



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
LARGE AIRCRAFT**

**BIWEEKLY 2011-17**

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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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<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		Sigma Aero Seat Bombardier, Inc Fokker Services B.V. Airbus	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
2011-07-10 2011-07-11 2011-08-51	S 2010-10-18 E	Bombardier, Inc. Dassault Aviation Boeing	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	S 98-19-12	Rolls-Royce plc	Engine: RB211-Trent 768-60 and RB211-Trent 772-60 turbofan
2011-08-11 2011-08-12	S 2005-13-19	BAE Systems (Operations) Limited Airbus	BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A 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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AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<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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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2011-15</b>			
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
<b>Biweekly 2011-16</b>			
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
<b>Biweekly 2011-17</b>			
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



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**CORRECTION:** [*Federal Register Volume 76, Number 149 (Wednesday, August 3, 2011)*]; Pages 46597-46598; [www.access.gpo.gov/su\\_docs/aces/aces140.html](http://www.access.gpo.gov/su_docs/aces/aces140.html)]

**2011-09-09 Bombardier, Inc.:** Amendment 39-16671. Docket No. FAA-2010-1307; Directorate Identifier 2010-NM-049-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective August 19, 2011.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to the airplanes identified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD; certificated in any category.

(1) Bombardier, Inc. Model CL-600-2A12 (CL-601) airplanes, serial numbers 3001 through 3066 inclusive on which Bombardier Service Bulletin 601-0590 has been accomplished.

(2) Bombardier, Inc. CL-600-2B16 (CL-601-3A and CL-601-3R Variants) airplanes, serial numbers 5001 through 5194 inclusive on which Bombardier Service Bulletin 601-0590 has been accomplished.

(3) Bombardier, Inc. CL-600-2B16 (CL-604 Variants) airplanes, serial numbers 5301 through 5665 inclusive.

(4) Bombardier, Inc. CL-600-2B16 (CL-604 Variants) airplanes, serial numbers 5701 and subsequent.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (j) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Subject**

(d) Air Transport Association (ATA) of America Codes 30 and 36: Ice and Rain Protection and Pneumatic, respectively.

**Reason**

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

During flight-testing of a wing anti-ice piccolo tube containing a deliberate small breach, it was determined that the wing leading edge thermal switches were not detecting the consequent bleed leak at the design threshold. As a result, new Airworthiness Limitation tasks, consisting of a functional test of the wing leading edge thermal switches and an inspection of the wing anti-ice duct piccolo tubes, have been introduced in order to limit exposure to dormant failure of the switches in the event of piccolo tube failure, which could potentially compromise the structural integrity of the wing leading edge and the effectiveness of the wing anti-ice system.

## 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 days after the effective date of this AD: Revise the Airworthiness Limitations Section of the Instructions for Continued Airworthiness by incorporating the applicable tasks identified in table 1 of this AD.

**Table 1–Airworthiness Limitations Tasks**

<b>For Bombardier, Inc. Model –</b>	<b>Incorporate Task(s) –</b>	<b>Identified in –</b>
CL-600-2A12 (CL-601) airplanes, serial numbers 3001 through 3066 inclusive on which Bombardier Service Bulletin 601-0590 has been accomplished	30-11-00-101, Wing Anti-icing, and 30-11-00-102, Wing Anti-icing.	Bombardier Challenger 601 Time Limits/Maintenance Checks, PSP 601-5, Revision 38, dated June 19, 2009.
CL-600-2B16 (CL-601-3A and CL-601-3R Variants) airplanes, serial numbers 5001 through 5194 inclusive on which Bombardier Service Bulletin 601-0590 has been accomplished	30-11-00-101, Wing Anti-icing, and 30-11-00-102, Wing Anti-icing.	Bombardier Challenger 601 Time Limits/Maintenance Checks, PSP 601A-5, Revision 34, dated June 19, 2009.
CL-600-2B16 (CL-604 Variants) airplanes, serial numbers 5301 through 5665 inclusive	30-11-00-101, Detailed Inspection of the Wing Anti-Ice Duct Piccolo-Tube, and 36-21-00-101, Functional Test of the Leading Edge Thermal Switches.	Bombardier Challenger 604 Time Limits/Maintenance Checks, CH 604 TLMC, Revision 13, dated August 12, 2009.
CL-600-2B16 (CL-604 Variants) airplanes, serial numbers 5701 and subsequent	30-11-00-101, Detailed Inspection of the Wing Anti-Ice Duct Piccolo-Tube, and 36-21-00-101, Functional Test of the Leading Edge Thermal Switches.	Bombardier Challenger 605 Time Limits/Maintenance Checks, CH 605 TLMC, Revision 1, dated August 12, 2009.

(h) For all tasks identified in paragraph (g) of this AD, the initial compliance times for those tasks are within the applicable times specified in table 2 of this AD.

**Table 2—Initial Compliance Times for Airworthiness Limitations Tasks**

<b>Bombardier, Inc. Model –</b>	<b>Task(s) –</b>	<b>Initial Compliance Time (whichever occurs later) –</b>	
CL-600-2A12 (CL-601) airplanes, serial numbers 3001 through 3066 inclusive; and CL-600-2B16 (CL-601-3A and CL-601-3R Variants) airplanes, serial numbers 5001 through 5194 inclusive; on which Bombardier Service Bulletin 601–0590 has been accomplished.	30–11–00–101, Wing Anti-icing	Prior to the accumulation of 4,800 total flight hours; or within 4,800 flight hours after accomplishing Task 30-11-06-204 in Section 5-20–15 of the applicable Time Limits/Maintenance Checks manual specified in table 1 of this AD; whichever occurs later.	Within 240 flight hours after the effective date of this AD
CL-600-2A12 (CL-601) airplanes, serial numbers 3001 through 3066 inclusive; and CL-600-2B16 (CL-601-3A and CL-601-3R Variants) airplanes, serial numbers 5001 through 5194 inclusive; on which Bombardier Service Bulletin 601–0590 has been accomplished.	30–11–00–102, Wing Anti-icing	Prior to the accumulation of 4,800 total flight hours; or within 4,800 flight hours after accomplishing Task 30-13-00-205 in Section 5-20–15 of the applicable Time Limits/Maintenance Checks manual specified in table 1 of this AD; whichever occurs later.	Within 240 flight hours after the effective date of this AD
CL–600–2B16 (CL–604 Variants) airplanes, serial numbers 5301 through 5665 inclusive.	30–11–00–101, Detailed Inspection of the Wing Anti-Ice Duct Piccolo-Tube, and 36-21-00-101, Functional Test of the Leading Edge Thermal Switches.	Prior to the accumulation of 6,400 total flight hours; except for airplanes having 6,400 total flight hours or more as of the effective date of this AD on which the task has not been accomplished: prior to the next scheduled 6,400 flight hour task inspection or prior to the next scheduled accomplishment of Task 57-10-00–208 in the applicable Time Limits/Maintenance Checks manual specified in table 1 of this AD, whichever occurs first.	Within 320 flight hours after the effective date of this AD

CL-600-2B16 (CL-604 Variants) airplanes, serial numbers 5701 and subsequent.	30-11-00-101, Detailed Inspection of the Wing Anti-Ice Duct Piccolo-Tube, and 36-21-00-101, Functional Test of the Leading Edge Thermal Switches.	Prior to the accumulation of 6,400 total flight hours.	Within 320 flight hours after the effective date of this AD
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(i) After accomplishing the actions required by paragraph (g) of this AD, no alternative tasks or task intervals may be used unless the tasks or task intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j)(1) of this AD.

### FAA AD Differences

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

### Other FAA AD Provisions

(j) 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

(k) Refer to MCAI Canadian Airworthiness Directive CF-2009-49R1, dated January 21, 2010, and the service information specified in Table 1 of this AD, for related information.

### Material Incorporated by Reference

(l) You must use the applicable service information contained in table 3 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

**Table 3—Material Incorporated by Reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Tasks 30-11-00-101 and 30-11-00-102 of the Bombardier Challenger 601 Time Limits/ Maintenance Checks, PSP 601-5	38	June 19, 2009
Tasks 30-11-00-101 and 30-11-00-102 of the Bombardier Challenger 601 Time Limits/ Maintenance Checks, PSP 601A-5	34	June 19, 2009
Tasks 30-11-00-101 and 36-21-00-101 of the Bombardier Challenger 604 Time Limits/ Maintenance Checks, CH 604 TLMC	13	August 12, 2009
Tasks 30-11-00-101 and 36-21-00-101 of the Bombardier Challenger 605 Time Limits/ Maintenance Checks, CH 605 TLMC	1	August 12, 2009

The title pages of these documents do not indicate the revision level or issue date of the documents. Only the Record of Revisions of these documents contains the revision level of these documents.

(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 April 13, 2011.

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



**2011-14-07 Pratt & Whitney:** Amendment 39-16742; Docket No. FAA-2010-1095; Directorate Identifier 2009-NE-40-AD.

### **Effective Date**

- (a) This AD is effective September 8, 2011.

### **Affected ADs**

- (b) None.

### **Applicability**

(c) This AD applies to Pratt & Whitney (PW) PW4074 and PW4077 turbofan engines with 15th stage high-pressure compressor (HPC) disks, part number (P/N) 55H615, installed.

### **Unsafe Condition**

(d) This AD results from multiple shop findings of cracked 15th stage HPC disks. We are issuing this AD to prevent cracks from propagating into the bolt holes of the 15th stage HPC disk, which could result in a failure of the 15th stage HPC disk, uncontained engine failure, and damage to the airplane.

### **Compliance**

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

(f) For 15th stage HPC disks that have 9,865 or fewer cycles since new (CSN) on the effective date of this AD, remove the disk from service before accumulating 12,000 CSN.

(g) For 15th stage HPC disks that have accumulated more than 9,865 CSN on the effective date of this AD, do the following:

(1) Remove the disk from service at the next piece-part exposure above 12,000 CSN, not to exceed 2,135 cycles-in-service (CIS) after the effective date of this AD.

(2) For 15th stage HPC disks that are installed in the engine and exceed 12,000 CSN on the effective date of this AD, perform a borescope inspection (BSI) or eddy current inspection (ECI) of the disk rim according to the following schedule:

(i) Within 2,400 cycles-since-last fluorescent penetrant inspection or ECI, or

(ii) Within 1,200 cycles-since-last BSI, or

(iii) Within 55 CIS after the effective date of this AD, whichever occurs later.

(3) If the BSI from paragraph (g)(2) of this AD indicates the presence of a crack in the disk rim, but you can't visually confirm a crack, perform an ECI within 5 CIS after the BSI.

(4) If you confirm a crack in the disk rim using any inspection method, remove the disk from service before further flight.

(h) Use paragraph 1.A. or 1.B. of the Accomplishment Instructions "For Engines Installed on the Aircraft" or 1.A. or 1.B. of the Accomplishment Instructions "For Engines Removed from the

Aircraft," of PW Service Bulletin PW4G-112-72-309, Revision 1, dated July 1, 2010 to perform the inspections.

### **Alternative Methods of Compliance**

(i) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

### **Related Information**

(j) For more information about this AD, contact Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7178; fax: (781) 238-7199; e-mail: [ian.dargin@faa.gov](mailto:ian.dargin@faa.gov).

### **Material Incorporated by Reference**

(k) You must use Pratt & Whitney Service Bulletin PW4G-112-72-309, Revision 1, dated July 1, 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 the service information contained in this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-7700; fax (860) 565-1605.

(3) 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.

(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 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 June 24, 2011.

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



**2011-16-01 Dassault Aviation:** Amendment 39-16759. Docket No. FAA-2011-0631; Directorate Identifier 2011-NM-134-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective August 22, 2011.

**Affected ADs**

(b) This AD supersedes AD 2011-12-51, Amendment 39-16735.

**Applicability**

(c) This AD applies to all Dassault Aviation Model FALCON 7X airplanes, certificated in any category, all serial numbers.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (n)(1) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Subject**

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

**Reason**

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

Recently, a Dassault Aviation Falcon 7X aeroplane experienced an uncontrolled pitch trim runaway during descent. The crew succeeded in recovering a stable situation and performed an uneventful landing.

This condition, if occurring again, could lead to a loss of control of the aeroplane.

\* \* \* \* \*

**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.

## **Modification**

(g) Before further flight, do the applicable actions specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD.

(1) For airplanes on which Dassault Mandatory Service Bulletin 7X-211, Revision 1, dated June 14, 2011, has not been done as of the effective date of this AD: Modify the airplane by adding an automatic reversion logic and a means for the pilot to override pitch trim control normal modes, and install placards in the cockpit in full view of the pilots, in accordance with paragraph 2., "Accomplishment Instructions for Aircraft which have not Already Implemented the Revision 1 of the Service Bulletin," of Dassault Mandatory Service Bulletin 7X-211, Revision 2, including New Standard Installation Checklist and Appendix A, dated June 22, 2011, including FCS Data Loading Procedure, Issue D, dated May 28, 2010.

(2) For airplanes on which Dassault Mandatory Service Bulletin 7X-211, Revision 1, dated June 14, 2011, has been done as of the effective date of this AD:

Replace the frame of the emergency switch box, in accordance with paragraph 3., "Accomplishment Instructions for Aircraft which have Already Implemented Revision 1 of this Service Bulletin," of Dassault Mandatory Service Bulletin 7X-211, Revision 2, including New Standard Installation Checklist and Appendix A, dated June 22, 2011, including FCS Data Loading Procedure, Issue D, dated May 28, 2010.

(3) For airplanes equipped with any horizontal stabilizer electronic control unit (HSECU) P/N 051244-04, replace the HSECU with any HSECU identified in paragraph (g)(3)(i), (g)(3)(ii), or (g)(3)(iii) of this AD, in accordance with the Accomplishment Instructions of Dassault Mandatory Service Bulletin 7X-212, Revision 2, dated July 7, 2011.

(i) HSECU P/N 051244-02

(ii) Verified HSECU P/N 051244-04 having a stamped "V"

(iii) HSECU P/N 051244-05

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

(h) An HSECU replacement done before the effective date of this AD in accordance with Dassault Mandatory Service Bulletin 7X-212, Revision 1, dated June 23, 2011, is acceptable for compliance with the requirements of either paragraph (g)(3)(i) or (g)(3)(ii) of this AD.

## **Revision of Airplane Flight Manual (AFM)**

(i) As of the effective date of this AD, operate the airplane according to the limitations and procedures in the Dassault Falcon 7X AFM, Revision 12, dated June 16, 2011. Revision 12 introduces revised operational speed limitations and revised procedures accounting for the new TRIM EMERG button.

## **Electronic Checklist Database Installation**

(j) Before further flight, install the electronic checklist V0007 database, in accordance with the Accomplishment Instructions of Dassault Service Bulletin 7X-213, dated June 22, 2011.

## **Operating Restrictions**

(k) Before further flight, revise the Limitations section of the Dassault Falcon 7X AFM to include the following information. This may be accomplished by inserting a copy of this AD into the AFM.

"Dispatch with any inoperative equipment identified below is prohibited. This prohibition takes precedence over the FAA master minimum equipment list (MMEL) or any operator's MEL.

Air data systems (identified as MEL item 34-9)

Multi functional probe (MFP) heating system (identified as MMEL item 30-1)

ACMU3 and ACMU4 (identified as MMEL item 27-3)

LH REAR POWER 3 (identified as MMEL item 27-5-(-6))

Back-up mode (identified as MMEL item 27-8)"

### **Maintenance Program Revision**

(l) Within 30 days after the effective date of this AD, revise the maintenance program to incorporate MPD task 27-40-00-710-801, as specified in Dassault Aviation, Falcon 7X Maintenance Manual, Falcon 7X–Chapter 5-40-00 after Rev 01, dated June 10, 2011 (Commonly referred to as Dassault Change Proposal (CP) CP009 to Chapter 5-40-00 of Dassault Falcon 7X Maintenance Manual). The initial compliance time for doing the operational test of the HSTA electric motors reversion relays is 1,850 flight hours after accomplishment of the applicable actions required by paragraph (g) of this AD.

Note 2: The MM revision required by paragraph (l) of this AD may be done by inserting a copy of Dassault CP CP009, dated June 10, 2011, to Chapter 5-40-00 of Dassault Falcon 7X MM into the MM. When Dassault CP CP009 has been included in general revisions of the MM, the general revisions may be inserted into the MM, provided the relevant information in the general revision is identical to that in Dassault CP CP009, and Dassault CP CP009 may be removed.

### **No Alternative Procedures or Intervals**

(m) After the maintenance program has been revised as required by paragraph (l) of this AD, no alternative procedure or interval for the operational test may be used unless the procedure and/or interval is approved as an AMOC in accordance with the procedures specified in paragraph (n) of this AD.

### **FAA AD Differences**

Note 3: This AD differs from the MCAI and/or service information as follows:

(1) EASA AD 2011-0114R2 requires repetitive operational tests of the HSTA electric motors reversion relays, and specifies that the aircraft maintenance program may be revised in lieu of those repetitive tests. This FAA AD merely mandates revising the maintenance program.

(2) EASA AD 2011-0114R2 does not include any requirement to revise the electronic checklist. Paragraph (j) of this FAA AD requires this action.

(3) EASA AD 2011-0114R2 mandates amending the minimum equipment list (MEL) by removing certain items. This FAA AD instead requires revising the AFM to prohibit dispatch with those items inoperative. The operational effect, however, is the same.

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, Transport Airplane Directorate, ANM-116, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; phone: 425-227-1137; fax: 425-227-1149. 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 refer to 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 ensure the product is airworthy before it is returned to service.

(3) 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 allowed, if conducted in accordance with a method approved by the Manager, ANM-116, International Branch, Transport Airplane Directorate, FAA.

### Related Information

(o) For related information, refer to MCAI EASA Airworthiness Directive 2011-0114R2, dated July 7, 2011, and the service information identified in table 1 of this AD.

**Table 1—Related Information**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Dassault Mandatory Service Bulletin 7X-211, including FCS Data Loading Procedure, Issue D, dated May 28, 2010, New Standard Installation Checklist, and Appendix A	2	June 22, 2011
Dassault Mandatory Service Bulletin 7X-212	2	July 7, 2011
Dassault Falcon 7X Airplane Flight Manual	12	June 16, 2011
Dassault Service Bulletin 7X-213		June 22, 2011
Dassault Change Proposal CP009 to Chapter 5-40-00 of Dassault Falcon 7X Maintenance Manual		June 10, 2011

### Material Incorporated by Reference

(p) You must use the service information contained in table 2 of this AD to do the actions required by this AD, unless the AD specifies otherwise. Appendix A and New Standard Installation Checklist of the Dassault Mandatory Service Bulletin 7X-211 are not dated or identified with a document number. The document date can only be found in the List of Revisions section of the Dassault Falcon 7X Airplane Flight Manual.

(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 Dassault Falcon Jet, P.O. Box 2000, South Hackensack, New Jersey 07606; telephone 201-440-6700; Internet <http://www.dassaultfalcon.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).

**Table 2—Material Incorporated by Reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Dassault Mandatory Service Bulletin 7X-211, including FCS Data Loading Procedure, Issue D, dated May 28, 2010, New Standard Installation Checklist, and Appendix A	2	June 22, 2011
Dassault Mandatory Service Bulletin 7X-212	2	July 7, 2011
Dassault Falcon 7X Airplane Flight Manual	12	June 16, 2011
Dassault Service Bulletin 7X-213		June 22, 2011
Dassault Change Proposal CP009 to Chapter 5-40-00 of Dassault Falcon 7X Maintenance Manual		June 10, 2011

Issued in Renton, Washington, on July 15, 2011.

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



**2011-16-03 Airbus:** Amendment 39-16761. Docket No. FAA-2011-0388; Directorate Identifier 2010-NM-004-AD.

### **Effective Date**

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

### **Affected ADs**

- (b) None.

### **Applicability**

(c) This AD applies to the Airbus airplanes listed in paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD, certificated in any category.

(1) Airbus Model A300 B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, and C4-605R Variant F airplanes; and Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes; all certified models, all manufacturer serial numbers, if equipped with a Hamilton Sundstrand ram air turbine (RAT) turbine assembly, as identified by part number (P/N) in Hamilton Sundstrand Service Bulletin 730816-29-15, dated August 4, 2009 (for Model A310 airplanes), and Hamilton Sundstrand Service Bulletin 732365-29-7, dated August 4, 2009 (for Model A300-600 series airplanes); or equipped with a Hamilton Sundstrand RAT turbine lower gear box assembly on which the part number cannot be determined.

(2) Airbus Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes; all manufacturer serial numbers, if equipped with a Hamilton Sundstrand RAT turbine assembly Model ERPS08M, as identified by part number in Hamilton Sundstrand Service Bulletin ERPS08M-29-8, dated June 17, 2009; or equipped with a Hamilton Sundstrand RAT turbine lower gear box assembly on which the part number cannot be determined.

(3) Airbus Model A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; all manufacturer serial numbers, if equipped with a Hamilton Sundstrand RAT turbine lower gearbox assembly, as identified by part number in Hamilton Sundstrand Service Bulletin ERPS06G-29-6, dated July 20, 2009; or equipped with a Hamilton Sundstrand RAT turbine lower gear box assembly on which the part number cannot be determined.

(4) Model A340-211, -212, -213, -311, -312, and -313 airplanes; all manufacturer serial numbers, if equipped with a Hamilton Sundstrand RAT turbine lower gearbox assembly, as identified by part number in Hamilton Sundstrand Service Bulletin ERPS06G-29-6, dated July 20, 2009; or equipped with a Hamilton Sundstrand RAT turbine lower gear box assembly on which the part number cannot be determined.

(5) Model A340-541 and -642 airplanes, all manufacturer serial numbers, if equipped with a Hamilton Sundstrand RAT turbine lower gearbox assembly, as identified by part number in Hamilton Sundstrand Service Bulletin ERPS33G-29-1, dated July 20, 2009; or equipped with a Hamilton Sundstrand RAT turbine lower gear box assembly on which the part number cannot be determined.

**Subject**

(d) Air Transport Association (ATA) of America Code 29: Hydraulic power.

**Reason**

(e) For Model A310 and A300-600 series airplanes, the MCAI describes the unsafe condition as:

Hamilton Sundstrand (HS), the manufacturer of the RAT, reported the failure during a wind tunnel test of a balance weight fastening screw on the RAT turbine cover. After investigation, it has been discovered that a batch of screws, which are used to attach the balance washers of the HS RAT Turbine Assembly, has not been subject to the correct heat treatment and are consequently exposed to potential fracture.

This condition, if not corrected, might lead to the ejection of screw heads and consequently to the detachment of the associated balance washers. The loss of balance washers could increase RAT vibrations, which might lead to a possible detachment of RAT parts and consequent loss of RAT functionality. The loss of the RAT, in combination with a total engine flame out, could result in loss of control of the aeroplane.

\* \* \* \* \*

For Model A318, A319, A320, and A321 series airplanes, the MCAI describes the unsafe condition as:

Hamilton Sundstrand (HS) reported the failure of a balance weight fastening screw on the RAT turbine cover during a wind tunnel test. After investigation, it has been discovered that a batch of screws, used to attach the balance washers of the RAT Turbine assembly, has not received the correct heat treatment, making them more subject to a potential failure.

This condition, if left uncorrected, could lead to the ejection of screw heads and detachment of the associated balance washers. The loss of balance washers would increase RAT vibrations, which could lead to a possible detachment of RAT parts and loss of RAT functionality. The loss of the RAT, in combination with a double engine failure, or a total loss of normal electrical power generation, could result in loss of control of the aeroplane.

\* \* \* \* \*

For Model A330 and A340 series airplanes, the MCAI describes the unsafe condition as:

Hamilton Sundstrand (HS), the manufacturer of the RAT, reported the failure of a balance weight fastening screw on the RAT cover during a wind tunnel test. After investigation, it has been discovered that a batch of screws, which are used to attach the balance washers of the HS RAT turbine lower gear box assembly, has not been subject to the correct heat treatment and the screws are consequently exposed to potential fracture.

This condition, if not corrected, might lead to the ejection of screw heads and consequently to the detachment of the associated balance washers. The loss of balance washers could increase RAT vibrations, which might lead to a possible detachment of

RAT parts, and thus to damage to the aeroplane and risk of injury to persons on the ground.

\* \* \* \* \*

## 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) At the applicable time specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD: Inspect to determine the part number and serial number of the RAT turbine lower gear box assembly, in accordance with the applicable Airbus all operator telex (AOT) identified in table 1 of this AD. If the RAT turbine lower gear box assembly has a part number and a serial number that are not listed in the applicable Hamilton Sundstrand service bulletin identified in table 2 of this AD, no further action is required by this AD, except as required by paragraph (k) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part and serial numbers of the RAT turbine lower gear box assembly can be conclusively determined from that review.

**Table 1–Airbus AOTs**

<b>Model</b>	<b>Document</b>	<b>Date</b>
Model A300–600 series airplanes	Airbus AOT A300–29A6062	September 1, 2009.
Model A310 series airplanes	Airbus AOT A310–29A2098	September 1, 2009.
Model A318 series airplanes; Model A319 series airplanes; Model A320–211, –212, –214, –231, –232, and –233 airplanes; Model A321 series airplanes.	Airbus AOT A320–29A1150	June 24, 2009.
Model A330–200 and A330–300 series airplanes	Airbus AOT A330–29A3110	September 1, 2009.
Model A340–200 and A340n–300 series airplanes	Airbus AOT A340–29A4085	September 1, 2009.
Model A340–500 and A340–600 series airplanes	Airbus AOT A340–500/600–29A5015	September 1, 2009.

(1) For airplanes identified in paragraph (c)(1) of this AD: Before the next RAT spin test, or within 1,500 flight hours or 9 months after the effective date of this AD, whichever occurs first.

(2) For airplanes identified in paragraph (c)(2) of this AD: Before the next RAT spin test, or within 3,000 flight hours or 12 months after the effective date of this AD, whichever occurs first.

(3) For airplanes identified in paragraph (c)(3), (c)(4), and (c)(5) of this AD: Before the next RAT spin test, or within 3,000 flight hours or 8 months after the effective date of this AD, whichever occurs first.

(h) If, during the inspection required by paragraph (g) of this AD, the RAT turbine lower gear box assembly has a part number and a serial number identified in the applicable Hamilton Sundstrand service bulletin specified in table 2 of this AD; or if the part number or serial number of the RAT turbine lower gear box assembly cannot be determined: Before further flight, inspect the RAT turbine lower gear box assembly to determine if the nameplate is identified with the applicable symbol

specified in table 3 of this AD, in accordance with the applicable Airbus AOT specified in table 1 of this AD. If the RAT turbine lower gear box assembly nameplate has the applicable symbol that is identified in table 3 of this AD, no further action is required by this AD except as required by paragraph (k) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the symbol identified on the nameplate can be conclusively determined from that review.

**Table 2—Applicable Hamilton Sundstrand Service Bulletins**

<b>Model</b>	<b>Document</b>	<b>Date</b>
Model A300–600 series airplanes	Hamilton Sundstrand Service Bulletin 732365–29–7.	August 4, 2009.
Model A310 series airplanes	Hamilton Sundstrand Service Bulletin 730816–29–15.	August 4, 2009.
Model A318 series airplanes; Model A319 series airplanes; Model A320–211, –212, –214, –231, –232, and –233 airplanes; Model A321 series airplanes.	Hamilton Sundstrand Service Bulletin ERPS08M–29–8.	June 17, 2009.
Model A330–200 and A330–300 series airplanes and Model A340–200 and A340–300 series airplanes.	Hamilton Sundstrand Service Bulletin ERPS06G–29–6.	July 20, 2009.
Model A340–500 and A340–600 series airplanes	Hamilton Sundstrand Service Bulletin ERPS33G–29–1.	July 20, 2009.

**Table 3—Nameplate Identification**

<b>Model</b>	<b>Symbol</b>
Model A300–600 series airplanes	29–7
Model A310 series airplanes	29–15
Model A318 series airplanes; Model A319 series airplanes; Model A320–211, –212, –214, –231, –232, and –233 airplanes; Model A321 series airplanes	29–8
Model A330–200 and A330–300 series airplanes	29–6
Model A340–200 and A340–300 series airplanes	29–6
Model A340–500 and A340–600 series airplanes	29–1

(i) If, during the inspection required by paragraph (h) of this AD, the RAT turbine lower gear box assembly does not have the applicable symbol specified in table 3 of this AD: Before further flight, do a general visual inspection for the missing and fractured balance screws and for missing washers in accordance with the applicable Airbus AOT specified in table 1 of this AD.

(1) If all balance screws are fitted on the turbine and are not fractured or missing, at the applicable time specified in paragraph (i)(1)(i), (i)(1)(ii), or (i)(1)(iii) of this AD: Replace the RAT turbine lower gear box assembly with a new or serviceable RAT turbine lower gear box assembly, or replace all balance screws on the RAT turbine lower gear box assembly with new or serviceable balance screws, in accordance with the applicable Airbus AOT specified in table 1 of this AD.

(i) For airplanes identified in paragraph (c)(1) of this AD: Within 1,500 flight hours or 9 months after the effective date of this AD, whichever occurs first.

(ii) For airplanes identified in paragraph (c)(2) of this AD: Within 3,000 flight hours or 12 months after the effective date of this AD, whichever occurs first.

(iii) For airplanes identified in paragraphs (c)(3), (c)(4), and (c)(5) of this AD: Within 3,000 flight hours or 8 months after the effective date of this AD, whichever occurs first.

(2) If one or more screws are fractured but the associated balance washers are still fitted on the RAT turbine lower gear box assembly, before further flight, do the actions specified in paragraph (i)(2)(i) or (i)(2)(ii) of this AD, in accordance with the applicable Airbus AOT specified in table 1 of this AD.

(i) Replace the RAT turbine lower gear box assembly with a new or serviceable RAT turbine lower gear box assembly.

(ii) Replace all balance screws on the RAT turbine lower gear box assembly with new or serviceable balance screws, including replacing any missing washers.

(3) If one or more screws are fractured and any balance washer is missing, before further flight, replace the RAT turbine lower gear box assembly with new or serviceable RAT turbine lower gear box assembly, in accordance with the applicable Airbus AOT specified in table 1 of this AD.

### **Reporting Requirement**

(j) At the applicable time specified in paragraph (j)(1) or (j)(2) of this AD, submit a report of the findings (both positive and negative) of the inspection required by paragraph (i) of this AD to Airbus, as specified in Paragraph 7 of the applicable AOT specified in table 1 of this AD. The report must include the inspection results, a description of any discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane.

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

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

### **Parts Installation**

(k) As of the effective date of this AD, no person may install, on any airplane, a RAT turbine lower gear box assembly, as identified by part number in the applicable Hamilton Sundstrand service bulletin specified in table 2 of this AD, unless it has been inspected and all applicable corrective actions have been done, in accordance with the requirements of this AD.

### **FAA AD Differences**

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

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to Attn: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2125; fax (425) 227-1149. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

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

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

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

### Related Information

(m) Refer to the applicable MCAI European Aviation Safety Agency (EASA) AD specified in table 4 of this AD, the Airbus AOTs specified in table 1 of this AD, and the Hamilton Sundstrand service bulletins specified in table 2 of this AD, for related information.

**Table 4—EASA ADs**

<b>For model—</b>	<b>EASA AD—</b>	<b>Dated—</b>
A300–600 and A310 series airplanes	2009–0258	December 10, 2009.
A318, A319, A320, and A321 series airplanes	2010–0120	June 21, 2010.
A330 and A340 series airplanes	2009–0260	December 10, 2009 (corrected December 14, 2009).

### Material Incorporated by Reference

(n) You must use the service information contained in table 5 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

**Table 5—Material Incorporated by Reference**

<b>Document</b>	<b>Date</b>
Airbus All Operator Telex A300–29A6062	September 1, 2009.
Airbus All Operator Telex A310–29A2098	September 1, 2009.
Airbus All Operator Telex A320–29A1150	June 24, 2009.
Airbus All Operator Telex A330–29A3110	September 1, 2009.
Airbus All Operator Telex A340–29A4085	September 1, 2009.
Airbus All Operator Telex A340–500/600–29A5015	September 1, 2009.
Hamilton Sundstrand Service Bulletin 732365–29–7	August 4, 2009.
Hamilton Sundstrand Service Bulletin 730816–29–15	August 4, 2009.
Hamilton Sundstrand Service Bulletin ERPS08M–29–8	June 17, 2009.

Hamilton Sundstrand Service Bulletin ERPS06G-29-6	July 20, 2009.
Hamilton Sundstrand Service Bulletin ERPS33G-29-1	July 20, 2009.

(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 Airbus service information identified in this AD, contact the appropriate office listed below.

(i) For Model A300-600 and A310 series airplanes: 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>.

(ii) For Model A318, A319, A320, and A321 series airplanes: Airbus, Airworthiness Office-EAS, 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>.

(iii) For Model A330 and A340 series airplanes: Airbus SAS-Airworthiness Office-EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; e-mail [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

(3) For Hamilton Sundstrand service information identified in this AD, contact Hamilton Sundstrand, Technical Publications, Mail Stop 302-9, 4747 Harrison Avenue, P.O. Box 7002, Rockford, Illinois 61125-7002; telephone 860-654-3575; fax 860-998-4564; e-mail [tech.solutions@hs.utc.com](mailto:tech.solutions@hs.utc.com); Internet <http://www.hamiltonsundstrand.com>.

(4) 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.

(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 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 July 20, 2011.

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



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**2011-16-06 The Boeing Company:** Amendment 39-16764; Docket No. FAA-2011-0041; Directorate Identifier 2010-NM-227-AD.

**Effective Date**

(a) This AD is effective September 9, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to The Boeing Company Model 747-400 and -400F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011.

**Subject**

(d) Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 25: Equipment/Furnishings.

**Unsafe Condition**

(e) This AD was prompted by a report of a loss of bus control unit number 1 and generator control units numbers 1 and 2 while the airplane was on the ground, and multiple operator reports of cracked main equipment center (MEC) drip shields. We are issuing this AD to prevent water penetration into the MEC, which could result in the loss of flight critical systems.

**Compliance**

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

**Inspection**

(g) Within 24 months after the effective date of this AD, do the actions specified in paragraph (g)(1) or (g)(2) of this AD, as applicable, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011.

(1) For Group 1 and Group 3 airplanes, as identified in Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011: Do a general visual inspection of the MEC drip shield to detect cracking and holes, do all applicable repairs, and install the MEC drip shield panel stiffeners and the fiberglass reinforcing overcoat to the MEC drip shield, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011. Do all applicable repairs before further flight.

(2) For Group 2 airplanes, as identified in Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011: Do a general visual inspection of the MEC drip shield to detect cracking and holes, do all applicable repairs, and install the fiberglass reinforcing overcoat to the MEC drip shield, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011. Do all applicable repairs before further flight.

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

(h) Accomplishing the actions required in paragraph (g) of this AD before the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-25A3588, dated July 19, 2010, is considered acceptable for compliance with the corresponding actions specified in this AD.

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

(i)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed 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.

### **Related Information**

(j) For more information about this AD, contact Francis Smith, Aerospace Engineer, Cabin Safety & Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057-3356; phone: 425-917-6596 ; fax: 425-917-6590; e-mail: Francis.Smith@faa.gov.

### **Material Incorporated by Reference**

(k) You must use Boeing Alert Service Bulletin 747-25A3588, Revision 1, dated April 7, 2011, 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 Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: me.boecom@boeing.com; Internet: <https://www.myboeingfleet.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 July 26, 2011.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2011-17-02 Airbus:** Amendment 39-16766. Docket No. FAA-2011-0305; Directorate Identifier 2010-NM-186-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective September 16, 2011.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Airbus Model A320-214, -232, and -233 airplanes; all manufacturer serial numbers on which Airbus Modification 38310 has been accomplished in production; certificated in any category.

**Subject**

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

**Reason**

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

\* \* \* \* \*

Results from a design review done by AIRBUS for documentation update have revealed that, on post-mod 38310 A320 aeroplanes only, in case of emergency electrical configuration combined with a Green and Yellow hydraulic system loss, during landing phase (nose landing gear extended), the roll control would only be provided by the left aileron.

This condition, if not corrected, could lead to an asymmetrical landing configuration, resulting in reduced control of the aeroplane.

\* \* \* \* \*

**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 24 months after the effective date of this AD, modify the electrical installation of the elevator aileron computer and trimmable horizontal stabilizer motor 1 power supply, in accordance

with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-27-1199, Revision 02, dated September 20, 2010.

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

(h) Modifications done before the effective date of this AD in accordance with Airbus Service Bulletin A320-27-1199, Revision 01, dated March 4, 2010, are acceptable for compliance with the requirements of paragraph (g) of this AD.

### **FAA AD Differences**

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

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1405; fax (425) 227-1149. Information may be 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**

(j) Refer to MCAI European Aviation Safety Agency (EASA) Airworthiness Directive 2010-0149, dated July 21, 2010; and Airbus Mandatory Service Bulletin A320-27-1199, Revision 02, dated September 20, 2010; for related information.

### **Material Incorporated by Reference**

(k) You must use Airbus Mandatory Service Bulletin A320-27-1199, Revision 02, including Appendix 01, dated September 20, 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, Airworthiness Office–EAS, 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 July 29, 2011.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2011-17-03 Fokker Services B.V.:** Amendment 39-16767. Docket No. FAA-2011-0472; Directorate Identifier 2011-NM-005-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective September 16, 2011.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to Fokker Services B.V. Model F.28 Mark 1000, 2000, 3000, and 4000 airplanes, certificated in any category, all serial numbers.

Note 1: This AD requires revisions to certain operator maintenance documents to include new Critical Design Configuration Control Limitations (CDCCLs). Compliance with these CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (j) of this AD. The request should include a description of changes to the required actions that will ensure the continued operational safety of the airplane.

**Subject**

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

**Reason**

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

[T]he Federal Aviation Administration (FAA) has published Special Federal Aviation Regulation (SFAR) 88, and the Joint Aviation Authorities (JAA) has published Interim Policy INT/POL/25/12. The review conducted by Fokker Services on the Fokker F28 Type Design in response to these regulations revealed that, under certain failure conditions, a short circuit may develop in the collector tank level float switch wiring. Such a short circuit may result in an ignition source in the tank vapour space.

This condition, if not corrected, could result in a wing fuel tank explosion and consequent loss of the aeroplane.

\* \* \* \* \*

## 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 24 months after the effective date of this AD, install fuses packed in jiffy junctions [i.e., crimped wire in-line junction device], in accordance with the Accomplishment Instructions of Fokker Service Bulletin SBF28-28-049, dated June 23, 2010, including Fokker Drawing W57273, Sheet 002, Issue C, dated June 23, 2010, Fokker Drawing W58048, Sheet 1, dated April 29, 2010, and Fokker Manual Change Notification MCNM-F28-035, dated June 23, 2010.

## Maintenance Program Revision

(h) Before further flight after doing the modification required in paragraph (g) of this AD: Revise the maintenance program by incorporating the CDCCL specified in paragraph 1.L.(1)(c) of Fokker Service Bulletin SBF28-28-049, dated June 23, 2010, including Fokker Drawing W57273, Sheet 002, Issue C, dated June 23, 2010, Fokker Drawing W58048, Sheet 1, dated April 29, 2010, and Fokker Manual Change Notification MCNM-F28-035, dated June 23, 2010.

## No Alternative Critical Design Configuration Control Limitations (CDCCLs)

(i) After accomplishing the revision required by paragraph (h) of this AD, no alternative CDCCLs may be used unless the CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

## FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows: Although European Aviation Safety Agency (EASA) Airworthiness Directive 2010-0194, dated September 29, 2010, specifies both revising the maintenance program to include limitations, and maintaining CDCCLs, this AD only requires the revision. Requiring a revision of the maintenance program, rather than requiring maintaining CDCCLs, requires operators to record AD compliance only at the time the revision is made. Maintaining CDCCLs specified in the airworthiness limitations must be complied with in accordance with 14 CFR 91.403(c).

## 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. If sending information directly to the International Branch, send it to Attn: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; 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 2010-0194, dated September 29, 2010; and Fokker Service Bulletin SBF28-28-049, dated June 23, 2010, including Fokker Drawing W57273, Sheet 002, Issue C, dated June 23, 2010, Fokker Drawing W58048, Sheet 1, dated April 29, 2010, and Fokker Manual Change Notification MCNM-F28-035, dated June 23, 2010; for related information.

### **Material Incorporated by Reference**

(l) You must use Fokker Service Bulletin SBF28-28-049, dated June 23, 2010, including Fokker Drawing W57273, Sheet 002, Issue C, dated June 23, 2010, Fokker Drawing W58048, Sheet 1, dated April 29, 2010, and Fokker Manual Change Notification MCNM-F28-035, dated June 23, 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 Fokker Services B.V., Technical Services Dept., P.O. Box 231, 2150 AE Nieuw-Vennep, the Netherlands; telephone +31 (0)252-627-350; fax +31 (0)252-627-211; e-mail [technicalservices.fokkerservices@stork.com](mailto:technicalservices.fokkerservices@stork.com); Internet <http://www.myfokkerfleet.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 July 29, 2011.

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



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**2011-17-10 Fokker Services B.V.:** Amendment 39-16774. Docket No. FAA-2011-0473; Directorate Identifier 2011-NM-019-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective September 16, 2011.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to Fokker Services B.V. Model F.28 Mark 1000, 2000, 3000, and 4000 airplanes, certificated in any category, all serial numbers.

Note 1: This AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections) and/or Critical Design Configuration Control Limitations (CDCCLs). Compliance with these actions and/or CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance (AMOC) according to paragraph (l) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Subject**

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

**Reason**

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

\* \* \* [T]he Federal Aviation Administration (FAA) have published Special Federal Aviation Regulation (SFAR) 88, and the Joint Aviation Authorities (JAA) have published Interim Policy INT/POL/25/12. The review conducted by Fokker Services on the Fokker F28 type design in response to these regulations revealed that, on certain aeroplanes, an interrupted shield contact may exist or develop between the housing of an in-tank Fuel Quantity Indication (FQI) cable plug and the cable shield of the shielded FQI system cables in the main and collector fuel tanks which can, under certain conditions, form a spark gap.

This condition, if not detected and corrected, may create an ignition source in the tank vapour space, possibly resulting in a wing fuel tank explosion and consequent loss of the aeroplane.

\* \* \* \* \*

## 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 Installation for Model F.28 Airplanes Serial Numbers 11003 Through 11041 and 11991 Through 11994**

(g) For airplanes having serial numbers 11003 through 11041 inclusive and 11991 through 11994 inclusive: At a scheduled opening of the fuel tanks, but not later than 84 months after the effective date of this AD, do a general visual inspection for the presence of a by-pass wire between the housing of each in-tank FQI cable plug and the cable shield, in accordance with Part 1 of the Accomplishment Instructions of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010.

(h) If during the general visual inspection required by paragraph (g) of this AD, it is found that a by-pass wire is not installed: Before the next flight, install the by-pass wire between the housing of the in-tank FQI cable plug and the cable shield, in accordance with Part 2 of the Accomplishment Instructions of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010.

### **Maintenance Program Revision To Add Fuel Airworthiness Limitation for Model F.28 Airplanes Serial Numbers 11003 Through 11041 and 11991 Through 11994**

(i) For airplanes having serial numbers 11003 through 11041 inclusive and 11991 through 11994 inclusive: Concurrently with paragraph (g) of this AD, revise the airplane maintenance program by incorporating CDCCL-1 specified in paragraph 1.L.(1)(c) of Fokker Service Bulletin SBF28-28-053 Revision 1, dated September 20, 2010.

### **Maintenance Program Revision To Add Fuel Airworthiness Limitation for Model F.28 Airplanes Serial Numbers 11042 Through 11241**

(j) For airplanes having serial numbers 11042 through 11241 inclusive: Within 3 months after the effective date of this AD, revise the airplane maintenance program by incorporating CDCCL-2 specified in paragraph 1.L.(1)(c) of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010.

### **No Alternative Actions, Intervals, and/or CDCCLs**

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

### **FAA AD Differences**

Note 2: This AD differs from the MCAI and/or service information as follows:

Although European Aviation Safety Agency (EASA) Airworthiness Directive 2010-0217, dated October 21, 2010, specifies both revising the maintenance program to include airworthiness

limitations, and doing certain repetitive actions (e.g., inspections) and/or maintaining CDCCLs, this AD only requires the revision. Requiring a revision of the maintenance program, rather than requiring individual repetitive actions and/or maintaining CDCCLs, requires operators to record AD compliance only at the time the revision is made. Repetitive actions and/or maintaining CDCCLs specified in the airworthiness limitations must be complied with in accordance with 14 CFR 91.403(c).

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; 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.

(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 EASA Airworthiness Directive 2010-0217, dated October 21, 2010; and Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010; for related information.

### **Material Incorporated by Reference**

(n) You must use Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 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 Fokker Services B.V., Technical Services Dept., P.O. Box 231, 2150 AE Nieuw-Vennep, the Netherlands; telephone +31 (0)252-627-350; fax +31 (0)252-627-211; e-mail technicalservices.fokkerservices@stork.com; Internet <http://www.myfokkerfleet.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 August 3, 2011.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.