EX-329, Revision 3, dated March 10, 2010, which includes the following appendices:

- (i) Appendix 1, Revision 2, dated February 15, 2010;
- (ii) Appendix 2, Revision 3, dated February 15, 2009;
- (iii) Appendix 3, Revision 2, dated October 21, 2009;
- (iv) Appendix 4, Revision 1, dated October 20, 2009; and
- (v) Appendix 5, Revision 3, dated February 15, 2010.

(3) For Model MYSTERE-FALCON 900 airplanes: Dassault Mandatory Service Bulletin F900-388, Revision 3, dated October 19, 2011, which includes the following appendices:

- (i) Appendix 1, Revision 2, dated February 15, 2010;
- (ii) Appendix 2, Revision 3, dated February 15, 2009;
- (iii) Appendix 3, Revision 2, dated October 21, 2009;
- (iv) Appendix 4, Revision 1, dated October 20, 2009; and
- (v) Appendix 5, Revision 4, dated October 19, 2011.

(4) For Model FALCON 2000 airplanes: Dassault Mandatory Service Bulletin F2000-358, Revision 3, dated March 10, 2010, which includes the following appendices:

- (i) Appendix 1, Revision 2, dated February 15, 2010;
- (ii) Appendix 2, Revision 3, dated February 15, 2009;
- (iii) Appendix 3, Revision 2, dated October 21, 2009;
- (iv) Appendix 4, Revision 1, dated October 20, 2009; and
- (v) Appendix 5, Revision 3, dated February 15, 2010.

(5) For Model FALCON 2000EX airplanes: Dassault Mandatory Service Bulletin F2000EX-171, Revision 3, dated March 10, 2010, which includes the following appendices:

- (i) Appendix 1, Revision 2, dated February 15, 2010;
- (ii) Appendix 2, Revision 3, dated February 15, 2009;
- (iii) Appendix 3, Revision 2, dated October 21, 2009;
- (iv) Appendix 4, Revision 1, dated October 20, 2009; and
- (v) Appendix 5, Revision 3, dated February 15, 2010.

#### **(h) Credit for Previous Actions**

This paragraph provides credit for the modifications required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information (which is not incorporated by reference in this AD) specified in paragraphs (h)(1) through (h)(5) of this AD, as applicable.

(1) For Model MYSTERE-FALCON 50 airplanes:

(i) Dassault Mandatory Service Bulletin F50-496, dated October 30, 2009, which includes the following appendices:

- (A) Appendix 1, Revision 1, dated October 21, 2009;
- (B) Appendix 2, Revision 2, dated October 21, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 2, dated October 22, 2009.

(ii) Dassault Mandatory Service Bulletin F50-496, Revision 1, dated February 15, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(2) For Model FALCON 900EX airplanes:

(i) Dassault Mandatory Service Bulletin F900EX-329, dated September 25, 2009, which includes the following appendices:

- (A) Appendix 1, dated July 6, 2009;
- (B) Appendix 2, dated July 6, 2009;
- (C) Appendix 3, Revision 1, dated September 25, 2009;
- (D) Appendix 4, dated July 6, 2009; and
- (E) Appendix 5, Revision 1, dated September 24, 2009.

(ii) Dassault Mandatory Service Bulletin F900EX-329, Revision 1, dated October 30, 2009, which includes the following appendices:

- (A) Appendix 1, Revision 1, dated October 21, 2009;
- (B) Appendix 2, Revision 2, dated October 21, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 2, dated October 22, 2009.

(iii) Dassault Mandatory Service Bulletin F900EX-329, Revision 2, dated February 15, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(3) For Model MYSTERE-FALCON 900 airplanes:

(i) Dassault Mandatory Service Bulletin F900-388, dated October 30, 2009, which includes the following appendices:

- (A) Appendix 1, Revision 1, dated October 21, 2009;
- (B) Appendix 2, Revision 2, dated October 21, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 2, dated October 22, 2009.

(ii) Dassault Mandatory Service Bulletin F900-388, Revision 1, dated February 15, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(iii) Dassault Mandatory Service Bulletin F900-388, Revision 2, dated March 10, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(4) For Model FALCON 2000 airplanes:

(i) Dassault Mandatory Service Bulletin F2000-358, dated September 25, 2009, which includes the following appendices:

- (A) Appendix 1, dated July 6, 2009;
- (B) Appendix 2, dated July 6, 2009;
- (C) Appendix 3, Revision 1, dated September 25, 2009;
- (D) Appendix 4, dated July 6, 2009; and
- (E) Appendix 5, Revision 1, dated September 24, 2009.

(ii) Dassault Mandatory Service Bulletin F2000-358, Revision 1, dated October 30, 2009, which includes the following appendices:

- (A) Appendix 1, Revision 1, dated October 21, 2009;
- (B) Appendix 2, Revision 2, dated October 21, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 2, dated October 22, 2009.

(iii) Dassault Mandatory Service Bulletin F2000-358, Revision 2, dated February 15, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(5) For Model FALCON 2000EX airplanes:

(i) Dassault Mandatory Service Bulletin F2000EX-171, dated July 6, 2009, which includes the following appendices:

- (A) Appendix 1, dated July 6, 2009;
- (B) Appendix 2, dated July 6, 2009;
- (C) Appendix 3, dated July 6, 2009;
- (D) Appendix 4, dated July 6, 2009; and
- (E) Appendix 5, dated July 6, 2009.

(ii) Dassault Mandatory Service Bulletin F2000EX-171, Revision 1, dated October 22, 2009, which includes the following appendices:

- (A) Appendix 1, Revision 1, dated October 21, 2009;
- (B) Appendix 2, Revision 2, dated October 21, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 2, dated October 22, 2009.

(iii) Dassault Mandatory Service Bulletin F2000EX-171, Revision 2, dated February 15, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

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

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, 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 International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1137; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-

REQUESTS@faa.gov. 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. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

#### **(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency Airworthiness Directive 2011-0193, dated October 5, 2011, for related information. This MCAI may be viewed on the Internet at [http://ad.easa.europa.eu/blob/easa\\_ad\\_2011\\_0193.pdf](http://ad.easa.europa.eu/blob/easa_ad_2011_0193.pdf).

(2) Service information identified in this AD that is not incorporated by referenced may be obtained at the addresses specified in paragraphs (k)(3) and (k)(4) of this AD.

#### **(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Dassault Mandatory Service Bulletin F50-496, Revision 2, dated March 10, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(ii) Dassault Mandatory Service Bulletin F900EX-329, Revision 3, dated March 10, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(iii) Dassault Mandatory Service Bulletin F900-388, Revision 3, dated October 19, 2011, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 4, dated October 19, 2011.

(iv) Dassault Mandatory Service Bulletin F2000-358, Revision 3, dated March 10, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(v) Dassault Mandatory Service Bulletin F2000EX-171, Revision 3, dated March 10, 2010, which includes the following appendices:

- (A) Appendix 1, Revision 2, dated February 15, 2010;
- (B) Appendix 2, Revision 3, dated February 15, 2009;
- (C) Appendix 3, Revision 2, dated October 21, 2009;
- (D) Appendix 4, Revision 1, dated October 20, 2009; and
- (E) Appendix 5, Revision 3, dated February 15, 2010.

(3) For service information identified in this AD, contact Dassault Falcon Jet, P.O. Box 2000, South Hackensack, New Jersey 07606; telephone 201-440-6700; Internet <http://www.dassaultfalcon.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on April 23, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2013-11-17 Embraer S.A.:** Amendment 39-17477. Docket No. FAA-2012-1230; Directorate Identifier 2011-NM-107-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective August 6, 2013.

**(b) Affected ADs**

This AD supersedes AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010).

**(c) Applicability**

This AD applies to Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE., and -100 SU airplanes; Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes; Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes; certificated in any category; having Hamilton Sundstrand low pressure check valve (LPCV) part number (P/N) 1001447-3 or 1001447-4.

**(d) Subject**

Air Transport Association (ATA) of America Code 36, Pneumatic.

**(e) Reason**

This AD was prompted by reports of uncommanded engine shutdowns on both Model ERJ 170 and ERJ 190 airplanes due to excessive wear and failure of LPCVs having certain part numbers. We are issuing this AD to prevent the possibility of a dual engine in-flight shutdown due to LPCV failure.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Retained Replacement for Right-Hand (RH) Engine on Model ERJ 170-100 LR, -100 STD, -100 SE., and -100 SU Airplanes**

This paragraph restates the requirements of paragraph (f) of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010). For Model ERJ 170-100 LR, -100 STD, -100 SE., and -100 SU airplanes equipped with LPCVs having P/N 1001447-3: Within 100 flight hours after November 29, 2005 (the effective date of AD 2005-23-14, Amendment 39-14372 (70 FR 69075, November 14, 2005)), or prior to the accumulation of 3,000 total flight hours, whichever occurs later, replace the low-stage check valve and associated seals of the RH engine's engine bleed system with a new check valve and new seals, in accordance with the Accomplishment Instructions of EMBRAER Alert

Service Bulletin 170-36-A004, dated September 28, 2005; or paragraph 3.C. of the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0004, dated November 18, 2005, or Revision 01, dated March 10, 2008. As of August 26, 2010 (the effective date of AD 2010-14-14), only use EMBRAER Service Bulletin 170-36-0004, Revision 01, dated March 10, 2008, for the actions required by this paragraph. Repeat the replacement thereafter at intervals not to exceed 3,000 flight hours.

**(h) Retained Provision for Removed Check Valves from RH Engine**

This paragraph restates the provision specified in paragraph (g) of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010). Although EMBRAER Alert Service Bulletin 170-36-A004, dated September 28, 2005, specifies to send removed check valves to the manufacturer, this AD does not include that requirement.

**(i) Retained Replacement for Left-Hand (LH) Engine on Model ERJ 170 Airplanes**

This paragraph restates requirements of paragraph (h) of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010). For Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes equipped with LPCVs having P/N 1001447-3: Within 300 flight hours after September 13, 2007 (the effective date of AD 2007-16-09, Amendment 39-15148 (72 FR 44734, August 9, 2007)), or prior to the accumulation of 3,000 total flight hours, whichever occurs later, replace the low-stage check valve and associated seals of the LH engine's engine bleed system with a new check valve and new seals, in accordance with paragraph 3.B. of the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0004, dated November 18, 2005, or Revision 01, dated March 10, 2008. As of August 26, 2010 (the effective date of AD 2010-14-14), only use EMBRAER Service Bulletin 170-36-0004, Revision 01, dated March 10, 2008. Repeat the replacement thereafter at intervals not to exceed 3,000 flight hours.

**(j) Retained Provision for Removed Check Valves from LH Engine**

This paragraph restates the provision specified in paragraph (i) of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010). Although EMBRAER Service Bulletin 170-36-0004, dated November 18, 2005, specifies to send removed check valves to the manufacturer, this AD does not include that requirement.

**(k) Retained Actions and Compliance With Revised Service Information**

This paragraph restates the requirements of paragraph (j) of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010), with revised service information for paragraphs (k)(3), (k)(7), and (k)(8) of this AD. Unless already done, do the following actions.

(1) For Model ERJ 170-200 LR, -200 STD, and -200 SU airplanes equipped with LPCVs having P/N 1001447-3: Within 100 flight hours after August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), or prior to the accumulation of 3,000 total flight hours, whichever occurs later, replace the low-stage check valve and associated seals of the RH engine's engine bleed system with a new check valve and new seals, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0004, Revision 01, dated March 10, 2008. Repeat the replacement thereafter at intervals not to exceed 3,000 flight hours.

(2) For Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes equipped with LPCVs having P/N 1001447-3: Replacing the LPCV having P/N 1001447-3 with a new one having P/N 1001447-4, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0011, Revision 02, dated July 19, 2007, terminates the repetitive replacements required by paragraphs (g), (i), and (k)(1) of this AD.

(3) For Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes equipped with LPCVs having P/N 1001447-3, at the earlier of the times specified in paragraphs (k)(3)(i) and (k)(3)(ii) of this AD, revise the maintenance program to include maintenance Task 36-11-02-002 (Low Stage Bleed Check Valve), specified in Section 1 of the EMBRAER 170 Maintenance Review Board Report (MRBR), MRB-1621, Revision 6, dated January 14, 2010; or Revision 7, dated November 11, 2010. Thereafter, except as provided by paragraph (q) of this AD, no alternative inspection intervals may be approved for the task.

(i) Within 180 days after accomplishing paragraph (k)(2) of this AD.

(ii) Before any LPCV having P/N 1001447-4 accumulates 3,000 total flight hours, or within 300 flight hours after August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), whichever occurs later.

(4) For Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes equipped with LPCVs having P/N 1001447-3: As of August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), no person may install any LPCV identified in paragraph (k)(4)(i) or (k)(4)(ii) of this AD on any airplane.

(i) Any LPCV having P/N 1001447-3, installed on Model ERJ 170 airplanes, that has accumulated more than 3,000 total flight hours.

(ii) Any LPCV having P/N 1001447-3, installed on Model ERJ 170 and ERJ 190 airplanes, that has accumulated 3,000 or more total flight hours. For Model ERJ 170 airplanes: To install an LPCV having P/N 1001447-3 which was previously installed on a Model ERJ 190 airplane, calculate the equivalent number of flight hours by multiplying the flight hours accumulated on the Model ERJ 190 airplane by a factor of 2 (100 percent).

(5) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: Within 100 flight hours after August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), replace all LPCVs having P/N 1001447-3 that have accumulated 1,500 total flight hours or more as of August 26, 2010 (the effective date of AD 2010-14-14), with a new or serviceable LPCV having P/N 1001447-4 that has accumulated less than 2,000 total flight hours since new or since overhaul, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 190-36-0006, Revision 01, dated July 19, 2007.

(6) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: Replace all LPCVs having P/N 1001447-3 that have accumulated less than 1,500 total flight hours as of August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), before the LPCV accumulates 1,500 total flight hours or within 100 flight hours after August 26, 2010 (the effective date of AD 2010-14-14), whichever occurs later. Replace that LPCV with a new or serviceable LPCV having P/N 1001447-4 that has accumulated less than 2,000 total flight hours since new or since overhaul, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 190-36-0006, Revision 01, dated July 19, 2007.

(7) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: Within 200 flight hours after August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), or before any LPCV having P/N 1001447-4 installed on the right engine accumulates 2,000 total flight hours since new or since overhaul, whichever occurs later, replace the valve with a new or serviceable LPCV having P/N 1001447-4 that has accumulated less than 2,000 total flight hours since new or since overhaul, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 190-36-0014, Revision 01, dated January 14, 2009 (for Model ERJ 190-100 STD, -100 LR, and -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes); or EMBRAER Service Bulletin 190LIN-36-0004, dated December 23, 2009 (for Model 190-100 ECJ airplanes). Repeat the replacement on the right engine at intervals not to exceed 2,000 total flight hours on the LPCV since new or last overhaul.

(8) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: Within 200 flight hours after August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), or before any LPCV having P/N 1001447-4 installed on the left engine accumulates 2,000 total flight hours since new or last overhaul, whichever

occurs later, replace the valve with a new or serviceable LPCV having P/N 1001447-4 that has accumulated less than 2,000 total flight hours since new or since overhaul, in accordance with the Accomplishment Instructions of EMBRAER Service Bulletin 190-36-0014, Revision 01, dated January 14, 2009 (for Model ERJ 190-100 STD, -100 LR, and -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes); or EMBRAER Service Bulletin 190LIN-36-0004, dated December 23, 2009 (for Model 190-100 ECJ airplanes). Repeat the replacement on the left engine at intervals not to exceed 2,000 total flight hours on the LPCV since new or last overhaul.

(9) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: As of August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), installation on the left and right engines with an LPCV having P/N 1001447-4 is allowed only if the valve has accumulated less than 2,000 total flight hours since new or last overhaul prior to installation.

(10) For Model ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW airplanes: As of August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), no LPCV having P/N 1001447-3 may be installed on any airplane. Any LPCV having P/N 1001447-3 already installed on an airplane may remain in service until reaching the flight-hour limit defined in paragraphs (k)(5) and (k)(6) of this AD.

### **(l) New Terminating Action**

For Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes: Except as provided by paragraph (m) of this AD, within 10 months after the effective date of this AD, install a new LPCV having P/N 1001447-6, in accordance with paragraph (l)(1) or (l)(2) of this AD. Installation of P/N 1001447-6 terminates the requirement for installation and repetitive replacements of the LPCV P/N 1001447-3 or 1001447-4 required by paragraph (k) of this AD.

(1) Using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or Agência Nacional de Aviação Civil (ANAC) (or its delegated agent).

(2) The Accomplishment Instructions of EMBRAER Service Bulletins 190-36-0014, Revision 01, dated January 14, 2009 (for Model ERJ 190-100 STD, -100 LR, and -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes), and 190-LIN-36-0004, dated December 23, 2009 (for Model 190-100 ECJ airplanes). The service information has instructions to install P/N 1001447-4, but can also be used to install P/N 1001447-6.

### **(m) New Exception to Paragraph (l) of This AD**

For Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes; on which an LPCV, P/N 1001447-4, has been installed before the compliance time specified in paragraph (l) of this AD: Prior to the accumulation of 2,000 flight hours on the part since new or overhauled, install a new LPCV having P/N 1001447-6, in accordance with paragraph (m)(1) or (m)(2) of this AD.

(1) Using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or ANAC (or its delegated agent).

(2) The Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0011, Revision 2, dated July 19, 2007. The service information has instructions to install P/N 1001447-4, but can also be used to install P/N 1001447-6.

### **(n) New Optional Terminating Action**

For Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes: Installation of a new LPCV having P/N 1001447-6

terminates the requirement for installation and repetitive replacements of the LPCV, P/N 1001447-3 or 1001447-4, required by paragraph (k) of this AD.

Note 1 to paragraph (n) of this AD: Guidance for installing P/N 1001447-6 can be found in EMBRAER Service Bulletin 170-36-0011, Revision 2, dated July 19, 2007. The service information has instructions to install P/N 1001447-4, but can also be used to install P/N 1001447-6.

**(o) Credit for Previous Actions**

(1) This paragraph provides credit for the actions specified in paragraph (k)(2) of this AD, if those actions were performed before August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), using EMBRAER Service Bulletin 170-36-0011, dated January 9, 2007; or EMBRAER Service Bulletin 170-36-0011, Revision 01, dated May 28, 2007; which are not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions specified in paragraphs (k)(5) and (k)(6) of this AD, if those actions were performed before August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), using EMBRAER Service Bulletin 190-36-0006, dated April 9, 2007, which is not incorporated by reference in this AD.

(3) This paragraph provides credit for the actions specified in paragraph (k)(1) of this AD, if those actions were performed before August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), using EMBRAER Service Bulletin 170-36-0004, dated November 18, 2005, which is not incorporated by reference in this AD.

(4) This paragraph provides credit for the actions specified in paragraph (k)(3) of this AD, if those actions were done before August 26, 2010 (the effective date of AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010)), using Task 36-11-02-002 (Low Stage Bleed Check Valve) specified in Section 1 of the EMBRAER 170 Maintenance Review Board Report (MRBR), MRB-1621, Revision 5, dated November 5, 2008, which is not incorporated by reference in this AD.

**(p) New Parts Installation Limitations**

(1) For Model ERJ 170-100 LR, -100 STD, -100 SE., and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes: As of the effective date of this AD, no person may install on any airplane an LPCV having P/N 1001447-4 that was previously installed on any Model ERJ-190 airplane unless the valve has been overhauled.

(2) For Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes: As of the effective date of this AD, and until the effective date specified in paragraph (p)(3) of this AD, no person may install on any airplane an LPCV having P/N 1001447-4 that was previously installed on any Model ERJ-170 airplane unless the valve has been overhauled.

(3) For Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes: As of 10 months after the effective date of this AD, no person may install any LPCV having P/N 1001447-4 on any airplane.

**(q) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 International Branch, send it to ATTN: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue

SW., Renton, WA 98057-3356; telephone (425) 227-2768; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) AMOCs approved previously in accordance with AD 2010-14-14, Amendment 39-16359 (75 FR 42585, July 22, 2010), are not approved as AMOCs for this AD.

#### **(r) Related Information**

(1) Refer to MCAI Brazilian Airworthiness Directive 2005-09-03R3, effective May 30, 2011 (<http://www2.anac.gov.br/certificacao/da/Textos/1336amd.pdf>); Brazilian Airworthiness Directive 2006-11-01R6, effective May 30, 2011 (<http://www2.anac.gov.br/certificacao/DA/Textos/1337amd.pdf>); for related information.

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (s)(7) and (s)(8) 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 the AD specifies otherwise.

(3) The following service information was approved for IBR on August 6, 2013.

(i) EMBRAER Service Bulletin 190LIN-36-0004, dated December 23, 2009.

(ii) Task 36-11-02-002 (Low Stage Bleed Check Valve) specified in Section 1 of the EMBRAER 170 Maintenance Review Board Report (MRBR), MRB-1621, Revision 7, dated November 11, 2010.

(4) The following service information was approved for IBR on August 26, 2010 (75 FR 42585, July 22, 2010).

(i) EMBRAER Service Bulletin 170-36-0004, Revision 01, dated March 10, 2008.

(ii) EMBRAER Service Bulletin 170-36-0011, Revision 02, dated July 19, 2007.

(iii) EMBRAER Service Bulletin 190-36-0006, Revision 01, dated July 19, 2007.

(iv) EMBRAER Service Bulletin 190-36-0014, Revision 01, dated January 14, 2009.

(v) Task 36-11-02-002 (Low Stage Bleed Check Valve) specified in Section 1 of the EMBRAER 170 MRBR MRB-1621, Revision 6, dated January 14, 2010.

(5) The following service information was approved for IBR on September 13, 2007 (72 FR 44734, August 9, 2007).

(i) EMBRAER Service Bulletin 170-36-0004, dated November 18, 2005.

(ii) Reserved.

(6) The following service information was approved for IBR on November 29, 2005 (70 FR 69075, November 14, 2005).

(i) EMBRAER Alert Service Bulletin 170-36-A004, dated September 28, 2005.

(ii) Reserved.

(7) For service information identified in this AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170–Putim–12227-901 São Jose dos Campos-SP–BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet <http://www.flyembraer.com>.

(8) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(9) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 29, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2013-13-03 Airbus:** Amendment 39-17491. Docket No. FAA-2012-1039; Directorate Identifier 2011-NM-275-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective August 14, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Airbus Model A319-112, -113, and -132 airplanes; Model A320-211, -212, -214, -231, and -232 airplanes; and Model A321-111 and -131 airplanes; certificated in any category; manufacturer serial numbers 0259, 0260, 0264, 0266 through 0270 inclusive, 0275, 0276, 0278, 0287, 0296, 0300, 0303, 0312, 0320, 0321, 0323, 0325, 0328, 0332, 0334, 0335, 0337, 0346, 0352, 0353, 0356, 0365, 0369, 0375, 0377, 0382, 0383, 0396, 0398, 0401, 0412, 0413, 0416, 0419, 0421, 0431, 0432, 0438, 0440, 0441, 0445, 0453, 0458, 0459, 0466, 0468, 0473, 0474, 0482, 0484, 0491, 0493, 0497, 0498, 0501, 0502, 0505, 0507, 0509, 0518, 0520, 0521, 0529, 0531, 0534, 0537, 0538, 0544, 0549, 0554, 0555, 0560, 0563, 0577, 0578, 0585, 0598, 0600, 0608, 0612, 0618, 0621, 0625, 0637, 0660, 0685, 0976, 1010, 1092, 1096, 1103, 1139, 1143, 1158, 1251, 1356, and 1511.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report of two fatigue cracks on the left-hand and right-hand sides of the continuity fittings at the front windshield lower framing on a Model A319 series airplane. We are issuing this AD to detect and correct cracking of the windshield central lower node continuity fittings, which could reduce the structural integrity of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Inspection and Corrective Action**

Before the accumulation of 34,000 total flight cycles since the airplane's first flight, or within 4,500 flight cycles after the effective date of this AD, whichever occurs later: Perform a high frequency eddy current (HFEC) inspection for any cracking on the left-hand and right-hand sides of the windshield central lower node continuity fittings, in accordance with the Accomplishment

Instructions of Airbus Service Bulletin A320-53-1245, Revision 01, including Appendix 1, dated May 17, 2011. If any cracking is found, before further flight, repair using a method approved by the Manager, International Branch, ANM-116, FAA, or the European Aviation Safety Agency (EASA) (or its delegated agent).

### **(h) Reporting Requirement**

Submit a report of the findings (both positive and negative) of the inspection required by paragraph (g) of this AD to Airbus, Customer Service Directorate, Attn: SDC32 Technical Data and Documentation Services, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; fax +33 5 61 93 28 06; email sb.reporting@airbus.com; at the applicable time specified in paragraph (h)(1) or (h)(2) of this AD.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

### **(i) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-53-1245, including Appendix 1, dated March 2, 2011, which is not incorporated by reference in this AD.

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

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1405; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(k) Related Information**

(1) Refer to MCAI EASA Airworthiness Directive 2011-0231, dated December 9, 2011, for related information. The MCAI may be viewed on the Internet at [http://ad.easa.europa.eu/blob/easa\\_ad\\_2011\\_0231.pdf](http://ad.easa.europa.eu/blob/easa_ad_2011_0231.pdf).

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (1)(3) and (1)(4) of this AD.

**(l) 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) Airbus Service Bulletin A320-53-1245, Revision 01, including Appendix 1, dated May 17, 2011.

(ii) Reserved.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 14, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2013-13-04 Airbus:** Amendment 39-17492. Docket No. FAA-2012-1035; Directorate Identifier 2011-NM-235-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective August 14, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Airbus Model A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231, and A321-232 airplanes; certificated in any category; all manufacturer serial numbers, except airplanes on which Airbus modification 37866 has been embodied in production.

**(d) Subject**

Air Transport Association (ATA) of America Code 32: Landing Gear.

**(e) Reason**

This AD was prompted by a report of an uncommanded nose landing gear (NLG) retraction. We are issuing this AD to prevent untimely unlocking and/or retraction of the NLG, which, while on the ground, could result in injury to ground personnel and damage to the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Modification**

At the applicable compliance time specified in paragraph (g)(1) or (g)(2) of this AD: Install a power interruption protection circuit for the landing gear control interface unit (LGCIU), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1346, Revision 04, including Appendices 01 and 02, dated April 22, 2011 (for Model A318, A319, A320, and A321 series airplanes other than the Model A319CJ (corporate jet) airplanes); or Airbus Service Bulletin A320-32-1349, Revision 03, including Appendix 1, dated October 5, 2011 (for Model A319CJ (corporate jet) airplanes).

(1) For airplanes that have embodied Airbus modification 38947 specified in Airbus Service Bulletin A320-32-1348 during production or in service: Within 72 months after the effective date of this AD.

(2) For all airplanes other than those identified in paragraph (g)(1) of this AD: Within 60 months after the effective date of this AD.

#### **(h) Re-Identification of Identification Plates**

For airplanes on which the installation required by paragraph (g) of this AD have been done before the effective date of this AD using Airbus Service Bulletin A320-32-1346, dated December 4, 2008 (for Model A318, A319, A320, and A321 series airplanes other than Model A319CJ (corporate jet) airplanes): Within the applicable times specified in paragraphs (g)(1) and (g)(2) of this AD, re-identify the identification plates, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1346, Revision 04, including Appendices 01 and 02, dated April 22, 2011 (for Model A318, A319, A320, and A321 series airplanes other than Model A319CJ (corporate jet) airplanes).

#### **(i) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraphs (i)(1) through (i)(6) of this AD, which are not incorporated by reference in this AD.

(1) Airbus Service Bulletin A320-32-1346, Revision 01, dated October 27, 2009 (for Model A318, A319, A320, and A321 series airplanes).

(2) Airbus Service Bulletin A320-32-1346, Revision 02, dated November 4, 2009 (for Model A318, A319, A320, and A321 series airplanes).

(3) Airbus Service Bulletin A320-32-1346, Revision 03, dated January 7, 2010 (for Model A318, A319, A320, and A321 series airplanes).

(4) Airbus Service Bulletin A320-32-1349, dated December 4, 2008 (for Model A319CJ (corporate jet) airplanes).

(5) Airbus Service Bulletin A320-32-1349, Revision 01, dated August 31, 2009, (for Model A319CJ (corporate jet) airplanes).

(6) Airbus Service Bulletin A320-32-1349, Revision 02, dated June 16, 2010 (for Model A319CJ (corporate jet) airplanes).

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

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANM-116, International Branch, Transport Airplane Directorate, 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 International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1405; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are

considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency Airworthiness Directive 2011-0202, dated October 13, 2011, for related information. This MCAI may be viewed on the Internet at [http://ad.easa.europa.eu/blob/easa\\_ad\\_2011\\_0202.pdf](http://ad.easa.europa.eu/blob/easa_ad_2011_0202.pdf).

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the addresses specified in paragraphs (1)(3) and (1)(4) of this AD. (1)

**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) Airbus Service Bulletin A320-32-1346, Revision 04, including Appendices 01 and 02, dated April 22, 2011.

(ii) Airbus Service Bulletin A320-32-1349, Revision 03, including Appendix 1, dated October 5, 2011.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 14, 2013.

Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2013-13-09 Learjet Inc.:** Amendment 39-17497; Docket No. FAA-2013-0214; Directorate Identifier 2012-NM-152-AD.

**(a) Effective Date**

This AD is effective August 6, 2013.

**(b) Affected ADs**

Certain requirements of this AD affect certain requirements of AD 2010-11-11, Amendment 39-16316 (75 FR 32255, June 8, 2010).

**(c) Applicability**

This AD applies to Learjet Inc. Model 60 airplanes, certificated in any category, serial numbers 60-001 through 60-413 inclusive.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 32, Landing gear; 57, Wings; 78, Engine exhaust.

**(e) Unsafe Condition**

This AD was prompted by a report of a high-speed rejected takeoff caused by all four main landing gear (MLG) tires blowing out during the takeoff roll. We are issuing this AD to prevent failure of the braking system or adverse operation of the spoiler and thrust reverser system due to external damage, particularly from tire failure, which could result in loss of control of the airplane.

**(f) Compliance**

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

**(g) Modification and Installation**

Within 600 flight hours or 12 months after the effective date of this AD, whichever occurs first: Do the actions required by paragraphs (g)(1), (g)(2), and (g)(3) of this AD, as applicable.

(1) For all airplanes: Install new rigid hydraulic tube assemblies to the MLG struts, install a new MLG squat switch bracket and modify the MLG squat switch wire harness, modify the MLG anti-skid wheel transducer electrical wire harnesses, and route and secure the anti-skid wheel and squat switch electrical wire harnesses to the MLG strut assembly, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 60-32-33, dated July 23, 2012.

(2) For all airplanes: Install outboard bracket assemblies, anti-skid shield, forward electrical cover on the forward stiffener, upper and lower inboard bracket assemblies, and clamps that support the electrical wire harness; modify the aft stiffener for the new electrical wire harness support; install

the aft electrical cover and strap on the aft stiffener; and install a new flat landing light lamp, as applicable; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 60-57-7, dated July 23, 2012.

(3) For airplanes having serial numbers 60-002 through 60-276 inclusive: Install a new wheel speed detect box assembly, nutplates, brackets, and interface box; and modify the wiring for the new thrust reverser interface box; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 60-78-7, Revision 2, dated May 1, 2006.

**(h) Terminating Action for AD 2010-11-11, Amendment 39-16316 (75 FR 32255, June 8, 2010)**

After accomplishing the actions required by paragraph (g) of this AD, the requirement in paragraph (h) of AD 2010-11-11, Amendment 39-16316 (75 FR 32255, June 8, 2010), to check the nose and main tire pressures before 96 hours prior to takeoff, is terminated. All provisions of paragraphs (g) and (h) of AD 2010-11-11 that are not specifically referenced by this paragraph remain fully applicable and must be complied with.

**(i) Credit for Previous Actions**

This paragraph provides credit for the corresponding actions specified in paragraph (g)(3) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin SB60-78-7, dated February 21, 2005; or Revision 1, dated June 30, 2005; which are not incorporated by reference in this AD.

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

(1) The Manager, Wichita Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in the Related Information section of this AD.

(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.

**(k) Related Information**

For more information about this AD, contact Don Ristow, Aerospace Engineer, Mechanical Systems and Propulsion Branch, ACE-116W, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, KS 67209; phone: 316-946-4120; fax: 316-946-4107; email: donald.ristow@faa.gov.

**(l) 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) Bombardier Service Bulletin 60-32-33, dated July 23, 2012.

(ii) Bombardier Service Bulletin 60-57-7, dated July 23, 2012.

(iii) Bombardier Service Bulletin 60-78-7, Revision 2, dated May 1, 2006.

(3) For service information identified in this AD, contact Learjet, Inc., One Learjet Way, Wichita, KS 67209-2942; telephone 316-946-2000; fax 316-946-2220; email [ac.ict@aero.bombardier.com](mailto:ac.ict@aero.bombardier.com); Internet <http://www.bombardier.com>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on June 13, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2013-13-11 The Boeing Company:** Amendment 39-17499; Docket No. FAA-2008-0620; Directorate Identifier 2007-NM-357-AD.

**(a) Effective Date**

This AD is effective August 6, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-400, -400D, and -400F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-28A2330, dated April 2, 2012.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 2800, Aircraft Fuel System.

**(e) Unsafe Condition**

This AD was prompted by reports of two in-service occurrences on Model 737-400 airplanes of total loss of boost pump pressure of the fuel feed system, followed by loss of fuel system suction feed capability on one engine, and in-flight shutdown of the engine. We are issuing this AD to detect and correct loss of the engine fuel suction feed capability of the fuel system, which, in the event of total loss of the fuel boost pumps, could result in multi-engine flameout, inability to restart the engines, and consequent forced landing of the airplane.

**(f) Compliance**

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

**(g) Operational Test and Corrective Actions**

Within 30,000 flight hours after the effective date of this AD: Perform an operational test of the engine fuel suction feed of the fuel system, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-28A2330, dated April 2, 2012; or Boeing Service Bulletin 747-28A2330, Revision 1, dated November 30, 2012. Do all applicable corrective actions before further flight. Repeat the operational test thereafter at intervals not to exceed 30,000 flight hours. Thereafter, except as provided in paragraph (h) of this AD, no alternative procedures or repetitive test intervals will be allowed.

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

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-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.

**(i) Related Information**

For more information about this AD, contact Sue Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6438; fax: 425-917-6590; email: suzanne.lucier@faa.gov.

**(j) 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 to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 747-28A2330, dated April 2, 2012.

(ii) Boeing Service Bulletin 747-28A2330, Revision 1, dated November 30, 2012.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(4) You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, June 13, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**DATE: July 12, 2013**  
**AD #: 2013-14-51**

This emergency airworthiness directive (AD) supersedure is sent to owners and operators of General Electric Company (GE) GE90-110B1 and GE90-115B turbofan engines.

### **Background**

This emergency AD supersedure was prompted by a report of one additional failure of a transfer gearbox assembly (TGB) radial gearshaft, outside the suspect population identified in AD 2013-10-52, which resulted in an in-flight shutdown (IFSD). Two earlier failures of the TGB radial gearshaft prompted the issuance of AD 2013-10-52. Inspections have found three additional radial gearshafts with cracks. Investigation has revealed that the failures were caused by TGB radial gearshaft cracking and separation. This condition, if not corrected, could result in additional IFSDs of one or more engines, loss of thrust control, and damage to the airplane.

### **Relevant Service Information**

We reviewed GE GE90-100 Series Alert Service Bulletin (ASB) No. GE90-100 S/B 72-A0568, dated July 10, 2013. The ASB provides additional information regarding the affected TGB radial gearshafts.

### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD prohibits operation of an airplane with affected TGB radial gearshafts installed on both engines five days after receipt of this emergency AD.

### **Interim Action**

We consider this AD to be an interim action. We anticipate that further AD action will follow.

### 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.

### Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2013-14-51 **General Electric Company:** Directorate Identifier 2013-NE-17-AD

#### (a) Effective Date

This Emergency AD is effective upon receipt.

#### (b) Affected ADs

This AD supersedes AD 2013-10-52, which was issued as an Emergency AD on May 16, 2013, and as a final rule, request for comment on June 13, 2013 (78 FR 38195, June 26, 2013).

#### (c) Applicability

General Electric Company (GE) GE90-110B1 and GE90-115B turbofan engines with a transfer gearbox assembly (TGB) radial gearshaft, part number 1995M24P02, serial number (S/N) listed in Figure 1 to paragraph (c) of this emergency AD, installed.

**Figure 1 to Paragraph (c) – TGB Radial Gearshaft S/N’s**

FIA0KCYG	FIA0JETA	FIA0H0VJ	FIA0HL0C
FIA0K63F	FIA0J7V2	FIA0K62R	FIA0HLY9
FIA0K3A3	FIA0KCYM	FIA0K63C	FIA0HLOE
FIA0JVRE	FIA0JJ6E	FIA0K89H	FIA0HLOF
FIA0H0VM	FIA0JNJH	FIA0KCYK	FIA0HLOG
FIA0K3A4	FIA0K62W	FIA0K3A5	FIA0HLY7
FIA0K62T	FIA0K89P	FIA0HWKA	FIA0HJTE

FIA0JJ53	FIA0JJ57	FIA0KCYR	FIA0HJTJ
FIA0K89W	FIA0JJ56	FIA0HWKE	FIA0HJTG
FIA0KCW8	FIA0KH9Y	FIA0J7WH	FIA0HJTC
FIA0K3A6	FIA0KCYP	FIA0JER9	FIA0HJTF
FIA0HY8C	FIA0JJ55	FIA0JNJJ	FIA0HJTH
FIA0K3AP	FIA0KH9G	FIA0JVRR	FIA0HJTA
FIA0J7WG	FIA0KH9H	FIA0JNJM	FIA0HJR9
FIA0JVRL	FIA0KH9K	FIA0KH9R	FIA0HWJ7
FIA0J7V1	FIA0KH9C	FIA0KH9P	FIA0HY76
FIA0JVRM	FIA0K63H	FIA0K89C	FIA0HY8F
FIA0K3AV	FIA0K63M	FIA0JVRH	FIA0H0VK
FIA0J7V8	FIA0K62Y	FIA0K89L	FIA0J7VR
FIA0J7WE	FIA0JVP9	FIA0JER6	FIA0JJ58
FIA0K3A2	FIA0K63E	FIA0JETH	FIA0JJ6C
FIA0K3A1	FIA0K3AY	FIA0H0VC	FIA0JNJF
FIA0K3AN	FIA0JVRT	FIA0K3AL	FIA0JNJK
FIA0JV RP	FIA0HY8E	FIA0J7VV	FIA0JVRC
FIA0JJ6F	FIA0HY8N	FIA0J7VP	FIA0J7V4
FIA0JJ6J	FIA0J7V0	FIA0J7V9	FIA0JETF
FIA0JVRV	FIA0J7V3	FIA0HWJ8	FIA0HEG4
FIA0H0VL	FIA0J7V5	FIA0H0VA	FIA0HWJ9
FIA0K89T	FIA0HY8H	FIA0KCYL	FIA0HWJ5
FIA0K89Y	FIA0HEG2	FIA0HY79	FIA0HWJ6
FIA0JETL	FIA0K62V	FIA0KH9J	FIA0J7VW
FIA0JER8	FIA0HEGY	FIA0HY8G	FIA0J7VY
FIA0J7WC	FIA0HWKC	FIA0HY8M	FIA0J7VT
FIA0JETE	FIA0K3A0	FIA0HY8A	FIA0J7WF
FIA0K3AT	FIA0JVRJ	FIA0H0VG	FIA0J7V6
FIA0JJ59	FIA0K8AA	FIA0K3AR	FIA0K89G
FIA0K3AW	FIA0KCYT	FIA0JETC	FIA0K89K
FIA0JVRN	FIA0KH9T	FIA0KH9W	FIA0K89R
FIA0JNH8	FIA0HEG1	FIA0JNJC	FIA0KCYJ
FIA0JETN	FIA0HEG3	FIA0K63L	FIA0KCYM
FIA0JJ6G	FIA0HY78	FIA0J7WJ	FIA0KCYN
FIA0JJ6A	FIA0HY75	FIA0JER7	FIA0KCYP
FIA0JVRG	FIA0HY8K	FIA0HEG0	FIA0KCYR
FIA0JVRF	FIA0HY8L	FIA0HLY6	FIA0KH9E
FIA0K63K	FIA0HY8J	FIA0HLY0	FIA0KH9F
FIA0J7WK	FIA0H0VH	FIA0HLY1	FIA0H0T9
FIA0JER5	FIA0H0VF	FIA0HLY4	FIA0HLY3
FIA0JETM			

**(d) Unsafe Condition**

This emergency AD supersedure was prompted by a report of one additional failure of a TGB radial gearshaft, outside the suspect population identified in AD 2013-10-52, which resulted in an in-flight shutdown (IFSD). Two earlier failures of the TGB radial gearshaft prompted the issuance of

AD 2013-10-52. This condition, if not corrected, could result in additional IFSDs of one or more engines, loss of thrust control, and damage to the airplane.

**(e) Compliance**

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

(2) No later than five days after receipt of this emergency AD, do not operate the airplane if more than one installed engine has a TGB radial gearshaft S/N listed in Figure 1 to paragraph (c) of this emergency AD.

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

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(g) Related Information**

(1) For further information about this AD, contact: Carlos Fernandes, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7189; fax: 781-238-7199; email: [carlos.fernandes@faa.gov](mailto:carlos.fernandes@faa.gov).

(2) GE Alert Service Bulletin No. GE90-100 S/B 72-A0568, dated July 10, 2013 pertains to the subject of this AD.

(3) For the service information referenced in this AD, contact: General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, Ohio 45215; email: [geae.aoc@ge.com](mailto:geae.aoc@ge.com); phone: 513-552-3272.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on July 12, 2013.

Frank P. Paskiewicz,  
Acting Director,  
Aircraft Certification Service