



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
LARGE AIRCRAFT**

**BIWEEKLY 2011-23**

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## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2011-01</b>			
2010-25-06		Boeing	737-200, -300, -400, and -500 series
2010-26-05		Dassault Aviation	Falcon 10, Fan Jet Falcon, Fan Jet Falcon Series C, D, E, F, and G, Mystere-Falcon 20-C5, 20-D5, 20-E5, 20-F5, Mystere-Falcon 200, Mystere-Falcon 50, Mystere-Falcon 900, Falcon 900EX, Falcon 2000 and Falcon 2000EX
2010-26-06		Boeing	737-600, -700, -700C, -800, and -900 series
2010-26-07		Boeing	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
2010-26-08		Boeing	767-200, -300, -300F, and -400ER series
2010-26-10	S 2006-05-09	Boeing	747-200C, -200F, -400, -400D, and -400F series
2010-26-12		Airbus	A321-211, -212, -231, and -232
2010-26-13		Bombardier	DHC-8-301, -311, and -315
<b>Biweekly 2011-02</b>			
2010-02-05		Airbus	See AD
2010-24-05	COR	Pratt & Whitney Canada	Engine: PW305A and PW305B
2010-24-06	S 2006-12-18	Short Brothers PLC	SD3-60 SHERPA, SD3-SHERPA, SD3-30, and SD3-60
2011-01-01	S 2008-13-15	Embraer	EMB-135BJ
2011-01-02		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, 343, A340-211, -212, -213, -311, -312, and -313
2011-01-05		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F
2011-01-06	S 2007-02-22	Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-01-07		328 Support Services GmbH	328-100 and -300
2011-01-09		B/E Aerospace	Appliance: Protective breathing equipment (PBE) units
2011-01-10		Bombardier	BD-700-1A10 and BD-700-1A11
2011-01-11		Boeing	MD-90-30
2011-01-12	S 2008-21-03	Boeing	737-300, -400, and -500 series
2011-01-13		Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, and C4-605R Variant F
2011-01-15		Boeing	757-200, -200CB, and -300 series
2011-01-16		Boeing	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88
2011-02-01		Boeing	MD-11 and MD-11F
2011-02-03		Boeing	757-200, -200PF, -200CB, and -300 series
<b>Biweekly 2011-03</b>			
2011-02-05		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2011-02-06		Boeing	767-300 series
2011-02-09		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
2011-03-01	S 2005-25-05	Pratt & Whitney	JT8D-7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR series

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AD No.	Information	Manufacturer	Applicability
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<b>Biweekly 2011-04</b>			
2011-02-07	S 2010-12-10	General Electric	Engine: CF6-45A, CF6-45A2, CF6-50A, CF6-50C, CF6-50CA, CF6-50C1, CF6-50C2, CF6-50C2B, CF6-50C2D, CF6-50E, CF6-50E1, CF6-50E2, CF6-50C2-F and CF6-50C2-R
2011-03-07		Fokker Services	F.28 Mark 1000, 2000, 3000, 4000, and F.28 Mark 0100
2011-03-08		Bombardier	CL-215-1A10 (CL-215), CL-215-6B11 (CL-215T Variant), and CL-215-6B11 (CL-415 Variant)
2011-03-09		Boeing	MD-90-30
2011-03-10	S 2005-20-32	Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2011-03-11		Airbus	A300 B4-601, B4-603, B4-620, B4-622, A300 B4-605R, B4-622R, A300 F4-605R, and A300 C4-605R Variant F
2011-03-12		Hawker Beechcraft	400A and 400T
2011-03-13		Bombardier	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900)
2011-03-14		Boeing	737-100, -200, -200C, -300, -400, -500 series, and 737-400 series
2011-04-02		Hamilton Sundstrand	Propeller: 247F series
<b>Biweekly 2011-05</b>			
2011-03-15		Boeing	767-200, -300, -300F, and -400ER series
2011-03-16		Cessna	750
2011-04-01		Fokker	F.28 Mark 0070 and 0100
2011-04-03		Bombardier	CL-600-2B19 (Regional Jet Series 100 and 440)
2011-04-04	S 2005-18-02	Pratt & Whitney	Engine: JT8D-209, -217, -217A, -217C, and -219 turbofan
2011-04-05		Airbus	A340-211, -212, -213; A340-311, -312, -313; A340-541; and A340-642
2011-04-06		Airbus	A340-211, -212, -213; A340-311, -312, -313; A340-541; A340-642
2011-04-07		Fokker	F.28 Mark 0070 and 0100
2011-04-08		Learjet	45
2011-04-10	S 2009-23-10	Boeing	737-300, -400, and -500 series
2011-05-03	S 2005-06-04	Bombardier	CL-600-2B19 (Regional Jet Series 100 & 440)
2011-05-04	S 2008-23-19	Boeing	757-200, -200CB, -200PF, and -300 series
2011-05-05		Airbus	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
<b>Biweekly 2011-06</b>			
98-09-27R1		Rolls-Royce plc	Engine: RB211-Trent 768, 772, and 772B turbofan
2011-04-09		Transport Category Airplanes	Transport Category Airplanes
2011-05-10		BAE Systems (Operations) Limited	ATP, HS 748 2A and series 2B
2011-05-11	S 2007-19-19	Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series
2011-05-12		Boeing	777-200, -200LR, -300, and -300ER series
2011-05-13		Saab AB, Saab Aerosystems	SAAB 2000
2011-05-14		Bombardier	DHC-8-400, -401, and -402
2011-06-04		Airbus	A330-243F

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<b>Biweekly 2011-07</b>			
2011-06-03		Boeing	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
2011-06-05 2011-06-08	S 2007-18-52	Boeing Bombardier	737-600, -700, -700C, -800, -900, and -900ER series 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)
2011-06-09	S 2009-11-09	Airbus	A300 B4-601, A300 B4-603, A300 B4-620, A300 B4-622, A300 B4-605R, A300 B4-622R; A300 F4-605R, A300 F4-622R; and A300 C4-605R Variant F, A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-06-11		Rolls-Royce plc	Engine: RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan
2011-06-12 2011-07-01	S 2009-04-17	Boeing General Electric	MD-90-30 Engine: CF6-45A, CF6-45A2, CF6-50A, CF6-50C, CF6-50CA, CF6-50C1, CF6-50C2, CF6-50C2B, CF6-50C2D, CF6-50E, CF6-50E1, CF6-50E2, and CF6-50E2B
2011-07-02	S 2005-02-03	Pratt & Whitney	Engine: JT8D-209, -217, -217A, -217C, and -219 series turbofan
<b>Biweekly 2011-08</b>			
2011-07-04		Boeing	DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-32F (C-9A), DC-9-32F (C9-B), DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, and DC-9-51
2011-07-05 2011-07-06 2011-07-07 2011-07-08 2011-07-10 2011-07-11 2011-08-51	S 2010-10-18     E	Sigma Aero Seat Bombardier, Inc Fokker Services B.V. Airbus Bombardier, Inc. Dassault Aviation Boeing	Appliance: See AD CL-600-2B19 (Regional Jet Series 100 & 440) F.28 Mark 1000, 2000, 3000, and 4000 A340-211, -212, -213, -311, -312 and -313 BD-100-1A10 (Challenger 300) Mystere-Falcon 50 737-300, -400, and -500 series
<b>Biweekly 2011-09</b>			
2011-07-12 2011-08-02 2011-08-03 2011-08-04		Fokker Services B.V. Fokker Services B.V. Airbus Bombardier, Inc	F.27 Mark 050 F.27 Mark 050 A340-541 and -642 CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900)
2011-08-05		Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, A300 C4-605R Variant F, A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-08-08		Embraer	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
2011-08-10 2011-08-11	S 98-19-12 S 2005-13-19	Rolls-Royce plc BAE Systems (Operations) Limited	Engine: RB211-Trent 768-60 and RB211-Trent 772-60 turbofan BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2011-08-12		Airbus	A330-301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, A340-311, -312, and -313
2011-09-01 2011-09-02 2011-09-03 2011-09-05 2011-09-06	S 2002-02-07	Airbus Saab AB, Saab Aerosystems Lockheed Martin Corp Boeing Airbus	A340-541, and -642 340A (SAAB/SF340A) and SAAB 340B 382, 382B, 382E, 382F, and 382G 777-200, -300, and -300ER series 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

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<b>Biweekly 2011-10</b>			
2011-08-07		Rolls-Royce plc	Engine: RB211-Trent 875-17, RB211-Trent 877-17, RB211-Trent 884-17, RB211-Trent 884B-17, RB211-Trent 892-17, RB211-Trent 892B-17, and RB211-Trent 895-17 turbofan
2011-09-07		Rolls-Royce plc	Engine: RB211-524G2-T-19, -524G3-T-19, -524H-T-36, -524H2-T-19; RB211 Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, 560A2-61; RB211 Trent 768-60, 772-60, 772B-60; RB211 Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17 turbofan
2011-09-10		Airbus	A300 B4-601, B4-603, B4-605R, C4-605R Variant F, and F4-605R airplanes, and A310-204 and -304
2011-09-11		Boeing	777-200 and -300 series
2011-09-12		Bombardier, Inc.	DHC-8-101, -102, -103, -106, -201, -202, -301, -311, -315, DHC-8-401, and -402
2011-09-13		Airbus	A340-211, -212, -213, -311, -312, and -313
2011-09-14		Boeing	747-200B, -300, -400, -400D, and -400F series
2011-09-15		Boeing	777-200, -200LR, -300, and -300ER series
2011-09-17	S 2010-01-07	Airbus	A340-211, -212, -213, -311, -312, -313, -541, and -642
2011-09-18		Dassault Aviation	FALCON 7X
2011-10-01		Dassault Aviation	FALCON 7X
2011-10-04		Rolls-Royce plc	Engine: RB211-Trent 875-17, -Trent 877-17, -Trent 884-17, -Trent 884B-17, -Trent 892-17, -Trent 892B-17, and -Trent 895-17 turbofan
<b>Biweekly 2011-11</b>			
2011-08-51		Boeing	737-300, -400, and -500 series
2011-09-04		Lockheed Martin Corporation	382, 382B, 382E, 382F, and 382G
2011-10-02		Boeing	747-400, 747-400D, and 747-400F series
2011-10-03		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, ERJ 170-200 LR, -200 SU, -200 STD, ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-200 STD, ERJ 190-200 LR, and ERJ 190-200 IGW
2011-10-05		Airbus	A310-203, -204, -222, -304, -322, and -324
2011-10-06		Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-10-07		Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-10-08	S 98-26-01 S 91-13-01	Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325
2011-10-10		Airbus	A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, and C4-605R Variant F
2011-10-14	S2010-24-08	Dassault Aviation	MYSTERE-FALCON 50
2011-10-15		Airbus	A318-112, A319-111, A319-112, A319-115, A319-132, A319-133, A320-214, A320-232, A320-233, A321-211, A321-213, and A321-231
2011-10-17	S 2007-04-11 S 2007-20-03 S 2007-25-02	Airbus	A300 B2-1A, B2-1C, B4-2C, B2K-3C, B4-103, B2-203, B4-203, A310-203, -204, -221, -222, -304, -322, -324, 325, A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, A300 C4-605R Variant F
2011-11-02		Bombardier, Inc.	DHC-8-400, -401, and -402

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<b>Biweekly 2011-12</b>			
2010-24-13	COR	Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series
2011-07-06	COR	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2011-11-05	S 2007-15-05	Boeing	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
2011-11-06	S 2002-03-10	BAE Systems (Operations) Limited	BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2011-11-08		Rolls-Royce plc	Engine: RB211-535E4-37, -535E4-B-37, -535E4-B-75, and -535E4-C-37 turbofan
2011-12-01		Koito Industries, Ltd.	Appliance: Seats and seating systems
2011-12-51	E	Dassault Aviation	FALCON 7X
<b>Biweekly 2011-13</b>			
2009-18-19 R1		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343 series, A340-211, -212, -213, -311, -312, and -313 series
2011-12-05		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series
2011-12-06		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)
2011-12-09		Boeing	737-100, -200, -200C, -300, -400, and -500 series
2011-12-11	S 2001-14-19	Boeing	767-200, -300, -300F series, 767-400ER series
2011-12-12		Boeing	MD-90-30
2011-12-13		Boeing	737-600, -700, -700C, -800, -900, and -900ER series
2011-12-14		Fokker Services B.V.	F.28 Mark 0070 and 0100
<b>Biweekly 2011-14</b>			
2011-08-09		Embraer	EMB-120, -120ER, -120FC, -120QC, and -120RT
2011-12-51		Dassault Aviation	FALCON 7X
2011-13-04		Rolls-Royce plc	Engine: RB211-Trent 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61, and 560A2-61 turbofan
2011-13-06		Bombardier, Inc.	DHC-8-400, -401, and -402
2011-13-07	S 2010-02-02	Dassault Aviation	FALCON 7X
2011-13-08		Bombardier, Inc.	DHC-8-400, -401, and -402
2011-13-09	S 2007-05-08	Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343
2011-13-10	S 2009-11-13	Learjet Inc	45
2011-13-11	S 2007-06-18	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

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AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency

### Biweekly 2011-15

2011-09-09		Bombardier, Inc.	CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A and CL-601-3R Variants), and CL-600-2B16 (CL-604 Variants)
2011-12-13	COR	Boeing	737-600, -700, -700C, -800, -900, and -900ER series
2011-13-01		Rolls-Royce plc	Engine: 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
2011-14-01		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
2011-14-03		Boeing	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87) and MD-88
2011-14-04		Dassault Aviation	FALCON 7X
2011-14-08		B/E Aerospace	Appliance: Continuous Flow Passenger Oxygen Mask Assembly
2011-14-10		Airbus	A330-342
2011-14-11		Boeing	747-400 and -400D series
2011-14-12		Saab AB, Saab Aerosystems	SAAB 2000
2011-15-01		Boeing	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88
2011-15-02	S 2008-20-01	Lockheed Martin	382, 382B, 382E, 382F, and 382G
2011-15-03	S 97-26-07	Boeing	747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series
2011-15-06		General Electric	Engine: GE90-76B; GE90-77B; GE90-85B; GE90-90B; and GE90-94B turbofan

### Biweekly 2011-16

2011-14-06	S 2007-20-05	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
2011-15-07		328 Support Services GmbH	328-100 and -300
2011-15-08		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
2011-15-09	S 2011-05-14	Bombardier, Inc.	DHC-8-400, -401, and -402
2011-16-02		Boeing	747 and 767

### Biweekly 2011-17

2011-09-09	Cor	Bombardier, Inc.	CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A and CL-601-3R Variants), CL-600-2B16 (CL-604 Variants), and CL-600-2B16 (CL-604 Variants)
2011-14-07		Pratt & Whitney	Engine: PW4074 and PW4077 turbofan
2011-16-01	S 2011-12-51	Dassault Aviation	FALCON 7X
2011-16-03		Airbus	See AD
2011-16-06		Boeing	747-400 and -400F series
2011-17-02		Airbus	A320-214, -232, and -233
2011-17-03		Fokker Services B.V.	F.28 Mark 1000, 2000, 3000, and 4000
2011-17-10		Fokker Services B.V.	F.28 Mark 1000, 2000, 3000, and 4000

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2011-18</b>			
2011-17-04		Bombardier	DHC-8-400, -401, and -402
2011-17-07	S 2006-09-07	M7 Aerospace LP Airbus	SA226-T, SA226-T(B), SA226-TC, SA226-AT A330-201, -202, -203, -223, -223F, -243, -243F, A330-301, -302, -303, -321, -322, -323, -341, -342, and -343
2011-17-09		Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, A330-301, -302, -303, -321, -322, -323, -341, -342, and -343
2011-17-11		Boeing	DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88
2011-17-12		Bombardier	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705) and Model CL-600-2D24 (Regional Jet Series 900)
2011-17-16		Airbus	A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-311, -312, -313, A340-541 and -642
2011-18-01		General Electric	Engine: CF6-45A, CF6-45A2, CF6-50A, CF6-50C, CF6-50CA, CF6-50C1, CF6-50C2, CF6-50C2B, CF6-50C2D, CF6-50E, CF6-50E1, and CF6-50E2 series turbofan
2011-18-02		General Electric	Engine: CF34-10E2A1; CF34-10E5; CF34-10E5A1; CF34-10E6; CF34-10E6A1; CF34-10E7; and CF34-10E7-B turbofan
2011-18-03		Boeing	737-600, -700, -700C, -800, -900 series, 737-600, -700, -700C, -800, and -900 series
2011-18-05		Saab Ab, Saab Aerosystems	SAAB 2000
2011-18-08		Bombardier	CL-600-2B19 (Regional Jet Series 100 & 440)
2011-18-51	E	Honeywell International, Inc.	Engine: TPE331
<b>Biweekly 2011-19</b>			
2005-25-10R1	R 2005-25-10	Dowty Propellers	Propeller: R321/4-82-F/8, R324/4-82-F/9, R333/4-82-F/12, and R334/4-82-F/13
2011-18-04		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU; ERJ 170-200 LR, -200 SU, -200; ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW; ERJ 190-200 STD, -200 LR, and -200 IGW
2011-18-14		Embraer	ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW; ERJ 190-200 STD, -200 LR, and -200 IGW
2011-18-18		Bombardier	DHC-8-400, -401, and -402
<b>Biweekly 2011-20</b>			
2011-08-07	COR	Rolls-Royce plc	Engine: RB211-Trent 875-17, RB211-Trent 877-17, RB211-Trent 884-17, RB211-Trent 884B-17, RB211-Trent 892-17, RB211-Trent 892B-17, and RB211-Trent 895-17 turbofan
2011-17-17	S 2007-22-09	Bombardier	DHC-8-400, -401, and -402
2011-18-13	S 2008-10-51	328 Support Services GmbH	328-100 and -300
2011-18-15		Bombardier	DHC-8-400, -401, and -402
2011-18-17		Bombardier	DHC-8-400, -401, and -402
2011-18-20		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343; A340-211, -212, -213, -311, -312, and -313
2011-18-22		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, and -313
2011-18-23		Boeing	See AD
2011-19-01	S 2004-15-14	Airbus	See AD
2011-19-04	S 2009-17-04	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
2011-20-02		BAE Systems (Operations) Limited	BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2011-20-03		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

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2011-21</b>			
2011-18-10	S 2003-03-01	Boeing	737-600, -700, -700C, -800, -900, and -900ER series
2011-19-02		Dowty Propellers	Propellers: R212/4-30-4/22 and R251/4-30-4/49
2011-20-04		Gulfstream Aerospace LP	Galaxy and Gulfstream 200
2011-20-07	S 2010-17-05	Boeing	737-600, -700, -700C, -800, and -900 series
2011-20-09		Airbus	See AD
2011-20-10		Boeing	737-600, -700, -700C, -800, -900, and -900ER series
<b>Biweekly 2011-22</b>			
2011-14-02	S 2006-24-04	Boeing	767-200, -300, -300F, and -400ER series
2011-17-05	S 90-01-10	Airbus	A300 B2-1C, A300 B2-203, A300 B2K-3C, A300-B4-103, A300 B4-203, and A300 B4-2C
2011-21-01		Fokker Services B.V.	F.27 Mark 050, 200, 300, 400, 500, 600, and 700 airplanes; and Fokker Services B.V. Model F.28 Mark 0070, 0100, 1000, 2000, 3000, and 4000
2011-21-02		Airbus	A330-243F
2011-21-03		Boeing	777-200, -200LR, -300, and -300ER series
2011-21-04	S 2006-12-16	Bombardier	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315
2011-21-05		Aviointeriors S.p.A.	Appliance: Passenger seats
2011-21-06	S 2009-10-02	BAE Systems (Operations) Limited	4101
2011-21-07		Bombardier	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)
2011-21-08		Sigma Aero Seat	Appliance: Passenger Seat Assemblies
2011-21-09	S 2007-25-15	Airbus	A300 B4-103, B4-203, and B4-2C
2011-21-14	S 2008-03-04	Airbus	A300 B4-601, B4-603, B4-620, and B4-622, A300 B4-605R, B4-622R, F4-605R, and F4-622R airplanes and A300 C4-605R Variant F
2011-21-15		Embraer	EMB-135ER, -135KE, -135KL, and -135LR airplanes; and Model EMB-145, -145ER, -145MR, -145LR, -145MP, and -145EP
2011-22-01		Rolls-Royce Deutschland Ltd	Engine: BR700-710A1-10, BR700-710A2-20, BR700-710C4-11 and BR700-710C4-11
<b>Biweekly 2011-23</b>			
2011-21-17		General Electric Company	Engine: CT7-8A, CT7-8A1, CT7-8E, and CT7-8F5 turboshaft
2011-22-02		Airbus	See AD
2011-22-03		Rolls-Royce Corporation	Engine: AE 3007A, AE 3007A1/1, AE 3007A1, AE 3007A1/3, AE 3007A1E, AE 3007A1P, and AE 3007A3 turbofan
2011-22-04		Airbus	A310-203, A310-204, A310-221 A310-222, A310-304, A310-322, A310-324, and A310-325
2011-22-06		Bombardier, Inc.	CL-215-1A10; CL-215-6B11 (CL-215T Variant), and CL-215-6B11 (CL-415 Variant)
2011-22-07		Rolls-Royce	Engine: See AD
2011-23-05	S 2009-02-06 R1	Boeing	737-300, -400, -500 series
2011-23-06		Sigma Aero Seat	Appliance: See AD
2011-23-09		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)



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**2011-21-17 General Electric Company:** Amendment 39-16840; Docket No. FAA-2011-0942; Directorate Identifier 2011-NE-29-AD.

**(a) Effective Date**

This AD is effective November 17, 2011.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to General Electric Company (GE) CT7-8A, CT7-8A1, CT7-8E, and CT7-8F5 turboshaft engines, with fuel filter differential pressure switch, part number (P/N) TD028VF0H7Y5 (part of fuel filter assembly, P/N 4110T53P06), installed.

**(d) Unsafe Condition**

This AD was prompted by reports of 47 fuel filter differential pressure switches found with stress-corrosion cracking of the mounting flanges. We are issuing this AD to prevent unrecoverable in-flight engine shutdown, engine bay fire due to fuel leakage, and forced landing or accident.

**(e) Compliance**

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

(1) Starting on the effective date of this AD, perform daily visual inspections of the fuel filter differential pressure switch for leaks and excessive cracking of the mounting flanges.

(2) Visually inspect in accordance with paragraph 3, Accomplishment Instructions, of GE Alert Service Bulletin (ASB) No. CT7-8-S/B 73-A0007, dated July 8, 2011.

**(f) Mandatory Terminating Action**

(1) As mandatory terminating action to the daily visual inspections, within 4 months after the effective date of this AD, install collar kit, P/N 59TC02800K1T, over the fuel filter differential pressure switch.

(2) Install the collar kit in accordance with paragraph 3, Accomplishment Instructions of GE ASB No. CT7-8-S/B 73-A0008, dated August 17, 2011.

**(g) Special Flight Permits**

Special flight permits are prohibited.

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

The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

**(i) Related Information**

For more information about this AD, contact Walter Meibaum, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7119; fax: (781) 238-7199; email: [walter.meibaum@faa.gov](mailto:walter.meibaum@faa.gov).

**(j) Material Incorporated by Reference**

You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(1) General Electric Company Alert Service Bulletin No. CT7-8-S/B 73-A0007, dated July 8, 2011, approved for IBR as of November 17, 2011.

(2) General Electric Company Alert Service Bulletin No. CT7-8-S/B 73-A0008, dated August 17, 2011, approved for IBR as of November 17, 2011.

(3) For service information identified in this AD, contact GE-Aviation, M/D Rm. 285, One Neumann Way, Cincinnati, OH 45215, phone: (513) 552-3272; email: [geae.aoc@ge.com](mailto:geae.aoc@ge.com).

(4) You may review copies of the 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.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Burlington, Massachusetts, on October 4, 2011.

Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



**2011-22-02 Airbus:** Amendment 39-16844. Docket No. FAA-2011-0255; Directorate Identifier 2010-NM-253-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective November 29, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all 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; Model A300 C4-605R Variant F airplanes; and Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes; certificated in any category.

**Subject**

(d) Air Transport Association (ATA) of America Code 24: Electrical Power.

**Reason**

(e) The mandatory continuing airworthiness information (MCAI) states:

An operator reported several cases of wire damages at the pylon/wing interface. Analysis revealed that wires damages are due to installation quality issue resulting from lack of information in installation drawings and job cards.

Moreover detailed analysis has highlighted that the Low Pressure Valve (LPV) wires were not segregated by design.

\* \* \* \* \*

If left uncorrected, the wire chafing could impact fire protection and detection system. It may also induce dormant failure on LPV preventing its closure leading to a permanent and uncontrolled fire (in case of fire ignited upstream the High Pressure Valve (HPV)).

\* \* \* \* \*

**Compliance**

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

## Actions

(g) Within 30 months or 4,000 flight hours after the effective date of this AD, whichever occurs first: Modify the electrical installation in the pylon/wing interface on the left-hand and right-hand side by doing a general visual inspection of wires for damage and doing all applicable repairs, replace the cable tie with lacing tape, improve the electrical installation at the level of the electrical ramp, and improve the segregation of both routes of the LPV channels 1 and 2 between LPV connector and ramp; in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-24-6106, excluding Appendix 01, dated March 31, 2010 (for Airbus Model A300 B4-600, B4-600R, and F4-600R series airplanes, and Model C4-605R Variant F airplanes); or Airbus Mandatory Service Bulletin A310-24-2106, Revision 01, including Appendix 01, dated April 4, 2011 (for Airbus Model A310 series airplanes). Do all applicable repairs before further flight.

## FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

## Other FAA AD Provisions

(h) 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: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2125; fax (425) 227-1149. Information may be e-mailed to: 9-ANM-11-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.

## Related Information

(i) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2010-0178R1, excluding Appendix 01, dated May 20, 2011; Airbus Mandatory Service Bulletin A300-24-6106, dated March 31, 2010; and Airbus Mandatory Service Bulletin A310-24-2106, Revision 01, including Appendix 01, dated April 4, 2011; for related information.

## Material Incorporated by Reference

(j) You must use Airbus Mandatory Service Bulletin A300-24-6106, excluding Appendix 01, dated March 31, 2010; or Airbus Mandatory Service Bulletin A310-24-2106, Revision 01, including Appendix 01, dated April 4, 2011; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

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

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

(3) You may review copies of the 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.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 11, 2011.

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



**2011-22-03 Rolls-Royce Corporation (Formerly Allison Engine Company):** Amendment 39-16845; Docket No. FAA-2011-0273; Directorate Identifier 2011-NE-08-AD.

**(a) Effective Date**

This AD is effective November 17, 2011.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce Corporation (RRC) AE 3007A, AE 3007A1/1, AE 3007A1, AE 3007A1/3, AE 3007A1E, AE 3007A1P, and AE 3007A3 turbofan engines, with any of the 6th-through-13th stage compressor wheel part numbers (P/Ns) in Table 1 of this AD installed.

**Table 1–6th-Through-13th Stage Compressor Wheel P/Ns Affected by This AD**

<b>Compressor Wheel Stage:</b>	<b>Wheel P/Ns with Chrome-Carbide Coated Knife Seals:</b>	<b>Wheel P/Ns with Uncoated Knife Seals:</b>
6 <sup>th</sup>	23074717	23062666, 23071261, 23071396
7 <sup>th</sup>	23074719, 23074217	23062667, 23071262, 23071397
8 <sup>th</sup>	23074721	23061628, 23071263,
9 <sup>th</sup>	23074722	23061629, 23071264
10 <sup>th</sup>	23074723	23061630, 23071265
11 <sup>th</sup>	23074724	23061631, 23066231
12 <sup>th</sup>	23074725	23061632, 23071267
13 <sup>th</sup>	23074213, 23074726	23061633, 23071268

**(d) Unsafe Condition**

This AD was prompted by reports of low-cycle fatigue cracks found during shop visits, in the 6th-through-13th stage compressor wheels having chrome-carbide coated or uncoated knife edge seals. We are issuing this AD to prevent uncontained failure of the 6th-through-13th stage compressor wheel, leading to damage to the airplane.

**(e) Compliance**

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

**(f) Initial Inspection**

The initial inspection compliance times for the 6th-through-13th stage compressor wheels are based on cycles-since-new (CSN) and cycles-in-service (CIS) of their 12th and 13th stage compressor wheels. For engines that one or both 12th and 13th stage compressor wheels have chrome-carbide coated knife edge seals, use the compliance times listed in Table 2 of this AD. For engines that both 12th and 13th stage compressor wheels do not have chrome-carbide coated knife edge seals, use the compliance times listed in Table 3 of this AD.

(1) Perform a one-time comprehensive eddy current inspection (ECI) of the 6th-through-13th stage compressor wheel knife edge seals for cracks, using paragraph 2, Accomplishment Instructions, of RRC Alert Service Bulletin (ASB) No. AE 3007A-A-72-386, Revision 4, dated June 27, 2011 (Completion of this one-time comprehensive ECI relieves you thereafter of the repetitive inspection requirements of this AD); or

(2) Perform an initial ECI of the 6th-through-13th stage compressor wheel outer circumferences for cracks, using paragraph 2, Accomplishment Instructions, of RRC ASB No. AE 3007A-A-72-390, Revision 3, dated June 27, 2011.

**Table 2—Initial Inspection Compliance Times for Engines, That One or Both 12th and 13th Stage Compressor Wheels Have Chrome-Carbide Coated Knife Edge Seals**

<b>For 12<sup>th</sup> and or 13<sup>th</sup> Stage Compressor Wheels With the Following CSN on the Effective Date of this AD:</b>	<b>Initially Inspect After the Effective Date of this AD:</b>
(i) 18,185 or more CSN.	Within 15 CIS.
(ii) 16,700 to 18,184 CSN.	Before accumulating 18,200 CSN.
(iii) 16,000 to 16,699 CSN.	Within 1,500 CIS.
(iv) 15,100 to 15,999 CSN.	Within 2,000 CIS.
(v) 14,300 to 15,099 CSN.	Within 2,800 CIS.
(vi) 13,000 to 14,299 CSN.	Within 3,400 CIS.
(vii) 12,300 to 12,999 CSN.	Within 4,000 CIS.
(viii) 11,200 to 12,299 CSN.	Within 4,600 CIS.
(ix) 9,700 to 11,199 CSN	Within 5,300 CIS.
(x) Fewer than 9,700 CSN.	Before accumulating 15,000 CSN or at the next shop visit when the engine has more than 7,000 cycles, whichever occurs first.

**Table 3–Initial Inspection Compliance Times for Engines, That Both 12<sup>th</sup> and 13<sup>th</sup> Stage Compressor Wheels Do Not Have Chrome-Carbide Coated Knife Edge Seals**

<b>For 12<sup>th</sup> and or 13<sup>th</sup> Stage Compressor Wheels With the Following CSN on the Effective Date of this AD:</b>	<b>Initially Inspect After the Effective Date of This AD:</b>
(i) 18,300 or more CSN.	Within 200 CIS.
(ii) 16,000 to 18,299 CSN.	Within 1,500 CIS.
(iii) 15,100 to 15,999 CSN.	Within 2,000 CIS.
(iv) 14,300 to 15,099 CSN.	Within 2,800 CIS.
(v) 13,000 to 14,299 CSN.	Within 3,400 CIS.
(vi) 12,300 to 12,999 CSN.	Within 4,000 CIS.
(vii) 11,200 to 12,299 CSN.	Within 4,600 CIS.
(viii) 9,700 to 11,199 CSN.	Within 5,300 CIS.
(ix) Fewer than 9,700 CSN.	Before accumulating 15,000 CSN or at the next shop visit when the engine has more than 7,000 cycles, whichever occurs first.

**(g) Repetitive Inspections**

(1) After passing the initial inspection, perform repetitive ECIs of the compressor wheel outer circumference, for cracks, within every 5,000 cycles-since-last-inspection (CSLI), using paragraph 2, Accomplishment Instructions, of RRC ASB No. AE 3007A-A-72-390, Revision 3, dated June 27, 2011; or

(2) Perform a one-time comprehensive ECI of the 6th-through-13th stage compressor wheel knife edge seals for cracks, within 5,000 CSLI using paragraph 2, Accomplishment Instructions, of RRC ASB No. AE 3007A-A-72-386, Revision 4, dated June 27, 2011. Completion of this one-time ECI comprehensive inspection relieves you thereafter of the repetitive inspection requirements of this AD.

**(h) 6th-Through-13th Stage Compressor Wheels Found Cracked**

Remove from service before further flight 6th-through-13th stage compressor wheels that are found cracked.

**(i) Special Flight Permits**

Special Flight Permits are limited to essential flight crew only.

**(j) Reporting Requirements**

Report all inspection results within 10 days, to AE Service Data, Rolls-Royce Corporation, Attn: AE Service Data Manager, P.O. Box 420, Speed Code U17, Indianapolis, IN 46206-0420, email: [. Use the reporting instructions in:](mailto:royce.com)

(1) Paragraph 2.D. of ASB No. AE 3007A-A-72-386, Revision 4, dated June 27, 2011.

(2) Service Bulletin Compliance Form of RRC ASB No. AE 3007A-A-72-390, Revision 3, dated June 27, 2011.

**(k) Paperwork Reduction Act Burden Statement**

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.

**(l) Previous Inspection Credit**

(1) If you previously performed an ECI of the 6th-through-13th stage compressor wheels using RRC ASB No. AE 3007A-A-390, Revision 1, dated February 14, 2011 or Revision 2, dated June 10, 2011, or Revision 3, dated June 27, 2011, you met the initial inspection requirements of this AD.

(2) If you previously performed a one-time comprehensive ECI of the 6th-through-13th stage compressor wheel knife edge seals, using RRC ASB No. AE 3007A-A-72-386, dated October 20, 2010, or Revision 1, dated December 17, 2010, or Revision 2 dated January 10, 2011, or Revision 3, dated June 10, 2011, you met the initial inspection requirements of paragraph (f) of this AD. Completion of this one-time comprehensive inspection relieves you of the repetitive inspection requirements of this AD.

(3) If you previously performed an ultrasonic inspection of the compressor wheel knife edge seals, using RRC Service Bulletin No. AE 3007A-72-382, dated April 6, 2010, prior to publication of RRC ASB No. AE 3007A-A-72-386, dated October 20, 2010, you met the initial inspection requirements of this AD. Completion of this one-time ultrasonic inspection relieves you of the repetitive inspection requirements of this AD.

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

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

**(n) Related Information**

For more information about this AD, contact Kyri Zaroyiannis, Aerospace Engineer, Chicago Aircraft Certification Office, Small Airplane Directorate, FAA, 2300 E. Devon Ave., Des Plaines, IL 60018; phone: (847) 294-7836; fax: (847) 294-7834; email: kyri.zaroyiannis@faa.gov.

**(o) Material Incorporated by Reference**

You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(1) Rolls-Royce Corporation Alert Service Bulletin No. AE 3007A-A-72-386, Revision 4, dated June 27, 2011, approved for IBR November 17, 2011.

(2) Rolls-Royce Corporation Alert Service Bulletin No. AE 3007A-A-72-390, Revision 3, dated June 27, 2011, approved for IBR November 17, 2011.

(3) For service information identified in this AD, contact Rolls-Royce Corporation, P.O. Box 420, Indianapolis, IN 46206; phone: (317) 230-3774; fax: (317) 230-6084; email: [.](mailto:royce.com)

(4) You may review copies of the 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.

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Burlington, Massachusetts, on October 25, 2011.

Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



**2011-22-04 Airbus:** Amendment 39-16846. FAA-2011-0650; Directorate Identifier 2010-NM-257-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective November 29, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to airplanes identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Airbus Model A310-203, A310-204, A310-221 and A310-222 airplanes (without trim tank), all serial numbers, except airplanes on which Airbus Mandatory Service Bulletin A310-28-2143, dated July 20, 2005; and Airbus Mandatory Service Bulletin A310-28-2142, Revision 03, dated November 18, 2009; have been done; certificated in any category.

(2) Model A310-304, A310-322, A310-324, and A310-325 airplanes (fitted with trim tank), all serial numbers, except airplanes on which Airbus Mandatory Service Bulletin A310-28-2143, dated July 20, 2005; Airbus Mandatory Service Bulletin A310-28-2153, dated July 20, 2005; and Airbus Mandatory Service Bulletin 310-28-2142, Revision 03, dated November 18, 2009; have been done; certificated in any category.

**Subject**

(d) Air Transport Association (ATA) of America Code 28: Fuel System.

**Reason**

(e) The mandatory continuing airworthiness information (MCAI) states:

[T]he FAA has published SFAR 88 (Special Federal Aviation Regulation 88).

In their letters referenced 04/00/02/07/01-L296, dated March 4th, 2002, and 04/00/02/07/03-L024, dated February 3rd, 2003, the [Joint Aviation Authorities] JAA recommended the application of a similar regulation to the National Aviation Authorities (NAA).

Under this regulation, all holders of type certificates for passenger transport aircraft with either a passenger capacity of 30 or more, or a payload capacity of 3,402 kg (7,500 lb) or more which have received their certification since January 1st, 1958, are required to conduct a design review against explosion risks.

\* \* \* \* \*

The unsafe condition is insufficient electrical bonding of the over-wing refueling cap adapter, which could result in a possible fuel ignition source in the fuel tanks.

## Compliance

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

## Resistance Measurement

(g) For configuration 05 and 06 airplanes, as identified in Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010, on which any Airbus service bulletin identified in table 1 of this AD has been done: Within 3 months after the effective date of this AD, do the actions in paragraph (g)(1) or (g)(2) of this AD, as applicable.

**Table 1—Previously Accomplished Airbus Service Bulletins**

<b>Airbus Service Bulletin</b>	<b>Revision</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A310-28-2142	---	August 26, 2005
Airbus Mandatory Service Bulletin A310-28-2142	01	July 17, 2006
Airbus Mandatory Service Bulletin A310-28-2142	02	September 3, 2007

(1) For configuration 05 airplanes: Do a resistance check of the inboard and outboard over-wing refuel cap mounts between the flange face of the refuel insert and the wing, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010.

(2) For configuration 06 airplanes: Do a resistance check of the outboard over-wing refuel cap mounts between the flange face of the refuel insert and the wing, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010.

## Corrective Action

(h) If during any resistance measurement required by paragraph (g)(1) or (g)(2) of this AD, a resistance of 10 milliohm (mohm) or greater is found: Before further flight, do all applicable corrective actions, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010.

## Credit for Actions Accomplished in Accordance With Previous Service Information

(i) Resistance measurements and corrective actions done in accordance with Airbus Mandatory Service Bulletin A310-28-2142, Revision 03, dated November 18, 2009, before the effective date of this AD are acceptable for compliance with the corresponding resistance measurements and corrective actions required by paragraphs (g) and (h) of this AD.

## FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:

(1) Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010, specifies that if any resistance measurement is more than 10 mohm, corrective actions must be done. This AD specifies that if any resistance measurement is 10 mohm or greater, corrective actions must be done.

(2) Paragraphs (1), (2), and (4) of European Aviation Safety Agency (EASA) Airworthiness Directive 2010-0199, dated September 30, 2010, include actions that are not required in this AD. These actions are required by AD 2007-20-04, Amendment 39-15214 (72 FR 56258, October 3, 2007).

## Other FAA AD Provisions

(j) 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. Send information to Attn: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2125; fax (425) 227-1149. Information may be e-mailed 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.

## Related Information

(k) Refer to MCAI EASA Airworthiness Directive 2010-0199, dated September 30, 2010; and Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010.

## Material Incorporated by Reference

(l) You must use Airbus Mandatory Service Bulletin A310-28-2142, Revision 04, dated November 30, 2010, to do the actions required by this AD, unless the AD specifies otherwise.

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

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

(3) You may review copies of the 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.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 13, 2011.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.



**2011-22-06 Bombardier, Inc.:** Amendment 39-16848. Docket No. FAA-2011-1096; Directorate Identifier 2011-NM-185-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective November 14, 2011.

**Affected ADs**

(b) None.

**Applicability**

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

(1) Model CL-215-1A10 airplanes, serial numbers 1051 through 1125 inclusive;

(2) Model CL-215-6B11 (CL-215T Variant) airplanes, serial numbers 1056 through 1125 inclusive; and

(3) Model CL-215-6B11 (CL-415 Variant) airplanes, serial numbers 2001 through 2990 inclusive.

**Subject**

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

**Reason**

(e) The mandatory continued airworthiness information (MCAI) states:

Multiple cracks were reported on the Main Landing Gear (MLG) upper member forward lug, part numbers 160-714-3 (L/H) and 160-714-4 (R/H). An investigation determined the cause to be fatigue cracks at the base of the step radius with multiple initiation sites. The fatigue cracking may compromise the structural integrity of the MLG during takeoff or landing, leading to failure.

\* \* \* \* \*

**Compliance**

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

**Eddy Current Inspections**

(g) Within 50 flight hours after the effective date of this AD: Perform an in situ eddy current inspection for cracks on the forward lug of the MLG upper member, part numbers 160-714-3 (left

hand) and 160-714-4 (right hand), in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A548, dated July 15, 2011 (for Model CL-215-1A10 airplanes, and Model CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4451, dated July 15, 2011 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

(1) If any crack is found: Before further flight, replace the forward lug of the MLG upper member with a new forward lug, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A548, dated July 15, 2011 (for Model CL-215-1A10 airplanes, and Model CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4451, dated July 15, 2011 (for Model CL-215-6B11 (CL-415 Variant) airplanes). Thereafter, repeat the in situ eddy current inspection at intervals not to exceed 165 land landings.

(2) If no crack is found: Repeat the in situ eddy current inspection at intervals not to exceed 165 land landings, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A548, dated July 15, 2011 (for Model CL-215-1A10 airplanes, and Model CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4451, dated July 15, 2011 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

### **Fluorescent Penetrant Inspection**

(h) Within two months after the effective date of this AD: Perform a one-time fluorescent penetrant inspection for cracks on the forward lug of the MLG upper member, part numbers 160-714-3 (left hand) and 160-714-4 (right hand), in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A547, dated July 8, 2011 (for Model CL-215-1A10 airplanes, and Model CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4450, dated July 8, 2011 (for Model CL-215-6B11 (CL-415 Variant) airplanes). If any crack is found, before further flight, replace the forward lug of the MLG upper member with a new forward lug, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin 215-A547, dated July 8, 2011 (for Model CL-215-1A10 airplanes, and Model CL-215-6B11 (CL-215T Variant) airplanes); or Bombardier Alert Service Bulletin 215-A4450, dated July 8, 2011 (for Model CL-215-6B11 (CL-415 Variant) airplanes).

### **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows:

If any cracking is found during any in situ eddy current inspection specified in paragraph (g) of this AD, and the forward lug of the MLG upper member is replaced, this AD requires repetitive in situ eddy current inspections, thereafter, at intervals not to exceed 165 land landings. Canadian Airworthiness Directive CF-2011-35, dated August 29, 2011, does not include this requirement.

### **Other FAA AD Provisions**

(i) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, 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 New York ACO, send it to Attn: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. 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) **Special Flight Permits:** 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.

### **Related Information**

(k) Refer to MCAI Canadian Airworthiness Directive CF-2011-35, dated August 29 2011; Bombardier Alert Service Bulletin 215-A548, dated July 15, 2011; Bombardier Alert Service Bulletin 215-A4451, dated July 15, 2011; Bombardier Alert Service Bulletin 215-A547, dated July 8, 2011; and Bombardier Alert Service Bulletin 215-A4450, dated July 8, 2011; for related information.

### **Material Incorporated by Reference**

(1) You must use Bombardier Alert Service Bulletin 215-A548, dated July 15, 2011; Bombardier Alert Service Bulletin 215-A4451, dated July 15, 2011; Bombardier Alert Service Bulletin 215-A547, dated July 8, 2011; and Bombardier Alert Service Bulletin 215-A4450, dated July 8, 2011; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; e-mail [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet <http://www.bombardier.com>.

(3) You may review copies of the 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.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 13, 2011.

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



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**2011-22-07 Rolls-Royce:** Amendment 39-16849. Docket No. FAA-2010-0993; Directorate Identifier 2010-NE-08-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective November 29, 2011.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Rolls-Royce (RR) turbofan engine models RB211-524G2-T-19, RB211-524G3-T-19, RB211-524H2-T-19, RB211-524H-T-36, RB211-Trent 768-60, RB211-Trent 772-60, RB211-Trent 772B-60, RB211-Trent 875-17, RB211-Trent 877-17, RB211-Trent 884-17, RB211-Trent 884B-17, RB211-Trent 892-17, RB211-Trent 892B-17 and RB211-Trent 895-17 that incorporate RR Service Bulletin (SB) RB.211-72-D133 or RB.211-72-E902. These engines are installed on, but not limited to, Airbus A330 series airplanes; Boeing 747-400 series, 767 series, and 777 series airplanes.

**Reason**

- (d) This AD results from:

Cracking has been found on the inner wall between intermediate dilution chutes on a total of five front combustion liners of the standard corresponding to Rolls-Royce RB211 Service Bulletin No. 72-D133. The lives of two of these liners were confirmed to be below the currently valid borescope inspection interval. Ultimately, crack propagation could result in hot gas breakout with potential of downstream component distress and multiple turbine blade release beyond containment capabilities of the engine casings. Thus, cracking of this nature constitutes a potentially unsafe condition.

Since Rolls-Royce Service Bulletin No. 72-E902 introduces further developments of Rolls-Royce RB211 Service Bulletin No. 72-D133, engines incorporating Rolls-Royce RB211 Service Bulletin No. 72-E902 are also considered to be potentially affected and are therefore included in the applicability of this AD.

Since EASA issued its AD, another cracking event has occurred, bringing to six the total of crack events of which we are aware. We are issuing this AD to detect cracks in the front combustion liner, which could result in hot section distress, multiple blade release, and possible damage to the airplane.

**Actions and Compliance**

- (e) Unless already done, do the following actions.

## Initial Inspection

(f) Perform a borescope inspection of the front combustion liner inner wall, before accumulating the cyclic limits specified in paragraphs (f)(2) and (f)(3) of this AD.

(1) If you incorporated paragraph 3.A.(2)(a) of RR Alert Service Bulletin (ASB) RB.211-72-AF458, Revision 4, dated March 9, 2009, or ASB RB.211-72-AF458, Revision 5, dated April 20, 2011, you have satisfied the requirements of paragraph (f) of this AD.

(2) If the engine has a combustion liner installed with:

(i) A LIFE on the effective date of this AD, that is equal to or greater than the initial inspection threshold specified in column (b) of Table 1 of this AD or a LIFE on the effective date of this AD, that is not known, within 250 cycles after the effective date of this AD, perform a borescope inspection as specified in paragraph (f) of this AD.

(ii) A LIFE on the effective date of this AD, that is less than the initial inspection threshold specified in column (b) of Table 1 of this AD, perform the borescope inspection before the LIFE exceeds the limit specified in column (c) of Table 1 of this AD.

## Repeat Inspection

(3) Thereafter, repeat the borescope inspection specified in paragraph (f) of this AD at intervals not to exceed the cycles specified in column (d) of Table 1 of this AD.

**Table 1—Initial Inspection Thresholds and Limits**

<b>Column (a)</b>	<b>Column (b)</b>	<b>Column (c)</b>	<b>Column (d)</b>
<b>Engine model</b>	<b>Initial inspection threshold</b>	<b>Initial inspection limit if LIFE is less than the initial inspection threshold</b>	<b>Repeat inspection interval</b>
(i) RB211-524G2-T-19, 524G3-T-19 and 524H2-T-19	1,150 cycles	1,400 cycles	1,400 cycles.
(ii) RB211-524H-T-36	550 cycles	800 cycles	800 cycles.
(iii) RB211-Trent 768-60, 772-60 and 772B-60	1,250 cycles	1,500 cycles	1,500 cycles.
(iv) RB211-Trent 892-17, RB211-Trent 884-17, RB211-Trent 884B-17, RB211-Trent 877-17, RB211-Trent 875-17, RB211-Trent 892B-17 and RB211-Trent 895-17 engines.	750 cycles	1,000 cycles	1,000 cycles.

## Definitions

(g) This AD defines LIFE as the lowest of:

(1) The number of cycles-since-new of the combustion liner, or

(2) The number of cycles-in-service (CIS) since replacement of the inner wall, or

(3) The number of CIS since the inner wall of the combustion liner was last borescope-inspected, or inspected by performing paragraph 3.A.(2)(a) of RR ASB RB.211-72-AF458, Revision 4, dated March 9, 2009 or ASB RB.211-72-AF458, Revision 5, dated April 20, 2011.

## **FAA AD Differences**

(h) This AD differs from the Mandatory Continuing Airworthiness Information (MCAI) in that the MCAI AD applies to the RB211-Trent 772C-60 engine, which is not type certificated in the United States. The MCAI also allows use of later revisions of the SBs. This AD does not.

## **Other FAA AD Provisions**

(i) Alternative Methods of Compliance (AMOCs): The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD if requested using the procedures found in 14 CFR 39.19.

## **Related Information**

(j) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2009-0243R2, Corrected, dated February 22, 2011, for related information.

(k) Rolls-Royce ASB RB.211-72-AF458, Revision 4, dated March 9, 2009, or ASB RB.211-72-AF458, Revision 5, dated April 20, 2011, provide information on how to do the actions required by this AD. For service information identified in this AD, contact Corporate Communications at Rolls-Royce plc, PO Box 31, Derby, DE24 8BJ, United Kingdom, phone: 011-44-1331-242424, fax: 011-44-1332-249936, or e-mail: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp) identifying the correspondence as related to airworthiness directives.

(l) Contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: [alan.strom@faa.gov](mailto:alan.strom@faa.gov); phone: 781-238-7143; fax: 781-238-7199, for more information about this AD.

## **Material Incorporated by Reference**

(m) None.

Issued in Burlington, Massachusetts, on October 18, 2011.

Peter A. White,  
Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.



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**2011-23-05 The Boeing Company:** Amendment 39-16856; Docket No. FAA-2011-1162; Directorate Identifier 2011-NM-186-AD.

**(a) Effective Date**

This AD is effective November 16, 2011.

**(b) Affected ADs**

This AD supersedes AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009).

**(c) Applicability**

This AD applies to The Boeing Company Model 737-300, -400, -500 series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of four cracked frames at certain body stations (BS) in the forward cargo compartment. We are issuing this AD to detect and correct cracking in the fuselage frames and frame reinforcements, which could reduce the structural capability of the frames to sustain limit loads, and result in cracking in the fuselage skin and subsequent rapid depressurization of the airplane.

**(f) Compliance**

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

**(g) Inspection**

At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraphs (k)(1), (k)(2), and (k)(4) of this AD: Do a high frequency eddy current (HFEC) surface or HFEC hole/edge inspection for any cracking of the 1.04-inch nominal diameter wire penetration hole in the frame and frame reinforcement between stringer S-20 and S-21, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011.

**(h) Repetitive Inspection**

Within 4,500 flight cycles after accomplishment of the most recent inspection specified in Part 2 or Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, or within 90 days after the effective date of this AD, whichever occurs later: Do an HFEC hole/edge inspection for cracking of the 1.04-inch nominal diameter wire penetration hole in the frame and frame reinforcement between S-20 and S-21, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011. Repeat the inspection thereafter at intervals not to exceed 4,500 flight cycles.

**(i) Repair**

If any cracking is found during any inspection required by paragraph (g) or (h) of this AD: Before further flight, repair the crack including doing all related investigative and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraph (k)(3) of this AD. All related investigative and applicable corrective actions must be done before further flight. Accomplishment of the requirements of this paragraph terminates the repetitive inspection requirements of paragraph (h) of this AD for the repaired location of that frame.

**(j) Optional Terminating Action**

Accomplishment of the preventive modification, including doing all related investigative and applicable corrective actions, specified in Part 5 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, except as required by paragraph (k)(3) of this AD, terminates the repetitive inspection requirements of paragraph (h) of this AD for the modified location of that frame, provided the modification is done before further flight after an inspection required by paragraph (g) or (h) of this AD has been done, and no cracking was found on that frame location during that inspection.

**(k) Exceptions to Service Bulletin Specifications**

The following exceptions apply in this AD.

(1) Where paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, refers to a compliance time "from date on Revision 1 of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) For airplanes meeting all of the criteria specified in paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of this AD: The compliance time for the initial inspection specified in Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, and required by paragraph (g) of this AD, may be extended to 90 days after the effective date of this AD.

(i) Model 737-300 series airplanes in Group 1, line numbers 1001 through 2565 inclusive;

(ii) Airplanes that have accumulated 40,000 or more total flight cycles as of the effective date of this AD; and

(iii) Airplanes on which the modification specified in Boeing Service Bulletin 737-53-1273, dated September 20, 2006; Revision 1, dated December 21, 2006; Revision 2, dated June 4, 2007; Revision 3, dated December 7, 2009; or Revision 4, dated July 23, 2010; has been done, including any configuration or deviation that has been approved as an AMOC during accomplishment of these service bulletins, by the Boeing Commercial Airplanes Organization Designation Authorization

(ODA) that has been authorized by the Manager, Seattle Aircraft Certification Office (ACO) to make those findings.

(3) Where Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011 specifies to contact Boeing for appropriate repair instructions: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(4) The "Condition" column of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, refers to total flight cycles, "at the date of/on this service bulletin." However, this AD applies to the airplanes with the specified total flight cycles as of the effective date of this AD.

#### **(l) Credit for Actions Accomplished in Accordance With Previous Service Information**

Actions done in accordance with Boeing Alert Service Bulletin 737-53A1279, dated December 18, 2007, before the effective date of this AD are acceptable for compliance with the corresponding actions required by paragraphs (g), (h), (i), and (j) of this AD.

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

(1) The Manager, Seattle 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.

(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 Boeing Commercial Airplanes 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.

(4) AMOCs approved for paragraphs (h) and (i) of AD 2009-02-06 R1, Amendment 39-16015 (74 FR 45979, September 8, 2009), are approved as AMOCs for the corresponding provisions of paragraphs (g), (h), and (i) of this AD.

#### **(n) Related Information**

For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle ACO, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; email: wayne.lockett@faa.gov.

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

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(i) Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, approved for IBR November 16, 2011.

(2) If you accomplish the optional actions specified by this AD, you must use the following service information to perform those actions, unless the AD specifies otherwise. The Director of the

Federal Register approved the incorporation by reference (IBR) of the following service information on the date specified:

(i) Boeing Alert Service Bulletin 737-53A1279, Revision 1, dated September 2, 2011, approved for IBR November 16, 2011.

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

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

(5) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 20, 2011.

Kalene C. Yanamura,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2011-23-06 Sicma Aero Seat:** Amendment 39-16857. Docket No. FAA-2011-23-06; Directorate Identifier 2011-NM-022-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective November 21, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Sicma Aero Seat Model 9401, 9402, 9404, 9505, 9406, 9407, 9408, and 9409 series passenger seat assemblies, all part numbers, except front row and aft facing seats, and those modified to "Amendment B" standard. These passenger seat assemblies are installed on, but not limited to, ATR-GIE Avions de Transport Régional Model ATR42-200, -300, -320, and -500 airplanes and Model ATR72-101, -201, -102, -202, -211, -212, and -212A airplanes.

Note 1: This AD applies to Sicma Aero Seat passenger seat assemblies as installed on any airplane, regardless of whether the airplane has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance (AMOC) according to paragraph (k)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Subject**

(d) Air Transport Association (ATA) of America Code 25: Equipment/Furnishings.

**Reason**

(e) The mandatory continued airworthiness information (MCAI) states:

Several occurrences of cracked central and lateral spreaders on passenger seats models 9401 and 9402 \* \* \*.

This condition, if not corrected, can lead to further cracking of the seat spreaders, causing injury to passengers or crew members during heavy turbulence in flight or in the event of an emergency landing.

\* \* \* \* \*

## **Compliance**

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

## **Repetitive Inspections, Repair, and Replacement**

(g) Within 6 months after the effective date of this AD, perform a detailed inspection for cracking of the central and lateral spreaders of the affected seats, in accordance with paragraph 2/A1., "Checking procedures of lateral and central spreaders," of the Accomplishment Instructions of Sicma Aero Seat Service Bulletin 94-25-013, Issue 4, dated February 12, 2008.

(1) If no cracking is found on any central spreader, repeat the detailed inspection thereafter at intervals not to exceed 550 flight hours until the replacement specified in paragraph (h) of this AD is done.

(2) If no cracking or only cracks that are shorter than 8 millimeters (mm) (0.315 inch) are found on any lateral spreader, repeat the detailed inspection thereafter at intervals not to exceed 550 flight hours until the replacement specified in paragraph (h) of this AD is done.

(3) If all cracks found on any central spreader are shorter than 8 mm (0.315 inch), before further flight, repair the affected spreader, in accordance with paragraphs 2/A through C2. of the Accomplishment Instructions of Sicma Aero Seat Service Bulletin 94-25-011, Revision 3, dated June 30, 2008. Within 550 flight hours after doing the repair, do the detailed inspection specified in paragraph (g) of this AD, and repeat the inspection thereafter at intervals not to exceed 550 flight hours until the replacement specified in paragraph (h) of this AD is done.

(4) If one or more cracks are found that are 8 mm (0.315 inch) or longer on any lateral or central spreader, before further flight, replace the affected spreader, in accordance with paragraphs 2/A through D2. of the Accomplishment Instructions of Sicma Aero Seat Service Bulletin 94-25-012, Revision 1, dated June 26, 2008.

## **Optional Terminating Action**

(h) Replacing all central and lateral spreaders on an affected seat assembly (modify to "Amendment B" standard), in accordance with paragraphs 2/A through D2. of the Accomplishment Instructions of Sicma Aero Seat Service Bulletin 94-25-012, Revision 1, dated June 26, 2008, terminates the inspections required by this AD for that seat assembly.

## **Credit for Actions Accomplished in Accordance With Previous Service Information**

(i) Actions done before the effective date of this AD in accordance with Sicma Aero Seat Service Bulletin 94-25-011, Issue 2, dated November 6, 2007; and Sicma Aero Seat Service Bulletin 94-25-012, dated September 25, 2007; are acceptable for compliance with the corresponding actions of this AD.

## **Parts Installation**

(j) As of 6 months after the effective date of this AD, no person may install any passenger seat assembly identified in paragraph (c) of this AD, on any airplane, unless it has been modified to "Amendment B" standard in accordance with the Accomplishment Instructions of Sicma Aero Seat Service Bulletin 94-25-012, Revision 1, dated June 26, 2008.

## **FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows: No differences.

## Other FAA AD Provisions

(k) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Boston Aircraft Certification Office, 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 ACO, send it to Attn: Jeffrey Lee, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7161; fax (781) 238-7170; email; jeffrey.lee@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.

## Related Information

(l) Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency AD 2008-0097, dated May 20, 2008; Sicma Aero Seat Service Bulletin 94-25-011, Revision 3, dated June 30, 2008; Sicma Aero Seat Service Bulletin 94-25-012, Revision 1, dated June 26, 2008; and Sicma Aero Seat Service Bulletin 94-25-013, Issue 4, dated February 12, 2008; for related information.

(m) Contact Jeffrey Lee, Aerospace Engineer, Boston Aircraft Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7161; fax (781) 238-7170; email; jeffrey.lee@faa.gov, for more information about this AD.

## Material Incorporated by Reference

(n) You must use Sicma Aero Seat Service Bulletin 94-25-011, Revision 3, dated June 30, 2008; Sicma Aero Seat Service Bulletin 94-25-012, Revision 1, dated June 26, 2008; and Sicma Aero Seat Service Bulletin 94-25-013, Issue 4, dated February 12, 2008; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) For service information identified in this AD, contact Sicma Aero Seat, 7 Rue Lucien Coupet, 36100 ISSOUDUN, France, telephone: +33 (0) 2 54 03 39 39; fax: +33 (0) 2 54 03 39 00; email Customerservices.sas@zodiacaerospace.com; Internet <http://www.sicma.zodiacaerospace.com>.

(3) You may review copies of the 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.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 20, 2011.

Kalene C. Yanamura,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2011-23-09 Bombardier, Inc.:** Amendment 39-16860. Docket No. FAA-2011-0031; Directorate Identifier 2010-NM-135-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective December 9, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all Bombardier, Inc. Model CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900) airplanes; certificated in any category.

Note 1: This AD is not applicable to piston axles having part number (P/N) 49203-7 or P/N 49203-9, which were installed in production on Bombardier, Inc. Model CL-600-2C10 airplanes having serial numbers (S/Ns) 10266 and subsequent; and Models CL-600-2D15 and CL-600-2D24 airplanes having S/Ns 15155 and subsequent.

**Subject**

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

**Reason**

(e) The mandatory continuing airworthiness information (MCAI) states:

There have been two reported cases of failure of the MLG [main landing gear] piston axle, P/N 49203-3 or 49203-5, resulting from fretting between the inboard axle sleeve and axle thrust face, damage to the protective coating and consequent stress corrosion. In both cases, the MLG did not collapse.

\* \* \* \* \*

The unsafe condition is failure of the MLG, which could adversely affect the airplane's safe landing.

**Compliance**

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

## Inspection and Repair

(g) At the applicable time in paragraph (h)(1), (h)(2), (h)(3) or (i) of this AD, inspect to determine whether the airplane has a main landing gear piston axle having P/N 49203-3 or 49203-5. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number of the main landing gear piston axle can be conclusively determined from that review.

Note 2: Operators should be aware that the Goodrich authorized release certificate (Form One) provided for MLG piston axles following overhaul, refers to only the higher assembly P/N 49263-1 or 49263-3; therefore, it is possible that MLG piston axles having P/N 49203-3 or 49203-5 that are installed on the airplane could be identified as having P/N 49263-1 or 49263-3.

(h) Except as required by paragraph (i) of this AD, if, during the inspection required by paragraph (g) of this AD, the landing gear piston axle is determined to have P/N 49203-3 or 49203-5: At the applicable time specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, do a detailed inspection for corrosion and damage of the inboard and outboard piston axles, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009. Before further flight, repair any corrosion or damage found, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009. Within 30 months after the initial inspection, or within 12 months after the effective date of this AD, whichever occurs later, do the inspection specified in this paragraph; and repeat the inspection thereafter at intervals not to exceed 30 months.

(1) For any piston axle that has been in service for 48 months or more as of the effective date of this AD: Inspect within 12 months after the effective date of this AD.

(2) For any piston axle that has been in service for 24 months or more, but less than 48 months, as of the effective date of this AD: Inspect within 24 months after the effective date of this AD.

(3) For any piston axle that has been in service for less than 24 months as of the effective date of this AD: Inspect within 36 months after the effective date of this AD.

(i) For airplanes that have mark "32-45" in the MOD STATUS field of the piston axle nameplate or that have incorporated one of the Bombardier repair engineering orders listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009: At the latest of the applicable times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, do the inspection specified in paragraph (h) of this AD and repeat the inspection thereafter at the time specified in paragraph (h) of this AD:

(1) Within 30 months after marking "32-45" in the MOD STATUS field of the piston axle nameplate.

(2) Within 30 months after incorporating one of the Bombardier repair engineering orders listed in paragraph 1.D. of Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009.

(3) Within 12 months after the effective date of this AD.

## Terminating Action

(j) Installing a piston axle having P/N 49203-7 or P/N 49203-9 on any airplane constitutes a terminating action for the requirements of paragraphs (h), (h)(1), (h)(2), and (h)(3) of this AD, for that airplane.

## Credit for Actions Accomplished in Accordance With Previous Service Information

(k) Inspections and repairs accomplished before the effective date of this AD according to any service bulletin specified in table 1 of this AD, are considered acceptable for compliance with the corresponding inspections and repairs specified in paragraph (h) of this AD.

**Table 1–Credit for Accomplishment of Previous Service Information**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Bombardier Service Bulletin 670BA-32-023	Original	October 24, 2007
Bombardier Service Bulletin 670BA-32-023	A	January 7, 2008
Bombardier Service Bulletin 670BA-32-023	B	March 5, 2008

**FAA AD Differences**

Note 3: This AD differs from the MCAI and/or service information as follows: The MCAI specifies to inspect only airplanes having certain serial numbers that are part of the MCAI applicability. Because the affected part could be rotated onto any of the airplanes listed in the applicability, this AD requires the inspection be done on all airplanes.

**Other FAA AD Provisions**

(l) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, 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 ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York, 11590; telephone (516) 228-7300; fax (516) 794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. 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.

**Related Information**

(m) Refer to MCAI Canadian Airworthiness Directive CF-2010-15, dated May 13, 2010; and Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009; for related information.

**Material Incorporated by Reference**

(n) You must use Bombardier Service Bulletin 670BA-32-023, Revision C, dated January 29, 2009, including Appendix A, Revision B, dated March 5, 2008, to do the actions required by this AD, unless the AD specifies otherwise.

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

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone (514) 855-5000; fax (514) 855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(3) You may review copies of the 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.

(4) You may also review copies of the 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on October 21, 2011.

Kalene C. Yanamura,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.