

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT  
BIWEEKLY 2013-24**

*11/18/2013 - 12/1/2013*



Federal Aviation Administration  
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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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AD No.	Information	Manufacturer	Applicability
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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
<b>Biweekly 2013-15</b>			
2013-13-08	S 2009-18-02	The Boeing Company	767-200, -300, -300F, and -400ER series
2013-13-15	S 87-02-07	The Boeing Company	737-100, -200, -200C, and -300 series
2013-13-17	S 2011-13-08	Bombardier, Inc.	DHC-8-400, -401, and -402
2013-14-02		The Boeing Company	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-14-03		The Boeing Company	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-14-05		The Boeing Company	747-400 and 747-400F series
2013-14-07		Learjet	45
2013-14-11		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900)
2013-15-04		Hartzell Propeller, Inc.	HC-(1,D)2(X,V,MV)20-7, HC-(1,D)2(X,V,MV)20-8, and HC-(1,D)3(X,V,MV)20-8 propellers
2013-15-07		The Boeing Company	787-8
<b>Biweekly 2013-16</b>			
2013-13-12	S 2000-06-13 R1	The Boeing Company	737-200, -200C, -300, -400, and -500 series
2013-13-16	S 2005-07-04	Airbus	330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2013-14-06		CFM International S.A.	CFM56-5 and CFM56-5B series turbofan engines
2013-14-09	S 2012-14-04	Bombardier, Inc.	DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315
2013-14-10	S 2010-11-02	Gulfstream Aerospace LP	100, Astra SPX and 1125 Westwind Astra
2013-15-05		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2013-15-20	S 2013-14-51	General Electric Company	GE90-76B, GE90-77B, GE90-85B, GE90-90B, GE90-94B, GE90-110B1, GE90-113B and GE90-115B turbofan engines
2013-16-02		Dassault Aviation	FALCON 7X

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2013-16-09		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
<b>Biweekly 2013-17</b>			
2013-15-08		Pratt & Whitney Canada Corp.	W118A, PW118B, PW119B, PW119C, PW123, PW123B, PW123C, PW123D, PW123E, PW123AF, PW124B, PW125B, PW126A, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines
2013-15-09		Pratt & Whitney Division	PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 turbofan engines
2013-15-11		The Boeing Company	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-15-12	S 2004-15-07	Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325
2013-15-14	S 2008-06-29	The Boeing Company	737-300, -400, and -500 series
2013-15-15		The Boeing Company	27, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-15-16		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-15-21	S 2004-13-06	Airbus	A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; and Model A320-111, -211, -212, -214, -231, -232, and -233
2013-16-08		Bombardier, Inc.	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900)
2013-16-10		Hamilton Standard Division and Hamilton Sundstrand Corporation	See AD
2013-16-11		Airbus	A330-301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2013-16-12		Bombardier, Inc.	DHC-8-102, -103, and DHC-8-106
2013-16-15		General Electric Company	GENx-2B67B turbofan engines
2013-16-17		The Boeing Company	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-16-18		Airbus	A320-214, -232, -233, A321-211, -213, and -231
2013-16-22		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
<b>Biweekly 2013-18</b>			
2013-05-08		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343; A340-211, -212, -213, -311, -312, and -313
2013-15-10	S 2012-10-12	Rolls-Royce plc	RB211-Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, 560A2-61, 768-60, 772-60, 772B-60, 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, 895-17, 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines
2013-15-13		The Boeing Company	757-200, -200PF, -200CB, and -300 series
2013-15-17		The Boeing Company	737-600, -700, -700C, -800, -900, and -900ER series
2013-15-18	S 2005-15-01	Lockheed Martin	L-1011-385-1, L-1011-385-1-14, L-1011-385-1-15, and L-1011-385-3
2013-16-23		Rolls-Royce plc	RB211-524G2-19; -524G3-19; -524H2-19; -524H-36; RB211-524B-02; -524B2-19; -524B3-02; -524B4-02; -524C2-19; -524D4-19; -524D4-B-19; and -524D4-39; RB211-535C-37; -535E4-37; -535E4-B-37, and -535E4-B-75 turbofan engines
2013-16-24	S 90-23-14	The Boeing Company	747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series
2013-16-25		Bombardier, Inc.	DHC-8-400, -401, and -402
2013-16-26		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
2013-17-03		Airbus	A330-201, -202, -203, -223, -243, -223F, -243F, -301, -302,

# LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Information Key: E - Emergency; COR - Correction; S - Supersedes

2013-17-05 2013-17-09		Bombardier, Inc. Airbus	-303, -321, -322, -323, -341, -342, and -343; A340-211, -212, -213, -311, -312, -313; A340-541, A340-642 CL-600-2C10, CL-600-2D15, and CL-600-2E25 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
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**Biweekly 2013-19**

2013-17-06 2013-17-07		Fokker Services B.V. General Electric Company	F.27 Mark 050, F.28 Mark 0070 and 0100 GE90-76B, -85B, -90B, -94B, GE90-110B1 and -115B turbofan engines
2013-17-08	S 2010-20-08	The Boeing Company	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SR series
2013-18-02 2013-18-09 2013-19-02		The Boeing Company Honeywell ASCa Inc. Airbus	767-200, 767-300, 767-300F, and 767-400ER series See AD A330-201, -202, -203, -223, -223F, -243 -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343

**Biweekly 2013-20**

2013-18-08 2013-19-03	S 2004-18-06	Boeing Boeing	737-200, -200C, -300, -400, and -500 series airplanes 737-600, -700, -700C, -800, -900, and -900ER series airplanes
2013-19-04 2013-19-08		Boeing Boeing	737-600, -700, -700C, -800, and -900 series airplanes 727, 727C, -100, -100C, -200, and -200F series; 737-100, -200, and -200C series; 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes
2013-19-09	S 2012-26-51	Airbus	A318-111, -112, -121, and -122; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, and -233; A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-19-13		Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SP series airplanes
2013-19-15		Boeing	Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, and 747SR series airplanes
2013-19-17 2013-19-18		Rolls-Royce plc Rolls-Royce plc	RB211-535E4-B-37 series turbofan engines RB211-535E4-37, RB211-535E4-B-37, RB211-535E4-C-37, and RB211-535E4-B-75 turbofan engines
2013-19-20 2013-19-21	S 2012-04-13	Boeing Rolls Royce plc	DC-10-10 and MD-10-10F airplanes RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61; and RB211 Trent 768-60, 772-60, and 772B-60; and RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17; and RB211-524G2-T-19, -524G3-T-19, -524H-T-36, and -524H2-T-19
2013-19-22 2013-19-23		Boeing Boeing	717-200 airplanes 737-600, -700, -700C, -800, -900, and -900ER series airplanes
2013-20-09 2013-20-12		Bombardier Boeing	CL-215-6B11 (CL-415 Variant) airplanes 767-200, -300, -300F, and -400ER series airplanes

**Biweekly 2013-21**

Due to the partial shutdown of the US Government, there were no AD's published in this Bi-weekly period.

**Biweekly 2013-22**

2013-16-10	COR	Hamilton Standard Division and Hamilton Sundstrand Corporation	6/5500/F and 24PF, 14RF, 14SF, 247F, and 568F series propellers
2013-20-04		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

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S - Supersedes			
2013-20-06		Airbus	A340-211, -212, -213, -311, -312, -313, -541, and -642
2013-20-10	S 2000-12-11	Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, and B4-622R
2013-20-11		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
2013-20-14		The Boeing Company	747-400 and -400F series
2013-21-03		The Boeing Company	747-8F and 747-8 series
2013-21-07		The Boeing Company	727, 727C, 727-100, 727 -100C, 727-200, and 727-200F series
2013-21-08		ATR-GIE Avions de Transport Régional	ATR72-101, -201, -102, -202, -211, -212, and -212A
2013-22-02		Airbus	A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; and Model A340-211, -212, -213, -311, -312, and -313
2013-22-03		The Boeing Company	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2013-22-04		Bombardier, Inc.	DHC-8-102, -103, -106, -201, -202, -301, -311, -315, DHC-8-400, -401, and -402
2013-22-05		Bombardier, Inc.	CL-600-2B16 (CL-601-3A and CL-601-3R Variants), and CL-600-2B16 (CL-604 Variant)
2013-22-06		The Boeing Company	747-100, 747-200B, and 747-200F series
2013-22-07		The Boeing Company	747-400 series
2013-22-08		BAE Systems (Operations) Limited	BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2013-22-09		Bombardier, Inc.	DHC-8-400, -401, and -402
<b>Biweekly 2013-23</b>			
2013-14-04		Airbus	A330-223F, -223, -321, -322, and -323
2013-19-14	S 2009-04-07 S 2011-02-09	Airbus	A330-223F, -243F, -201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, -541, and 642
2013-19-17		Rolls-Royce plc	RB211-535E4-B-37 series turbofan engines
2013-22-10		Dassault Aviation	Fan Jet Falcon, Mystere-Falcon 200, Mystere-Falcon 20-C5, 20-D5, 20-E5, and 20-F5
2013-22-11	S 2009-10-06	The Boeing Company	747-400 and -400D series
2013-22-18		EMBRAER	EMB-135ER, -135KE, -135KL, -135LR, EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP
2013-23-02		EADS CASA	CN-235, CN-235-100, CN-235-200, CN-235-300, and C-295
2013-23-03		The Boeing Company	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SR series
2013-23-04		The Boeing Company	737-600, -700, -800, -900, and -900ER series
2013-23-05		Fokker Services B.V.	F.28 Mark 0070 and 0100
<b>Biweekly 2013-24</b>			
2013-23-01		Rolls-Royce Deutschland Ltd & Co KG	Tay 620-15, 650-15, and 651-54 turbofan engines
2013-23-06		The Boeing Company	757-200 and -200PF series
2013-23-12		Rolls-Royce plc	RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61 turbofan engines
2013-23-13		Airbus	A300 B2-1A, B2-1C, B2K-3C, B2-203, B4-2C, B4-103, B4-203, A300 B4-601, B4-603, B4-620, B4-622, A300 B4-605R, B4-622R, A300 F4-605R, F4-622R, and A300 C4-605R Variant F
2013-23-15	S 2009-06-02	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 series
2013-23-16		The Boeing Company	757-200, -200PF, -200CB, and -300 series
2013-23-17		Rolls-Royce plc	RB211-535E4-37, -535E4-B-37, -535E4-C-37, RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines
2013-24-01		The Boeing Company	747-8, 747-8F series, and 787-8



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**2013-23-01 Rolls-Royce Deutschland Ltd & Co KG:** Amendment 39-17656; Docket No. FAA-2013-0397; Directorate Identifier 2013-NE-15-AD.

**(a) Effective Date**

This AD becomes effective December 30, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Rolls-Royce Deutschland Ltd & Co KG (RRD) model Tay 620-15, 650-15, and 651-54 turbofan engines.

**(d) Reason**

This AD was prompted by excessive deterioration of the high-pressure (HP) air bleed valve operating mechanism which is influencing the aerodynamic fan flutter margin. This condition, if not corrected, could lead to multiple fan blade failure. We are issuing this AD to prevent multiple fan blade failure, which could result in uncontained engine failure and damage to the airplane.

**(e) Actions and Compliance**

Unless already done, do the following actions.

(1) Within 1,500 flight cycles after the effective date of this AD, perform a one-time inspection of the HP air bleed valve operating mechanism. Use paragraphs 3.D. and 3.E. of RRD Alert Non-Modification Service Bulletin (NMSB) No. TAY-75-A1784, Revision 1, dated May 30, 2013, to do your inspection.

(2) If the measured torque necessary to open and close the HP air bleed valve is higher than the torque values referenced in paragraph 3.D.(1)(a)[1] for the Tay 620-15 and 650-15 engines, or 3.D.(2)(a)[1] for the Tay 651-54 engine, of RRD Alert NMSB No. TAY-75-A1784, Revision 1, dated May 30, 2013, then before next flight, accomplish paragraph 3.D(1)(a)[1][a], for the Tay 620-15 and 650-15 engines, or 3.D.(2)(a)[1][a], for the Tay 651-54 engine, of RRD Alert NMSB No. TAY-75-A1784, Revision 1, dated May 30, 2013.

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

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

**(g) Related Information**

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

(2) Refer to European Aviation Safety Agency AD 2013-0142, dated July 12, 2013, for more information. You may examine the AD on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0397-0004>.

**(h) 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) Rolls-Royce Deutschland Alert Non-Modification Service Bulletin No. TAY-75-A1784, Revision 1, dated May 30, 2013.

(ii) Reserved.

(3) For service information identified in this AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany; phone: 49 0 33-7086-1200; fax: 49 0 33-7086-1212.

(4) You may view this service information at 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.

(5) 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 November 1, 2013.

Thomas A. Boudreau,  
Acting Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2013-23-06 The Boeing Company:** Amendment 39-17661; Docket No. FAA-2013-0693; Directorate Identifier 2013-NM-059-AD.

**(a) Effective Date**

This AD is effective December 30, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 757-200 and -200PF series airplanes; certificated in any category; as identified in Boeing Service Bulletin 757-28-0118, dated January 12, 2012.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by reports indicating that a standard access door was located where an impact-resistant access door was required, and stencils were missing from some impact-resistant access doors. We are issuing this AD to prevent foreign object penetration of the fuel tank, which could cause a fuel leak near an ignition source (e.g., hot brakes or engine exhaust nozzle), consequently leading to a fuel-fed fire.

**(f) Compliance**

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

**(g) Inspections**

Within 72 months after the effective date of this AD, do the actions specified in paragraphs (g)(1) and (g)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 757-28-0118, dated January 12, 2012.

(1) Do a general visual inspection of the left- and right-hand wing fuel tank access doors to determine whether impact-resistant access doors are installed in the correct locations. If any standard access door is found, before further flight, replace with an impact-resistant access door, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 757-28-0118, dated January 12, 2012.

(2) Do a general visual inspection of the left- and right-hand wing fuel tank impact-resistant access doors to verify stencils and index markers are applied. If a stencil or index marker is missing, before further flight, apply stencil or index marker, as applicable, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 757-28-0118, dated January 12, 2012.

#### **(h) Maintenance Program Revision**

Within 60 days after the effective date of this AD, revise the maintenance program to incorporate critical design configuration control limitations (CDCCLs) Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Section 9, Airworthiness Limitations (AWLs) and Certification Requirements (CMRs) of Boeing 757 Maintenance Planning Data Document D622N001-9, Revision August 2012.

#### **(i) No Alternative Actions, Intervals, and/or CDCCLs**

After accomplishing the revision required by paragraph (h) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used unless the actions, intervals, and/or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

#### **(j) 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 paragraph (k) 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.

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

#### **(k) Related Information**

For more information about this AD, contact Suzanne Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6438; fax: 425-917-6590; email: suzanne.lucier@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) Boeing Service Bulletin 757-28-0118, dated January 12, 2012.

(ii) Critical design configuration control limitation (CDCCL) Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Section 9, Airworthiness Limitations (AWLs) and

Certification Requirements (CMRs) of Boeing 757 Maintenance Planning Data Document  
D622N001-9, Revision August 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 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 November 6, 2013.

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



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**2013-23-12 Rolls-Royce plc:** Amendment 39-17667; Docket No. FAA-2013-0880; Directorate Identifier 2013-NE-28-AD.

**(a) Effective Date**

This AD is effective December 11, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Rolls-Royce plc (RR) RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61 turbofan engines.

**(d) Reason**

This AD was prompted by reports of erosion of the leading edge profile of the low-pressure (LP) compressor blade set contributing to fan blade flutter. We are issuing this AD to prevent failure of the LP compressor blades, which could lead to an uncontained engine failure and damage to the airplane.

**(e) Actions and Compliance**

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

(1) If on the effective date of this AD, the LP compressor fan blades:

(i) Have less than 3,750 flight cycles since new (FCSN) or flight cycles since last leading edge profile blade repair (FCSLR), replace or repair the LP compressor fan blade set before accumulating 4,000 FCSN or FCSLR;

(ii) Have 3,750 or more FCSN or FCSLR, but less than 4,400 FCSN or FCSLR, replace or repair the LP compressor fan blade set within 250 flight cycles (FC), but not later than 4,500 FCSN or FCSLR;

(iii) Have 4,400 FCSN or FCSLR or more, replace or repair the LP compressor fan blade set within 100 FC; or

(iv) Have FCSN or FCSLR that are unknown, replace or repair the LP compressor fan blade set within 100 FC.

(2) Thereafter, replace or repair the LP compressor fan blade set within every 4,000 FCSN or FCSLR.

**(f) Definition**

LP compressor fan blades eligible for installation are:

(1) LP compressor fan blades with less than 4,000 FCSN; or

(2) LP compressor fan blades with less than 4,000 FCSLR, if LP compressor fan blades were repaired using RR Alert Non-Modification Service Bulletin No. RB.211-72-AH149, Revision 1,

dated May 3, 2013 or earlier version or, for initial restoration only, RB.211-72-H464, dated August 28, 2013.

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

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

**(h) Related Information**

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency, AD 2013-0214, dated September 16, 2013, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0880.

(3) Rolls-Royce plc Alert Non-Modification Service Bulletin No. RB.211-72-AH149, Revision 1, dated May 3, 2013 and RB.211-72-H464, dated August 28, 2013, which are not incorporated by reference in this AD, can be obtained from RR, using the contact information in paragraph (h)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, UK; phone: 44-0-1332-242424; fax: 44-0-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp).

(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.

**(i) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on November 8, 2013.  
Colleen M. D'Alessandro,  
Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2013-23-13 Airbus:** Amendment 39-17668. Docket No. FAA-2013-0418; Directorate Identifier 2012-NM-200-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective December 30, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

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

(1) Airbus Model A300 B2-1A, B2-1C, B2K-3C, B2-203, B4-2C, B4-103, and B4-203 airplanes, on which any repair has been done as specified in Airbus Service Bulletin A300-53-0337, dated February 4, 1999; or Airbus Service Bulletin A300-53-0337, Revision 01, dated March 17, 2003.

(2) Airbus Model A300 B4-601, B4-603, B4-620, and B4-622 airplanes; Model A300 B4-605R and B4-622R airplanes; Model A300 F4-605R and F4-622R airplanes; and A300 C4-605R Variant F airplanes; on which any repair has been done as specified in any of the service information identified in paragraphs (c)(2)(i), (c)(2)(ii), (c)(2)(iii), (c)(2)(iv), (c)(2)(v), and (c)(2)(vi) of this AD.

(i) Airbus Service Bulletin A300-53-6111, dated February 4, 1999.

(ii) Airbus Service Bulletin A300-53-6111, Revision 01, dated March 17, 2003.

(iii) Airbus Service Bulletin A300-53-6111, Revision 02, dated September 13, 2004.

(iv) Airbus Service Bulletin A300-53-6111, Revision 03, dated September 30, 2009.

(v) Airbus Mandatory Service Bulletin A300-53-6111, Revision 04, dated August 25, 2011.

(vi) Airbus Mandatory Service Bulletin A300-53-6111, Revision 05, dated January 28, 2013.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report that cracking was found in area 2 of the frame base fittings between frame 41 and frame 46. We are issuing this AD to detect and correct cracking in area 2 of the frame base fittings between frame 41 and frame 46, which could adversely affect 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) Maintenance Records Check and Frame Base Fitting Inspection**

Within 1,000 flight hours after the effective date of this AD: Check the airplane maintenance records to determine if repairs were done in area 1 of the frame base fittings as defined in Appendix 1 of Airbus Alert Operators Transmission A53W001-12, dated July 4, 2012.

**(h) Frame Base Fitting Inspection**

If, during any records check required by paragraph (g) of this AD, it is determined that area 1 of the frame base fittings was repaired: Within 1,000 flight hours after the effective date of this AD, do a detailed inspection of the frame base fittings between frame 41 and frame 46 in area 2 as defined in Appendix 1 of Airbus Alert Operators Transmission A53W001-12, dated July 4, 2012.

**(i) Corrective Action**

If any cracking is found during any detailed inspection required by paragraph (h) of this AD: Before further flight, repair the cracking using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent).

**(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: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-227-2125; 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**

Refer to Mandatory Continuing Airworthiness Information European Aviation Safety Agency Airworthiness Directive 2012-0229, dated October 31, 2012, for related information, which can be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0418-0002>.

**(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 Alert Operators Transmission A53W001-12, dated July 4, 2012, including Appendix 1 and Appendix 2 and excluding Appendix 3.

(ii) Reserved.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office–EAW, 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 November 6, 2013.

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



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**2013-23-15 The Boeing Company:** Amendment 39-17670; Docket No. FAA-2013-0461; Directorate Identifier 2012-NM-169-AD.

**(a) Effective Date**

This AD is effective December 30, 2013.

**(b) Affected ADs**

This AD supersedes AD 2009-06-02, Amendment 39-15838 (74 FR 11013, March 16, 2009).

**(c) Applicability**

This AD applies to The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, as identified in Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by an evaluation by the design approval holder indicating that certain fuselage frames are subject to widespread fatigue damage. The actions were developed to support the airplane's limit of validity of the engineering data that support the established structural maintenance program. We are issuing this AD to detect and correct fatigue cracks in the fuselage skin that can propagate and grow, and result in reduced structural integrity and sudden decompression of the airplane in flight.

**(f) Compliance**

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

**(g) Repetitive Inspections**

At the applicable compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, except as provided by paragraphs (i)(1) and (i)(2) of this AD, do an external detailed or high frequency eddy current (HFEC) inspection for skin cracks at specified shear tie end fastener locations of the fuselage frames, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, except as required by paragraph (i)(3) of this AD. Do all applicable corrective actions before further flight. Repeat the external

detailed or HFEC inspection thereafter at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012.

### **(h) Post-Repair Inspections**

For any external repair doubler in the inspection area specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, that has an upper or lower fastener row that is common to a shear tie end fastener: At the applicable time specified in paragraph (h)(1) or (h)(2) of this AD, whichever occurs later, do an internal HFEC inspection for cracks in the skin next to the shear tie, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, except as required by paragraph (i)(3) of this AD. Do all corrective actions before further flight. Repeat the internal HFEC inspection thereafter at the time specified in Table 4 or Table 5 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, as applicable.

- (1) Before further flight after an inspection required by paragraph (g) of this AD.
- (2) Within 2,000 flight cycles after the effective date of this AD.

### **(i) Service Information Clarifications and Exceptions**

(1) Paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, specifies certain compliance times in terms of the effective date of AD 2009-06-02, Amendment 39-15838 (74 FR 11013, March 16, 2009). The effective date of AD 2009-06-02 is April 20, 2009.

(2) Where paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, specifies counting the compliance time "after the revision 1 date of this service bulletin," this AD requires compliance within the applicable time after the effective date of this AD.

(3) Where Boeing Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012, specifies to contact Boeing for repair instructions, this AD requires repair before further flight using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

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

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-53A2682, dated May 8, 2008.

### **(k) Special Flight Permit**

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

### **(l) 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 paragraph (m)(1) 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.

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

#### **(m) Related Information**

(1) For more information about this AD, contact Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6577; fax: 425-917-6590; email: [berhane.alazar@faa.gov](mailto:berhane.alazar@faa.gov).

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

#### **(n) 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 Alert Service Bulletin 747-53A2682, Revision 1, dated May 24, 2012.

(ii) Reserved.

(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 view this service information at 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, on November 6, 2013.

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



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**2013-23-16 The Boeing Company:** Amendment 39-17671; Docket No. FAA-2013-0334; Directorate Identifier 2013-NM-027-AD.

**(a) Effective Date**

This AD is effective December 30, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5753, Trailing edge flaps.

**(e) Unsafe Condition**

This AD was prompted by a report of a broken forward support fitting at the inboard track of the inboard flap. We are issuing this AD to detect and correct cracking of the forward support fitting assembly, which could result in loss of inboard flap control and subsequent loss of airplane control.

**(f) Compliance**

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

**(g) Inspection and Corrective Action**

Except as provided by paragraph (h) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012: Do a high frequency eddy current (HFEC) inspection for cracking in the forward support fitting assemblies of the inboard track of the left and right inboard flaps, and do all applicable corrective actions, in accordance with paragraph 3.B.2. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012. Do all applicable corrective actions before further flight. Thereafter, repeat the inspections at intervals not to exceed 6,000 flight cycles, except as required by paragraphs (g)(1) and (g)(2) of this AD.

(1) For Group 1 airplanes, as identified in Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012, on which any forward support fitting assembly is replaced: Do the next inspection before 15,000 flight cycles have accumulated on that assembly.

(2) For Group 2 airplanes, as identified in Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012, on which any forward support fitting assembly is replaced: Do the next inspection before 18,000 flight cycles have accumulated on that assembly.

**(h) Exceptions to the Service Information**

(1) Where Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012, specifies compliance times "after the original issue date of this service bulletin," this AD requires compliance within the specified compliance times "after the effective date of this AD."

(2) Paragraphs 3.B.1. and 3.B.3. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012, are not required by this AD.

**(i) 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 paragraph (j) 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.

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

**(j) Related Information**

For more information about this AD, contact Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6440; fax: (425) 917-6590; email: nancy.marsh@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.

(i) Boeing Special Attention Service Bulletin 757-57-0071, dated September 12, 2012.

(ii) Reserved.

(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 view this service information at FAA, Transport Airplane Directorate, 1601 Lind Ave 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 November 6, 2013.  
Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2013-23-17 Rolls-Royce plc:** Amendment 39-17672; Docket No. FAA-2013-0750; Directorate Identifier 2013-NE-25-AD.

**(a) Effective Date**

This AD is effective December 11, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce plc (RR) RB211-535E4-37, -535E4-B-37, -535E4-C-37, RB211 Trent 768-60, 772-60, and 772B-60 turbofan engines with turbine disc part numbers (P/Ns) and serial numbers (S/Ns) listed in Table 1 to paragraph (c) of this AD.

**Table 1 to Paragraph (c)–New Reduced Cyclic Life Limits for High-Pressure (HP)/Intermediate-Pressure (IP) Turbine Discs**

<b>Engine</b>	<b>P/Ns</b>	<b>S/Ns</b>	<b>New reduced cyclic life limit</b>
RB211-535E4-37,-535E4-B-37, -535E4-C-37	UL39767	LDRCZ19900	11,400 flight cycles (FCs).
	UL39767	LDRCZ19903	
	UL39767	LDRCZ19904	

RB211 Trent 768-60, 772-60, and 772B-60	FK26893	LDRCZ19901	8,687 FCs.
	FK26893	LDRCZ20081	
	FK26893	LDRCZ20082	
	FK26893	LDRCZ20084	
	FK26893	LDRCZ20088	
	FK26893	LDRCZ20089	
	FK26893	LDRCZ20090	
	FK26893	LDRCZ20093	
	FK26893	LDRCZ20094	
	FK26893	LDRCZ20097	
	FK26893	LDRCZ20099	
	FK26893	LDRCZ20100	
	FK20795 or FW53118	LDREB12176	9,270 FCs.
	FK20795 or FW53118	LDREB12177	
FK20795 or FW53118	LDREB12178		
FK20795 or FW53118	LDREB12179		
FK20795 or FW53118	LDREB12180		

**(d) Reason**

This AD was prompted by a report of an HP disc contaminated with a steel inclusion. We are issuing this AD to prevent failure of the HP or IP turbine disc, uncontained engine failure, and damage to the airplane.

**(e) Actions and Compliance**

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

(1) Remove from service, within 30 days, any HP or IP disc identified in Table 1 to paragraph (c) of this AD that has exceeded the new cyclic life limit, or before the disc accumulates flight cycles that equal the new reduced cyclic life limit listed in Table 1 to paragraph (c) of this AD, whichever is later.

(2) Do not approve for return to service any engine with any installed HP or IP turbine disc listed in Table 1 to paragraph (c) of this AD, if the disc exceeds the new reduced cyclic life limit listed in Table 1 to paragraph (c) of this AD.

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

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

**(g) Related Information**

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7779; fax: 781-238-7199; email: frederick.zink@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2012-0155, dated July 18, 2013. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0750.

(3) Rolls-Royce plc, Alert Non-Modification Service Bulletin No. RB.211-72-AH215, dated December 6, 2012 and RB.211-72-AH152, Revision 1, dated July 3, 2013, which are not incorporated by reference in this AD, can be obtained from RR using the contact information in paragraph (g)(4) of this AD.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, UK; phone: 44-0-1332-242424; fax: 44-0-1332-249936; email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp).

(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.

**(h) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on November 8, 2013.  
Colleen M. D'Alessandro,  
Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2013-24-01 The Boeing Company:** Amendment 39-17675; Docket No. FAA-2013-0974; Directorate Identifier 2013-NM-209-AD.

**(a) Effective Date**

This AD is effective November 27, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model 747-8 and 747-8F series airplanes powered by GENx-2B67 or GENx-2B67B engines.

(2) Model 787-8 airplanes powered by GENx-1B64, GENx-1B67, GENx-1B70, GENx-1B64/P1, GENx-1B67/P1, GENx-1B70/P1, or GENx-1B70/75/P1 engines.

Note 1 to paragraph (c)(2) of this AD: The engine nameplate may also include a suffix such as "G03," which is the applicable Bill of Materials (See FAA Type Certification Data Sheet T00021SE basic model identifier).

**(d) Subject**

Air Transport Association (ATA) of America Code 71, Power plant.

**(e) Unsafe Condition**

This AD was prompted by reports of engine damage and thrust loss events as a result of flying in high altitude ice crystal icing (ICI) conditions. We are issuing this AD to ensure that the flight crews have operating instructions to avoid flight into ICI conditions that can lead to engine damage and thrust loss events. We are also issuing this AD to ensure the airplane has a minimum number of airworthy engines following a potential high altitude ICI encounter. Operation with more than one engine having icing damage can lead to a common cause loss of thrust on multiple engines, which can lead to a forced landing.

**(f) Compliance**

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

**(g) Revision of Airplane Flight Manual (AFM): Certificate Limitations**

Within 7 days after the effective date of this AD, revise the Certificate Limitations chapter of the applicable Boeing AFM to include the statement provided in figure 1 to paragraph (g) of this AD. This may be done by inserting a copy of this AD into the AFM.

## **Figure 1 to Paragraph (g) of This AD–Certificate Limitations**

### **AVOIDANCE OF ICE CRYSTAL ICING**

(Required by AD 2013-24-01.)

In order to prevent loss of thrust and engine damage due to ice crystal icing, for operations at or above 30,000 feet, when approaching, or in, instrument meteorological conditions or visible moisture:

The flight crew must comply with the Avoidance of Ice Crystal Icing procedure contained in the Operating Procedures chapter of this manual.

When following the Avoidance of Ice Crystal Icing procedure, flight is prohibited within 50NM of amber or red radar returns that are displayed below the airplane's flight path.

Note 2 to figure 1 to paragraph (g), figure 2 to paragraph (h), and figure 3 to paragraph (i) of this AD: When statements identical to those in figures 1, 2, and 3 to paragraphs (g), (h), and (i) of this AD, respectively, have been included in the applicable chapters of the general revisions of the applicable AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

### **(h) AFM Revision: Model 747-8 and 747-8F Operating Procedures**

For Model 747-8 (Intercontinental) and 747-8F (Freighter) series airplanes: Within 7 days after the effective date of this AD, revise the Operating Procedures chapter of the Boeing 747-8 AFM to include the statement provided in figure 2 to paragraph (h) of this AD. This may be done by inserting a copy of this AD into the AFM.

## **Figure 2 to Paragraph (h) of This AD–Model 747-8 Operating Procedures**

### **AVOIDANCE OF ICE CRYSTAL ICING**

(Required by AD 2013-24-01.)

This procedure is required by the AVOIDANCE OF ICE CRYSTAL ICING limitation contained in the Certificate Limitations chapter of this manual. The language below shall not be modified.

Operations in ice crystal icing can cause unrecoverable loss of thrust and engine damage due to ice crystal icing.

For operations at or above 30,000 feet, when approaching, or in, instrument meteorological conditions or visible moisture:

Operate weather radar in automatic mode and gain knob set to the 12 o'clock position, or if in manual mode adjust gain to maximum and set tilt between -1 and -3.

If areas of green, amber or red weather radar returns are observed along the flight path:

Use manual weather radar tilt control mode and vary the tilt between -3 and -5 degrees and set the gain knob to the 12 o'clock position to determine if amber or red returns are present below the airplane's flight path.

Flight is prohibited within 50NM of amber or red radar returns that are displayed below the airplane's flight path.

**(i) AFM Revision: Model 787-8 Operating Procedures**

For Model 787-8 airplanes: Within 7 days after the effective date of this AD, revise the Operating Procedures chapter of the Boeing 787 AFM to include the statement provided in figure 3 to paragraph (i) of this AD. This may be done by inserting a copy of this AD into the AFM.

**Figure 3 to Paragraph (i) of This AD—Model 787-8 Operating Procedures****AVOIDANCE OF ICE CRYSTAL ICING**

(Required by AD 2013-24-01.)

This procedure is required by the AVOIDANCE OF ICE CRYSTAL ICING limitation contained in the Certificate Limitations chapter of this manual. The language below shall not be modified.

Operations in ice crystal icing can cause unrecoverable loss of thrust and engine damage due to ice crystal icing.

For operations at or above 30,000 feet, when approaching, or in, instrument meteorological conditions or visible moisture:

Operate weather radar in automatic mode and 0 manual gain adjustment, or if in manual mode adjust gain to maximum and set tilt between -1 and -3.

If areas of green, amber or red weather radar returns are observed along the flight path:

Use manual weather radar tilt control mode and vary the tilt between -3 and -5 degrees and select 0 manual gain adjustment to determine if amber or red returns are present below the airplane's flight path.

Flight is prohibited within 50NM of amber or red radar returns that are displayed below the airplane's flight path.

**(j) Post-Event Inspections**

After any flight crew report of the appearance of an engine indicating and crew alerting system (EICAS) message that displays "ENG THRUST (L,R)" (for Model 787-8 airplanes) or "ENG (1, 2, 3, or 4) THRUST" (for Model 747-8 and 747-8F airplanes) during operation at or above 30,000 feet pressure altitude: Do borescope inspections of the first stage blade of the high pressure compressor of the engines to detect damage, as specified in paragraph (j)(1) or (j)(2) of this AD, as applicable. Correct any damage before further flight.

(1) For Model 747-8 and 747-8F series airplanes: Before further flight, inspect each engine for which an EICAS ENGINE THRUST message was displayed. A minimum total of 3 engines must be inspected before further flight. Within 5 flight cycles after the EICAS message was displayed, inspect the fourth engine, unless already accomplished as specified in this paragraph.

(2) For Model 787-8 airplanes: Before further flight, inspect both engines.

**(k) 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 paragraph (k) 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.

**(l) Related Information**

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

(2) Refer to the applicable information specified in paragraph (l)(2)(i) or (l)(2)(ii) of this AD for guidance on inspecting the engine and correcting damage.

(i) For Model 747-8 and 747-8F series airplanes: Refer to Task 72-00-00-290-801-G00, High Pressure Compressor Section (with a Borescope) Detailed Inspection, of Subject 72-00-00, Engine–Inspection/Check, of Chapter 72, Engine, of the Boeing 747-8 Aircraft Maintenance Manual.

(ii) For Model 787-8 airplanes: Refer to Data Module DMC-B787-A-G72-00-00-06B-280C-A, High Pressure Compressor Section (with a Borescope)–Special Detailed Inspection, of the Boeing 787-8 Aircraft Maintenance Manual.

(3) For Boeing service information identified in this AD that is not incorporated by reference, 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>. You may view this 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.

**(m) Material Incorporated by Reference**

None.

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