



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
LARGE AIRCRAFT**

**BIWEEKLY 2009-18**

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Federal Aviation Administration  
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Delegation and Airworthiness Programs Branch, AIR-140  
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## LARGE AIRCRAFT

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

### Biweekly 2009-01

2008-25-05	S 93-01-15	McDonnell Douglas	See AD
2008-26-04	S 2007-23-13	Cessna Aircraft Company	560
2008-26-06		Rolls-Royce Corporation	Engine: AE 3007A
2008-26-07		McDonnell Douglas	See AD
2008-26-08		Saab AB, Saab Aerosystems	340A (SAAB/SF340A) and SAAB 340B
2008-26-09		Bombardier, Inc	CL-600-2B19 (Regional Jet Series 100 & 440)
2009-01-01		CFM International, S. A	Engine: See AD

### Biweekly 2009-02

No Large Aircraft ADs were issued during Biweekly 2009-02.

### Biweekly 2009-03

2009-01-02		Boeing	737-600, -700, -700C, -800 and -900
2009-01-03		Bombardier, Inc.	DHC-8-400, DHC-8-401, and DHC-8-402
2009-01-04		Airbus	A318, A319, A320, and A321
2009-01-07		Bombardier, Inc	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D24 (Regional Jet Series 900)
2009-01-10		Bombardier, Inc	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900)
2009-02-03		Lycoming engines, See AD	See AD

### Biweekly 2009-04

No Large Aircraft ADs were issued during Biweekly 2009-04.

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### Biweekly 2009-05

2008-18-02	S 2004-14-07	BAE Systems	Jetstream 4101
2008-24-51		Boeing	737-600, -700, -700C, -800, and -900
2009-01-05		Embraer	EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP
2009-01-06	S 2005-15-16	328 Support Services GmbH	328-300
2009-01-08	S 98-16-11	Airbus	A300, A310, A300-600
2009-01-09	S 2000-26-14	Airbus	A310
2009-02-01		Construcciones Aeronauticas, S.A.	C-212-DF
2009-02-04		Airbus	A300-600
2009-02-05		Boeing	777-200, -200LR, -300, and -300E
2009-02-07	S 98-17-12	BAE Systems	Jetstream 4101
2009-02-09		BAE Systems	BAe 146-100A, -200A, and -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2009-02-10	S 2008-04-22	Fokker Services	F.28 Mark 0070 and 0100
2009-02-11		Bombardier Inc.	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D24 (Regional Jet Series 900)
2009-03-01		Learjet	55, 55B, and 55C
2009-03-02	S 2004-05-20	McDonnell Douglas	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
2009-03-03		McDonnell Douglas	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-9-33F, DC-9-34, DC-9-34F, DC-9-32F (C-9A, C-9B), DC-9-41, and DC-9-51
2009-04-02		Pratt & Whitney	Engine: PW4090 and PW4090-3
2009-04-03		Rolls-Royce Corporation	Engine: AE 3007A1E and AE 1107C
2009-04-06	S 2004-16-09	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
2009-04-07		Airbus	A330-200 and -300; and A340-200, -300, -500, and -600, A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343, A340-211, -212, -213, -311, -312, -313, -541, and -642
2009-04-10	S 2002-07-12	General Electric Company	CF6-80A, CF6-80C2, and CF6-80E1
2009-04-11		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2009-04-12	S 2001-26-19	Boeing	767-200, -300, and -400ER
2009-04-13		Rolls-Royce Deutschland Ltd & Co KG	Engine: BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30
2009-04-15	S 93-08-04	Boeing	737-100, -200, -200C, -300, -400, and -500
2009-04-16	S 2008-10-15	Boeing	747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP
2009-04-17		General Electric Company	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
2009-05-02		General Electric Company	Engine: See AD
2009-05-03		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F
2009-05-04		Bombardier Inc	CL-215-6B11 (CL-215T variant), CL-215-6B11 (CL-415 variant)

### Biweekly 2009-06

2009-02-06		Boeing	737-300, -400, and -500
2009-05-10		Airbus	A300, A340-200 and A340-300, A330
2009-05-11	S 2008-19-04	Boeing	777-200 and -300
2009-06-12	S 2008-01-04	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)

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### Biweekly 2009-07

2009-05-08		Trimble or Freeflight Systems	Appliance: Global positioning system
2009-06-02		Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747SR, and 747SP
2009-06-03		Viking Air Limited	DHC-7-1, DHC-7-100, DHC-7-101, DHC-7-102, and DHC-7-103
2009-06-04		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2009-06-05		Bombardier, Inc.	CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A & CL-601-3R), CL-600-2B16 (CL-604)
2009-06-06	S 2006-10-11 and 2005-15-10	Airbus	A310 and A300-600
2009-06-08		Boeing	767-200, -300, -300F, and -400ER
2009-06-09		328 Support Services GMBH	328-100
2009-06-10		Boeing	727-100 and 727-200
2009-06-11		Embraer	ERJ 190-100 STD, -100 LR, -100 IGW, -100ECJ, -200 STD, -200 LR, and -200 IGW
2009-06-13		Airbus	A321-131
2009-06-14		Fokker Services B.V	F.27 Mark 050
2009-06-15		Fokker Services B.V	F.27 Mark 050
2009-06-16		Embraer	ERJ 170-100 LR, -100 SE, -100 STD, -100 SU, -200 LR, -200 STD, and -200 SU airplanes; and Model ERJ 190-100 IGW, -100 LR, -100 STD, -100 ECJ, -200 IGW, -200 LR, and -200 STD
2009-06-17		Bombardier	CL-600-2B19 (Regional Jet Series 100 & 440)
2009-06-18		Bombardier, Inc	CL-600-2C10 (Regional Jet Series 700, 701, & 702)
2009-06-19		Boeing	767-200 and 767-300
2009-06-20		Boeing	757-200, 757-200PF, and 757-300
2009-06-21		Bombardier	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315, DHC-8-400, -401 and -402
2009-06-22		Airbus	A318-111, -112, -121, and -122; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232
2009-07-01		Rolls-Royce Deutschland Ltd & Co KG	Engine: BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30
2009-07-02	S 96-03-07	Hawker Beechcraft	400, 400A, MU-300-10, MU-300
2009-07-03		General Electric Company	Engine: <b>CF6-80C2 and CF6-80E1</b>

### Biweekly 2009-08

2009-04-18		Pratt & Whitney	Engine: JT9D-7, -7A, -7AH, -7H, -7F, and -7J
2009-07-04		McDonnell Douglas	Rotorcraft: MD-90-30
2009-07-05		ATR-GIE Avions de Transport Régional	ATR72-101, -102, -201, -202, -211, -212, and -212A
2009-07-06		McDonnell Douglas	717-200
2009-07-07		General Electric Company	Engine: CF6-80A, CF6-80A1, CF6-80A2, and CF6-80A3
2009-07-10	S 2004-22-05	Boeing	737-300, -400, -500
2009-07-11		General Electric Company	Engine: CF34-1A, -3A, -3A1, -3A2, -3B, and -3B1
2009-07-12	S 2007-07-12	Honeywell, Inc	Navigation computer
2009-08-01		McDonnell Douglas	See AD
2009-08-04		Hawker Beechcraft Corp.	BH.125 series 600A airplanes and Model HS.125 series 700A
2009-08-51	E		

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### Biweekly 2009-09

2009-08-06		General Electric Company	Engine: CF6-80A
2009-08-07		Honeywell International Inc	Engine: ALF502L-2 and ALF502L-2C
2009-09-01		Airbus	A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231, and A321-232
2009-09-02		Bombardier, Inc	DHC-8-400, DHC-8-401, and DHC-8-402

### Biweekly 2009-10

2009-06-22	C	Airbus	A318-111, -112, -121, and -122; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232
2009-09-05	S 2006-03-10	Airbus	A318-111 and 112; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, and -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232
2009-09-06		Boeing	737-100, -200, -200C, -300, -400, and -500
2009-09-07		Boeing	737-100, -200, -200C, -300, -400, and -500
2009-09-08		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
2009-10-01	S 2007-17-21	Pratt & Whitney	Engine: JT9D-7R4G2, -7R4E1, -7R4E4, and -7R4H1
2009-10-02	S 2005-19-15	BAE Systems	Jetstream 4101
2009-10-03		328 Support Services	328-100 and -300

### Biweekly 2009-11

2009-04-06	S 2004-16-09	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
2009-08-51		Rolls-Royce Corporation	Engine: RRC AE 3007A
2009-10-01	S 2007-17-21	Pratt & Whitney	Engine: JT9D-7R4G2, -7R4E1, -7R4E4, and -7R4H1
2009-10-05		Bombardier, Inc	CL-600-2B19 (Regional Jet series 100 and 440)
2009-10-06		Boeing	747-400 and 747-400D
2009-10-07		Airbus	380-841, -842 and 861
2009-10-08		Pratt & Whitney	Engine: PW2037, PW2037(M), and PW2040
2009-10-10		Bombardier Inc.	CL-600-2C10 (Regional Jet Series 700, 701, & 702), Model CL-600-2D15 (Regional Jet Series 705), Model CL-600-2D24 (Regional Jet Series 900)
2009-10-11		Airbus	A330-300, A340-200, and A340-300
2009-10-12	S 2005-16-06	Boeing	747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400F, -400, -400D, 747SP, and 747SR
2009-10-13		Saab AB, Saab Aerosystems	340A and 340B
2009-11-02		CFM International	Engine: CFM56-2, CFM56-3, CFM56-5A, CFM56-5B, CFM56-5C, and CFM56-7B
2009-11-03		Lockheed	382, 382B, 382E, 382F, and 382G

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### Biweekly 2009-12

2009-11-07		BAE Systems	HS 748 series 2A and series 2B
2009-11-08		Airbus	A330-202, -223, -243, -301, -322 and -342
2009-11-09		Airbus	A310-203, A310-204, A310-221, A310-222, A310-304, A310-322, A310-324, and A310-325 airplanes; and Airbus Model A300 B4-601, A300 B4-603, A300 B4-605R, A300 B4-620, A300 B4-622, A300 B4-622R, A300 C4-605R Variant F, A300 F4-605R and A300 F4-622R
2009-11-11		McDonnell Douglas	MD-90-30
2009-11-13		Learjet	45

### Biweekly 2009-13

2009-11-04		Rolls-Royce Corporation	Engine: AE 2100D2, AE 2100D2A, AE 2100D3, and AE 2100J
2009-12-02	S 2007-03-09	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
2009-12-03		Boeing	757-200, -200CB, and -300
2009-12-04		Construcciones Aeronauticas, S.A.	C-212-CB, C-212-CC, C-212-CD, C-212-CE, C-212-CF, and C-212-DE
2009-12-05		Boeing	737-300, -400, and -500
2009-12-06		Boeing	737-300, -400, and -500, 737-600, -700, -700C, -800, and -900
2009-12-08		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
2009-12-09		ATR-GIE Avions De Transport Régional	ATR42-200, ATR42-300, and ATR42-320, ATR42-500, ATR72-101, ATR72-201, ATR72-102, ATR72-202, ATR72-211, ATR72-212, and ATR72-212A
2009-12-10	S 2006-12-09	BAE Systems	BAe 146-100A, -200A, and -300A series airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2009-12-11		Airbus	A340-541 and -642
2009-12-12		ATR	ATR42-500 and ATR72-212A
2009-12-13		Bombardier, Inc	DHC-8-400, DHC-8-401, and DHC-8-402
2009-13-07		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343

### Biweekly 2009-14

2009-04-18	COR	Pratt & Whitney	Engine: JT9D-7, -7A, -7AH, -7H, -7F, and -7J
2009-13-02	S 98-06-07	Fokker Services B.V	F.28 Mark 0100
2009-13-03		Boeing	747-400 and -400F
2009-13-08		McDonnell Douglas	MD-90-30
2009-13-09		Microturbo SA	Appliance: Auxiliary power units (APU)
2009-13-10		British Aerospace Regional Aircraft	HP.137 Jetstream Mk.1, Jetstream Series 200 and 3101, and Jetstream Model 3201
2009-14-02	S 2002-26-15	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
2009-14-08		General Electric Company	Engine: CF6-80C2B5F

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### Biweekly 2009-15

2009-14-03		Bombardier, Inc.	CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A, CL-601-3R), CL-600-2B16 (CL-604)
2009-14-04		Boeing	737-100, -200, -200C, -300, -400, and -500
2009-14-05		Pratt & Whitney	Engine: PW2037, PW2037(M), and PW2040
2009-14-06	S 2007-17-12	Boeing	777
2009-14-07		Dassault Aviation	Mystere-Falcon 20-C5, 20-D5, 20-E5, and 20-F5
2009-14-09		Dassault Aviation	Falcon 2000EX
2009-14-12		Pratt & Whitney Canada Corp	Engine: PW305A and PW305B
2009-15-02		Airbus	A318, A319, A320, and A321
2009-15-03		Bombardier, Inc	BD-700-1A10 and BD-700-1A11
2009-15-04		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343

### Biweekly 2009-16

2008-26-03	COR	<b>Bombardier, Inc</b>	DHC-8-102, DHC-8-103, DHC-8-106, DHC-8-201, DHC-8-202, DHC-8-301, DHC-8-311, and DHC-8-315
2009-11-12	S 2004-14-06	Airbus	A310
2009-15-06		Boeing	707-100 long body, -200, -100B long body, and -100B short body series airplanes; Model 707-300, -300B, -300C, and -400 series airplanes; and Model 720 and 720B
2009-15-07		Airbus	A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, and -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232
2009-15-08		BAE Systems	BAe 146-100A, -200A, and -300A series airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2009-15-09		Airbus	A380-841, -842, and -861
2009-15-10		Airbus	A330-301, -321, -322, -341, and -342, A340-211, -212, -213, -311, -312, and -313
2009-15-11		Aerospatiale	SN-601 (Corvette)
2009-15-12		Boeing	747-400 and -400D
2009-15-17		Airbus	A330-200, A330-300, A340-200, and A340-300
2009-15-18		Embraer	EMB-120, -120ER, -120FC, -120QC, and -120RT
2009-15-19		BAE Systems	BAe 146-100A and 146-200A

### Biweekly 2009-17

2008-16-09 R1	R 2008-16-09	Short Brothers PLC	SD-3-60
2009-16-01		BAE Systems	Jetstream 4101
2009-16-05		Fokker Services B.V	F.27 Mark 050
2009-16-06		Boeing	767-200, -300, -300F, and -400ER
2009-16-14	S 2005-20-03	Boeing	737-100, -200, -200C, -300, -400, and -500
2009-17-01		Gulfstream Aerospace Corporation	G-IV, GIV-X, GV, GV-SP

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2009-16-07	S 2006-10-17	Boeing	737-600, -700, -700C, -800, and -900
2009-17-02		Saab AB, Saab Aerosystems	SAAB 340A (SAAB/SF340A) and SAAB 340B
2009-17-03		BAE Systems	BAe 146 and Avro 146-RJ
2009-17-04		Airbus	A318-111, -112, -121, and -122; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232
2009-17-05		Honeywell International Inc.	Engine: TPE331-10 and TPE331-11
2009-18-01		CFM International, S.A	Engine: CFM56-5B1/P; -5B2/P; -5B3/P; -5B3/P1; -5B4/P; -5B4/P1; -5B5/P; -5B6/P; -5B7/P; -5B8/P; -5B9/P
2009-18-02		Boeing	767-200, -300, -300F, and -400ER
2009-18-05		Fokker Services B.V	F.27 Mark 050 and F.28 Mark 0100
2009-18-06		Construcciones Aeronauticas, S.A.	CN-235, CN-235-100, CN-235-200, and CN-235-300
2009-18-07	S 2005-20-30	Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-300, 747SP, and 747SR



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**2009-16-07 Boeing:** Amendment 39-15990. Docket No. FAA-2008-1143; Directorate Identifier 2008-NM-136-AD.

**Effective Date**

- (a) This AD becomes effective September 22, 2009.

**Affected ADs**

- (b) This AD supersedes AD 2006-10-17.

**Applicability**

(c) This AD applies to Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes, certificated in any category; as identified in Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008.

**Unsafe Condition**

(d) This AD results from a report of an electrical burning smell in the flight compartment. We are issuing this AD to prevent wire bundles from contacting the overhead dripshield panel and modules in the P5 overhead panel, which could result in electrical arcing and shorting of the electrical connector and consequent loss of several critical systems essential for safe flight; and to ensure proper operation of the passenger oxygen system. If an improperly functioning passenger oxygen system goes undetected, the passenger oxygen mask could fail to deploy and result in possible incapacitation of passengers during a depressurization event.

**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.

**Requirements of AD 2006-10-17**

**Inspection/Replacements/Wiring Changes/Corrective Actions**

(f) Within 36 months after June 22, 2006 (the effective date of AD 2006-10-17), do the applicable actions in paragraphs (f)(1) through (f)(5) of this AD by accomplishing all the applicable actions specified in the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 2, dated December 1, 2005, except as provided by paragraph (i) of this AD. Any applicable corrective actions must be done before further flight.

- (1) Replace the five brackets that hold the P5 panel to the airplane structure with new brackets;
- (2) Do a general visual inspection for wire length and damage of the connectors and the wire bundles, and applicable corrective actions;
- (3) Make wiring changes;

- (4) Replace the standby compass bracket assembly with a new assembly; and
- (5) Replace the stud assemblies with new assemblies.

Note 1: For the purposes of this AD, a general visual inspection is: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(g) Actions done before June 22, 2006, in accordance with Boeing Alert Service Bulletin 737-24A1141, Revision 1, dated December 23, 2004, are acceptable for compliance with the requirements of paragraph (f) of this AD.

### Concurrent Requirements

(h) Before or concurrently with the requirements of paragraph (f) of this AD, do the applicable action specified in Table 1 of this AD.

**Table 1 – Concurrent requirements**

<b>For Airplanes Identified in Boeing Component Service Bulletin–</b>	<b>Action</b>
(1) 233A3205-24-01, dated July 26, 2001	Modify the generator drive and standby power module assembly in accordance with the Accomplishment Instructions of Boeing Component Service Bulletin 233A3205-24-01, dated July 26, 2001.
(2) 69-37319-21-02, Revision 1, dated August 30, 2001	Modify the air conditioning module assembly in accordance with the Accomplishment Instructions of Boeing Component Service Bulletin 69-37319-21-02, Revision 1, dated August 30, 2001.

### New Actions Required by This AD

#### New Service Bulletin Revision

(i) As of the effective date of this AD, use only the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, to do all the applicable actions required by paragraph (f) of this AD.

Note 2: Accomplishment of the steps specified in the tables of the figures of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, is required. Due to the variability of airplane configurations, the illustrations in the figures are provided as examples.

Note 3: Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008, refers to "unwanted" wire length. "Unwanted" wire length is any wire length that does not meet the wire length requirements specified in the Standard Wiring Practices Manual (SWPM).

## Additional Operational Test

(j) For airplanes on which the actions required by paragraph (f) of this AD have been done in accordance with Boeing Service Bulletin 737-24A1141, Revision 2, dated December 1, 2005, before the effective date of this AD: Within 12 months after the effective date of this AD, do an operational test of the P5-14 panel in accordance with paragraphs 3.B.92. and 3.B.93., as applicable, of the Accomplishment Instructions of Boeing Service Bulletin 737-24A1141, Revision 3, dated February 20, 2008.

## Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Binh Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6485; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(3) AMOCs approved previously in accordance with AD 2006-10-17 are approved as AMOCs for the corresponding provisions of this AD.

## Material Incorporated by Reference

(l) 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.

**Table 2 – All material incorporated by reference**

<b>Document</b>	<b>Revision Level</b>	<b>Date</b>
Boeing Component Service Bulletin 233A3205-24-01	Original	July 26, 2001
Boeing Component Service Bulletin 69-37319-21-02	1	August 30, 2001
Boeing Service Bulletin 737-24A1141	3	February 20, 2008

(1) The Director of the Federal Register approved the incorporation by reference of the service information contained in Table 3 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

**Table 3 – New material incorporated by reference**

<b>Document</b>	<b>Revision Level</b>	<b>Date</b>
Boeing Service Bulletin 737-24A1141	3	February 20, 2008

(2) The Director of the Federal Register previously approved the incorporation by reference of the service information contained in Table 4 of this AD on June 22, 2006 (71 FR 28766, May 18, 2006).

**Table 4 – Material previously incorporated by reference**

<b>Document</b>	<b>Revision Level</b>	<b>Date</b>
Boeing Component Service Bulletin 233A3205-24-01	Original	July 26, 2001
Boeing Component Service Bulletin 69-37319-21-02	1	August 30, 2001

(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, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(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 August 7, 2009.

Stephen P. Boyd,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2009-17-02 Saab AB, Saab Aerosystems:** Amendment 39-15993. Docket No. FAA-2009-0447; Directorate Identifier 2008-NM-172-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective September 22, 2009.

**Affected ADs**

- (b) None.

**Applicability**

- (c) Saab AB, Saab Aerosystems Model SAAB 340A (SAAB/SF340A) and SAAB 340B airplanes; certificated in any category; all serial numbers.

**Subject**

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

**Reason**

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

During refueling, the ground crew detected smoke from the refuel/defuel panel illuminated placard 160VU. The design of the refuel/defuel panel illuminated placard was changed during 1997 from its original specification, to fill the cavity inside the placard with silicone to avoid moisture/fluid ingress. SAAB has reviewed the working procedure and has developed a placard filled with a bi-component silicone-based material to minimize the cavity inside the panels.

For the reasons described above, this EASA AD requires the identification of the manufacturing date of the affected placard, a visual inspection of the placard for heat and/or burn marks and the installation of a new placard in accordance with the instructions of SAAB Service Bulletin (SB) 340-28-027.

This AD has been revised to identify the affected VIBRACHOC (the part manufacturer) placard with Part Number (P/N) C4FL5031C001, instead of the corresponding SAAB P/N 9303719-001, which was (also) quoted inaccurately. In addition, it has been recognized that the original AD did not allow installation of the placards with a manufacturing date before 31/97; that has now been corrected.

The unsafe condition is an electrical malfunction in the illuminated placard of the refuel and defuel panel, which could result in fire.

## **Actions and Compliance**

(f) Unless already done, do the following actions:

(1) Within 3 months after the effective date of this AD, inspect the illuminated placard of the refuel and defuel panel, part number (P/N) C4FL5031C001, for signs of heat and burn marks, in accordance with Saab Service Bulletin 340-28-027, Revision 01, dated July 7, 2008.

(2) If any sign of heat or burn marks are found, before further flight, replace the illuminated placard of the refuel and defuel panel with a new illuminated placard of the refuel and defuel panel, having part number C4FL5031C001, and marked with a manufacturer date before 31/97 (i.e., week 31 of 1997), or a manufacturing date of 37/07 (i.e., week 37 of 2007) or higher and marked 'Amdt:A.', in accordance with Saab Service Bulletin 340-28-027, Revision 01, dated July 7, 2008.

(3) If no signs of heat and burn marks are found, within 12 months after accomplishing the inspection required by (f)(1) of this AD is done, replace the illuminated placard of the fuel and defuel panel with a new illuminated placard of the refuel and defuel panel, having part number C4FL5031C001, and marked with a manufacturer date before 31/97 (i.e., week 31 of 1997) or a manufacturing date of 37/07 (i.e., week 37 of 2007) or higher and marked 'Amdt:A.', in accordance with Saab Service Bulletin 340-28-027, Revision 01, dated July 7, 2008.

(4) As of 15 months after the effective date of this AD, installing an illuminated placard of the refuel and defuel panel is prohibited on any airplane, unless it has a manufacturing date before 31/97, or unless it has a manufacturing date of 37/07 or higher and is marked 'Amdt:A'.

(5) Actions accomplished before the effective date of this AD in accordance with Saab Service Bulletin 340-28-027, dated April 30, 2008, are considered acceptable for compliance with the corresponding actions specified in paragraphs (f)(1), (f)(2), and (f)(3) 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**

(g) 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. Send information to Attn: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards 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: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

**Related Information**

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2008-0127R1, dated August 7, 2008; and Saab Service Bulletin 340-28-027, Revision 01, dated July 7, 2008, for related information.

**Material Incorporated by Reference**

(i) You must use Saab Service Bulletin 340-28-027, Revision 01, dated July 7, 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 Saab Aircraft AB, SAAB Aerosystems, SE-581 88, Linköping, Sweden; telephone +46 13 18 5591; fax +46 13 18 4874; e-mail [saab2000.techsupport@saabgroup.com](mailto:saab2000.techsupport@saabgroup.com); Internet <http://www.saabgroup.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 or 425-227-1152.

(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, 2009.

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



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**2009-17-03 BAE Systems (Operations) Limited (Formerly British Aerospace Regional Aircraft):** Amendment 39-15994. Docket No. FAA-2009-0532; Directorate Identifier 2008-NM-024-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective September 22, 2009.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to all BAE Systems (Operations) Limited Model BAe 146 and Avro 146-RJ airplanes, certificated in any category.

**Subject**

- (d) Air Transport Association (ATA) of America Code 53: Fuselage.

**Reason**

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

The airbrake upper crossbeam on an airplane failed in-flight. The crossbeam failure caused damage to the rudder control system, resulting in loss of rudder control. Loss of rudder control will cause handling difficulties particularly during take-off, approach, and landing phases in cross winds.

BAE Systems (Operations) Ltd has published Inspection Service Bulletin (ISB) 53-200 that revises and supersedes the inspection requirements, which are defined in the Maintenance Review Board Report (MRBR) SSI Task 53-40-125, Supplemental Structural Inspections Document (SSID) Tasks 53-40-125.1 and 53-40-125.2 (included in the Airworthiness Limitations Section of Aircraft Maintenance Manual Chapter 5 that is currently mandated as part of EASA AD 2007-0271 [which corresponds to an FAA NPRM, Directorate Identifier 2007-NM-363-AD]) and in Maintenance Planning Document (MPD) Task Reference 534025-DVI-10000-1. These revised inspection requirements and reduced inspection periods are to ensure that any fatigue damage is detected before it causes upper airbrake crossbeam failure. MRBR, SSID and MPD will be amended in due course to reflect these revised inspection periods.

For the reasons stated above, this Airworthiness Directive (AD) requires the [high frequency eddy current and a low frequency phase analysis eddy current] inspection [for

cracking, discrete surface damage, and discontinuity (corrosion and mechanical damage)] and, as necessary, repair of the airbrake upper crossbeam.

The required actions include replacing the three rivets with Hi-lok pins. For cracking, damage, or discontinuity that is outside certain limits defined in the service bulletin, the repair includes contacting BAE Systems (Operations) Limited for repair instructions and doing the repair.

## **Actions and Compliance**

(f) Unless already done, do the following actions:

(1) At the applicable time specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD, inspect for cracking, damage, and discontinuity of the airbrake upper crossbeam fastener positions and lightening holes; and replace the three rivets with Hi-lok pins; in accordance with paragraphs 2.B., 2.C., and 2.D. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007. If any crack, damage, or discontinuity is found: Before further flight, repair as required by paragraph (f)(3) of this AD.

(i) For airplanes that have not been inspected in accordance with BAE Systems (Operations) Limited MRBR SSI Task No. 53-40-125 (MPD Reference 534025-DVI-10000-1) as of the effective date of this AD, do the inspection prior to accumulating 20,000 total flight cycles or 500 flight cycles after the effective date of this AD, whichever occurs later.

(ii) For airplanes subject to MRBR and SSID requirements that have been inspected in accordance with BAE Systems (Operations) Limited MRBR SSI Task No. 53-40-125 (MPD Reference 534025-DVI-10000-1) as of the effective date of this AD, do the inspection at the latest of the times in paragraphs (f)(1)(ii)(A), (f)(1)(ii)(B), or (f)(1)(ii)(C) of this AD.

(A) Before the accumulation of 4,000 flight cycles since last inspection.

(B) Within 2,500 flight cycles (for MRBR airplanes), or within 1,000 flight cycles (for SSID airplanes) after the effective date of this AD; but not exceeding 8,000 flight cycles since the last inspection.

(C) Within 500 flight cycles after the effective date of this AD.

(2) Repeat the inspection required by paragraph (f)(1) of this AD thereafter at the applicable time specified in paragraph (f)(2)(i), (f)(2)(ii), or (f)(2)(iii) of this AD. If any crack, damage, or discontinuity is found: Before further flight, repair as required by paragraph (f)(3) of this AD.

(i) Inspect fastener positions at the rivet locations at intervals not to exceed 4,000 flight cycles.

(ii) Inspect the holes at Hi-lok pin locations at intervals not to exceed 12,000 flight cycles.

(iii) Inspect the lightening holes at intervals not to exceed 12,000 flight cycles.

(3) If any crack, damage, or discontinuity is found during any inspection required by this AD: Before further flight, do the repair in accordance with paragraph 2.E. of the Accomplishment Instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007.

(4) Actions accomplished before the effective date of this AD in accordance with BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, dated December 21, 2006, are considered acceptable for compliance with the corresponding action specified in 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

(g) 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. Send information to Attn: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1175; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards 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: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2007-0307, dated December 17, 2007; and BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007; for related information.

## Material Incorporated by Reference

(i) You must use BAE Systems (Operations) Limited Inspection Service Bulletin ISB.53-200, Revision 1, dated March 13, 2007, 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 BAE Systems Regional Aircraft, 13850 McLearen Road, Herndon, Virginia 20171; telephone 703-736-1080; e-mail [raebusiness@baesystems.com](mailto:raebusiness@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

(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 or 425-227-1152.

(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 4, 2009.

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



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**2009-17-04 Airbus:** Amendment 39-15995. Docket No. FAA-2009-0004; Directorate Identifier 2008-NM-160-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective September 22, 2009.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Airbus Model A318-111, -112, -121, and -122; A319-111, -112, -113, -114, -115, -131, -132, and -133; A320-111, -211, -212, -214, -231, -232, -233; and A321-111, -112, -131, -211, -212, -213, -231, and -232 series airplanes; certificated in any category; all manufacturer serial numbers.

**Subject**

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

**Reason**

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

One case of elevator servo-control disconnection has been experienced on an aircraft of the A320 family. Failure occurred at the servo-control rod eye-end. Further to this finding, additional inspections have revealed cracking at the same location on a number of other servo-control rod eye-ends. In one case, both actuators of the same elevator surface were affected. The root cause of the cracking has not yet been determined and tests are ongoing. It is anticipated that further actions will be required.

A dual servo-control disconnection on the same elevator could result in an uncontrolled surface, the elevator surface being neither actuated nor damped, which could lead to reduced control of the aircraft.

For the reason described above, this AD requires a one-time inspection [for cracking] of the elevator servo-control rod eye-ends and, in case of findings, the accomplishment of corrective actions.

The corrective actions include replacing any cracked rod eye-end with a serviceable unit and re-adjusting the elevator servo-control.

## **Actions and Compliance**

(f) Unless already done, after the accumulation of 10,000 total flight cycles since first flight of the airplane, do the following actions.

(1) Not before the accumulation of 10,000 total flight cycles since first flight of the airplane, and at the later of the times specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this AD: Inspect both the left-hand and right-hand inboard elevator servo-control rod eye-ends for cracking, in accordance with the instructions of Airbus All Operators Telex (AOT) A320-27A1186, Revision 04, dated April 3, 2009.

(i) Within 1,500 flight cycles or 200 days after the effective date of this AD, whichever occurs first.

(ii) Within 1,500 flight cycles or 200 days after accumulating 10,000 total flight cycles since first flight of the airplane, whichever occurs first.

(2) Not before the accumulation of 10,000 total flight cycles since first flight of the airplane, and at the later of the times specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this AD: Inspect both the left-hand and right-hand outboard elevator servo-control rod eye-ends for cracking, in accordance with the instructions of Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009.

(i) Within 3,000 flight cycles or 400 days after the effective date of this AD, whichever occurs first.

(ii) Within 3,000 flight cycles or 400 days after accumulating 10,000 total flight cycles since first flight of the airplane, whichever occurs first.

(3) If any cracking is found during any inspection required by this AD, before further flight, accomplish all applicable corrective actions in accordance with the instructions of Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009.

(4) Submit a report of the findings of the inspection required by paragraphs (f)(1) and (f)(2) of this AD to Airbus in accordance with the instructions of Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009; at the applicable time specified in paragraph (f)(4)(i) or (f)(4)(ii) of this AD.

(i) If the inspection was done after the effective date of this AD: Submit the report within 40 days after the inspection.

(ii) If the inspection was done before the effective date of this AD: Submit the report within 40 days after the effective date of this AD.

(5) As of the effective date of this AD, no person may install on any airplane an elevator servo-control rod eye-end unless it has been inspected in accordance with the instructions of Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009.

(6) Actions done before the effective date of this AD in accordance with Airbus AOT A320-27A1186, dated June 23, 2008; Revision 01, dated August 11, 2008; Revision 02, dated March 30, 2009; or Revision 03, dated April 1, 2009; are acceptable for compliance with the corresponding actions required by 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**

(g) 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. Send information to Attn: Tim Dulin, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2141; fax (425) 227-1149.

Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **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:** For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### **Related Information**

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2008-0149, dated August 5, 2008; and Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009; for related information.

### **Material Incorporated by Reference**

(i) You must use Airbus All Operators Telex A320-27A1186, Revision 04, dated April 3, 2009, to do the actions required by this AD, unless the AD specifies otherwise. (The document number and issue date of Airbus AOT A320-27A1186, Revision 04, dated April 3, 2009, are specified only on the first page of the AOT.)

(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](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 or 425-227-1152.

(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 7, 2009.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.



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**2009-17-05 Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine Division; Garrett Turbine Engine Company; and AiResearch Manufacturing Company of Arizona):**  
Amendment 39-15996. Docket No. FAA-2009-0555; Directorate Identifier 2009-NE-18-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective September 1, 2009.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Honeywell International Inc. TPE331-10 and TPE331-11 series turboprop engines with a first stage turbine disk, P/N 3101520-1 or 3107079-1, serial number 2-03501-2299, 2-03501-2300, 2-03501-2301, 2-03501-2302, or 2-03501-2304 installed. These engines are installed on, but not limited to, the following airplanes: British Aerospace Jetstream 3201 series, Cessna Aircraft Company Model 441 Conquest, Construcciones Aeronauticas, S.A. (CASA) C-212 series, Dornier Luftfahrt Dornier 228 series, Hawker Beechcraft (formerly Raytheon, formerly Beech) B100, C90 and E90, M7 Aerospace (formerly Fairchild) SA226 and SA227 series (Swearingen Merlin and Metro series), Mitsubishi MU-2B series (MU-2 series), PZL M18 series, and Twin Commander 680 and 690 series (Jetprop Commander).

**Unsafe Condition**

(d) This AD results from a report of an uncontained failure of a first stage turbine disk that had a metallurgical defect. We are issuing this AD to prevent uncontained failure of the first stage turbine disk 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.

**Removal of First Stage Turbine Disks From Service**

(f) Within 25 flight hours or 25 cycles-in-service after the effective date of this AD, whichever occurs first, remove from service first stage turbine disks, P/N 3101520-1 and P/N 3107079-1, serial numbers 2-03501-2299, 2-03501-2300, 2-03501-2301, 2-03501-2302, and 2-03501-2304.

### **Installation Prohibition**

(g) After the effective date of this AD, do not install first stage turbine disks, P/N 3101520-1 and P/N 3107079-1, serial numbers 2-03501-2299, 2-03501-2300, 2-03501-2301, 2-03501-2302, and 2-03501-2304, into any engine.

### **Alternative Methods of Compliance**

(h) The Manager, Los Angeles Aircraft 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**

(i) Contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; e-mail: joseph.costa@faa.gov; telephone (562) 627-5246; fax (562) 627-5210, for more information about this AD.

(j) Honeywell International Inc. Alert Service Bulletin No. TPE331-72-A2150, dated June 13, 2008, pertains to the subject of this AD. Contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; Web site: <http://portal.honeywell.com>, for a copy of this service information, and for coordinating disk returns with the Honeywell Complete Customer Care Center.

### **Material Incorporated by Reference**

(k) None.

Issued in Burlington, Massachusetts, on August 11, 2009.  
Karen Grant,  
Acting Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.



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**2009-18-01 CFM International, S.A.:** Amendment 39-15997. Docket No. FAA-2008-0174; Directorate Identifier 2008-NE-03-AD.

### **Effective Date**

(a) This airworthiness directive (AD) becomes effective October 1, 2009.

### **Affected ADs**

(b) None.

### **Applicability**

(c) This AD applies to:

(1) CFM International, S.A. turbofan engines with a low-pressure (LP) turbine rear frame, part number (P/N) 338-171-703-0; 338-171-704-0; 338-171-705-0; or 338-171-706-0 installed, as follows:

(i) Commercial application CFM56-5B1/P; -5B2/P; -5B3/P; -5B3/P1; -5B4/P; -5B4/P1; -5B5/P; -5B6/P; -5B7/P; -5B8/P; -5B9/P turbofan engines.

(ii) Corporate application CFM56-5B6/P and -5B7/P turbofan engines.

(2) CFM International, S.A. turbofan engines with an LP turbine rear frame, P/N 338-171-751-0; or 338-171-752-0 installed, on corporate and commercial applications of CFM56-5B1/P; -5B2/P; -5B3/P; -5B3/P1; -5B4/P; -5B4/P1; -5B5/P; -5B6/P; -5B7/P; -5B8/P; -5B9/P; -5B1/3; -5B2/3; -5B3/3; -5B4/3; -5B5/3; -5B6/3; -5B7/3; -5B8/3; -5B9/3; -5B3/3B1; and -5B4/3B1 turbofan engines.

(3) These engines are installed on, but not limited to, Airbus A318, A319, A320, and A321 series airplanes.

### **Unsafe Condition**

(d) This AD results from a refined lifing analysis by the engine manufacturer that shows the need to identify initial and repetitive inspection thresholds for inspecting certain LP turbine rear frames. We are issuing this AD to detect low-cycle-fatigue cracks in the LP turbine rear frame, which could result in an engine separating from the airplane, causing damage to, and possibly leading to loss of control of 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.

### **Initial Inspection**

(f) Perform an initial eddy current inspection (ECI) of the LP turbine rear frame using paragraphs 3.A. through 3.A.(7)(d) of the Accomplishment Instructions of CFM International, S.A. Service

Bulletin (SB) No. CFM56-5B S/B 72-0620, Revision 2, dated December 1, 2008, at the following compliance times:

(1) For commercial engine applications, within 25,000 cycles-since-new (CSN) on the LP turbine rear frame.

(2) For corporate engine applications, within 19,000 CSN on the LP turbine rear frame.

(3) For engines with unknown LP turbine rear frame CSN, within 300 cycles-in-service from the effective date of this AD.

### **Repetitive Inspections**

(g) Perform repetitive ECIs of the LP turbine rear frame using paragraphs 3.A. through 3.A.(7)(d) of the Accomplishment Instructions of CFM International, S.A. SB No. CFM56-5B S/B 72-0620, Revision 2, dated December 1, 2008. Use the inspection intervals in paragraph 3.A.(8) of the Accomplishment Instructions of CFM International, S.A. SB No. CFM56-5B S/B 72-0620, Revision 2, dated December 1, 2008.

### **LP Turbine Rear Frame Removal Criteria**

(h) Remove LP turbine rear frames from service that have a single crack length of 2.56 inches (65 mm) or longer, or multiple cracks with an accumulated crack length of 2.56 inches (65 mm) or longer.

### **Previous Credit**

(i) Initial and repetitive inspections done before the effective date of this AD using CFM International, S.A. SB No. CFM56-5B S/B 72-0620, dated May 3, 2007, or SB No. CFM56-5B S/B 72-0620, Revision 1, dated December 20, 2007, comply with the initial and repetitive inspection requirements specified in this AD. Operators must continue performing the repetitive inspections required in paragraph (g) of this AD.

### **Alternative Methods of Compliance**

(j) 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**

(k) European Aviation Safety Agency AD 2009-0110, dated May 7, 2009, also addresses the subject of this AD.

(l) Contact Stephen Sheely, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: [stephen.k.sheely@faa.gov](mailto:stephen.k.sheely@faa.gov); telephone (781) 238-7750; fax (781) 238-7199, for more information about this AD.

### **Material Incorporated by Reference**

(m) You must use CFM International, S.A. SB No. CFM56-5B S/B 72-0620, Revision 2, dated December 1, 2008 to perform the inspections required by this AD. The Director of the Federal

Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact CFM International, Technical Publications Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2800; fax (513) 552-2816, for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on August 17, 2009.

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



**2009-18-02 Boeing:** Amendment 39-15998. Docket No. FAA-2007-28035; Directorate Identifier 2006-NM-293-AD.

### **Effective Date**

- (a) This AD becomes effective October 1, 2009.

### **Affected ADs**

- (b) None.

### **Applicability**

(c) This AD applies to Model 767-200, -300, -300F, and -400ER series airplanes; certificated in any category; as identified in Boeing Service Bulletin 767-57A0100, Revision 1, dated June 19, 2008; and Boeing Service Bulletin 767-57A0102, Revision 1, dated November 27, 2007.

### **Unsafe Condition**

(d) This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent possible ignition sources in the auxiliary fuel tank, main fuel tanks, and surge tanks caused by a wiring short or lightning strike, which could result in fuel tank explosions and consequent loss of 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.

### **Fastener Sealant Application**

(f) For airplanes identified in Boeing Service Bulletin 767-57A0100, Revision 1, dated June 19, 2008: Within 60 months after the effective date of this AD, do the actions in paragraphs (f)(1) and (f)(2) of this AD in accordance with the Accomplishment Instructions of Boeing Service Bulletin 767-57A0100, Revision 1, dated June 19, 2008, as applicable.

(1) For Groups 1 and 2 airplanes: Seal the ends of the fasteners on the brackets that hold the vortex generators, and seal the ends of the fasteners on certain stiffeners on the rear spar, as applicable.

(2) For Group 3 airplanes: Do a detailed inspection to determine the method of attachment of the vortex generators and, before further flight, do all applicable specified corrective actions.

## Wire Bundle Sleeve and Clamp Installation and Fastener Sealant Application

(g) For airplanes identified in Boeing Service Bulletin 767-57A0102, Revision 1, dated November 27, 2007: Within 60 months after the effective date of this AD, do the actions specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, as applicable, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 767-57A0102, Revision 1, dated November 27, 2007.

- (1) Change the wire bundle clamp configurations at specified locations on the fuel tank walls.
- (2) Seal the fasteners and certain stiffeners at specified locations in the fuel tank.
- (3) Do a detailed inspection of the sealant of the fasteners in the auxiliary tank center bay and rib 28 of the left and right main fuel tanks. Seal any unsealed fasteners before further flight.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

### Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19. Send information to ATTN: Douglas Bryant, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6505; fax (425) 917-6590.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

### Material Incorporated by Reference

(i) You must use the service information contained in Table 1 of this AD to do the actions required by this AD, unless the AD specifies otherwise.

**Table 1 – Material incorporated by reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Boeing Service Bulletin 767-57A0102	01	November 27, 2007
Boeing Service Bulletin 767-57A0100	01	June 19, 2008

(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; 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>.

(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 or 425-227-1152.

(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 7, 2009.  
Stephen P. Boyd,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2009-18-05 Fokker Services B.V.:** Amendment 39-16001. Docket No. FAA-2009-0496; Directorate Identifier 2008-NM-139-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective October 1, 2009.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to Fokker Model F.27 Mark 050 and F.28 Mark 0100 airplanes, certificated in any category, all serial numbers.

**Subject**

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

**Reason**

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

Several incidents have been reported where an electrical burning smell was noted in the cockpit, originating from the Electrical Power Centre. Troubleshooting revealed a partly molten terminal, which normally attaches a wire or bus bar to a stud of an Electrical Power Contactor, Part Number (P/N) SG02206. Furthermore, heat damage to the contactor stud itself was found. Material investigation revealed that the terminal, which was attached to the stud, was not properly torque tightened when the incident occurred. Loss of torque is considered to have occurred during operation, for reasons not fully understood. Further loosening may have taken place in-service under influence of vibration. As a result, poor contact caused electrical arcing during which extremely high temperatures were developed, leading to partial melting of the terminal.

Investigation of some other burned contactors revealed evidence (flat spring lock washer) of a fully torqued terminal/stud connection when the overheating occurred. The exact cause for the increase in temperature in the contactor and the terminal/stud could not be determined. However, it could not be excluded that an increase of the temperature inside the contactor could lead to reduction of the reliability of the contactor stud/terminal connection due to loss of lock washer tension. The affected Electrical Power Contactor is used on several locations in the electrical power system, i.e. Generator Line Contactor (GLC), Bus Tie Contactor (BTC), Auxiliary Power Contactor (APC) and External Power Contactor (EPC).

This condition, if not corrected, could lead to further cases of overheating of terminals and studs of Electrical Power Contactors P/N SG02206, possibly resulting in the loss of electrical power systems, electrical arcing and fire/smoke in the cockpit.

For the reasons described above, this EASA Airworthiness Directive (AD) requires the replacement of the current nut and spring washer of the standard contactor P/N SG02206 with a new self-locking nut.

## **Actions and Compliance**

(f) Unless already done, do the following actions:

(1) Except as provided by paragraphs (f)(2) and (f)(3) of this AD: Within 36 months after the effective date of this AD, remove the standard nuts and lock washers from the contactors having P/N SG02206, install new self-locking nuts, and perform the applicable tests on the Alternating Current Bus Transfer system, in accordance with the Accomplishment Instructions of Fokker Service Bulletin SBF100-24-041 or SBF50-24-031, both dated January 29, 2008, as applicable. If any test fails, before further flight, repair using a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or European Aviation Safety Agency (EASA) (or its delegated agent).

(2) Accomplishment of paragraph (f)(1) of this AD is not required for Model F.28 Mark 0100 airplanes that have been modified in service in accordance with Fokker Service Bulletin SBF100-24-037, dated October 2, 2003. Accomplishment of Fokker Service Bulletin SBF100-24-037, dated October 2, 2003, within the compliance time specified in paragraph (f)(1) of this AD is considered an acceptable method of compliance with the requirements of paragraph (f)(1) of this AD.

(3) Accomplishment of paragraph (f)(1) of this AD is not required for Model F.27 Mark 050 airplanes that have been modified during production to incorporate Fokker Engineering Change Record (ECR) 51780, or for airplanes that have been modified in service in accordance with Fokker Service Bulletin SBF50-24-030, dated November 6, 2003. Accomplishment of Fokker Service Bulletin SBF50-24-030, dated November 6, 2003, within the compliance time specified in paragraph (f)(1) of this AD is considered an acceptable method of compliance with the requirements of paragraph (f)(1) of this AD.

(4) As of 36 months after the effective date of this AD, no person may install a contactor having P/N SG02206 on any airplane unless it has been modified in accordance with Goodrich Power Systems Service Bulletin SG02206-24-01, dated March 4, 2008.

## **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows: The MCAI does not include a corrective action for airplanes on which the test required by paragraph (f)(1) of this AD fails. This AD requires the corrective action specified in paragraph (f)(1) of this AD.

## **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information 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. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal maintenance inspector

(PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local flight Standards 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.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

### Related Information

(h) Refer to MCAI EASA Airworthiness Directive 2008-0091, dated May 13, 2008, and the service information listed in Tables 1, 2, and 3 of this AD for related information.

**Table 1 – Service Information**

<b>Service Bulletin</b>	<b>Date</b>
Fokker Service Bulletin SBF50-24-030, including the drawings identified in Table 2 of this AD	November 6, 2003
Fokker Service Bulletin SBF50-24-031	January 29, 2008
Fokker Service Bulletin SBF100-24-037, including Manual Change Notification – Maintenance Documentation MCNM F100-076, dated October 2, 2003, and including the drawings identified in Table 3 of this AD	October 2, 2003
Fokker Service Bulletin SBF100-24-041	January 29, 2008
Goodrich Power Systems Service Bulletin SG02206-24-01	March 4, 2008

**Table 2 – Drawings Included in Fokker Service Bulletin SBF50-24-030**

<b>Fokker Drawing –</b>	<b>Sheet –</b>	<b>Issue –</b>	<b>Dated –</b>
W7980-236	02	H	August 1, 2003
W7980-253	40	BK	September 17, 2003
W7980-253	41	BK	September 17, 2003
W7980-253	42	BK	September 17, 2003
W7980-253	43	BK	September 17, 2003
W7980-253	44	BL	September 17, 2003
W7980-253	45	BK	September 17, 2003
W7980-253	46	BL	September 17, 2003
W7980-253	47	BK	September 17, 2003
W7980-253	48	BK	September 17, 2003
W7980-253	49	BL	September 17, 2003
W7980-253	50	BL	September 17, 2003
W7980-253	51	BL	September 17, 2003
W7980-253	52	BL	September 17, 2003
W7980-253	53	BL	September 17, 2003
W7980-253	54	BK	September 17, 2003
W7980-253	55	BL	September 17, 2003
W7980-253	56	BL	September 17, 2003
W7980-253	57	BK	September 17, 2003
W7980-253	58	BL	September 17, 2003
W7980-253	59	BK	September 17, 2003
W7980-253	60	BK	September 24, 2003
W7980-253	61	BK	September 24, 2003
W7980-253	62	BK	September 24, 2003
W7980-253	63	BL	September 24, 2003
W7980-253	64	BK	September 24, 2003
W7980-253	65	BL	September 24, 2003
W7980-253	66	BK	September 24, 2003

**Table 3 – Drawings Included in Fokker Service Bulletin SBF100-24-037**

<b>Fokker Drawing –</b>	<b>Sheet –</b>	<b>Issue –</b>	<b>Dated –</b>
W43255	01	A	July 30, 2003
W43255	02	Original	July 30, 2003
W43255	03	A	August 4, 2003
W43255	04	A	July 30, 2003
W43255	05	Original	July 30, 2003
W43255	06	A	July 30, 2003
W43255	07	A	August 4, 2003

**Material Incorporated by Reference**

(i) You must use the service information contained in Table 4 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise. If you do the optional actions specified in this AD, you must use the service information specified in Tables 2, 3, and 5 of this AD, as applicable, 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 Fokker 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) For Goodrich service information identified in this AD, contact Goodrich Corporation, Power Systems, 1555 Corporate Woods Parkway, Uniontown, Ohio 44685-8799; telephone 330-487-2007; fax 330-487-1902; e-mail [twinsburg.techpubs@goodrich.com](mailto:twinsburg.techpubs@goodrich.com); Internet <http://www.goodrich.com/TechPubs>.

(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 or 425-227-1152.

(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).

**Table 4 – Documents Incorporated by Reference for Actions Required by this AD**

<b>Service Bulletin</b>	<b>Date</b>
Fokker Service Bulletin SBF50-24-031	January 29, 2008
Fokker Service Bulletin SBF100-24-041	January 29, 2008
Goodrich Power Systems Service Bulletin SG02206-24-01	March 4, 2008

**Table 5 – Documents Incorporated by Reference for Optional Actions Specified in this AD**

<b>Service Bulletin</b>	<b>Date</b>
Fokker Service Bulletin SBF50-24-030 including the drawings identified in Table 2 of this AD	November 6, 2003
Fokker Service Bulletin SBF100-24-037, including Manual Change Notification – Maintenance Documentation MCNM F100-076, dated October 2, 2003, and including the drawings identified in Table 3 of this AD	October 2, 2003

Issued in Renton, Washington, on August 17, 2009.

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



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**2009-18-06 Construcciones Aeronauticas, S.A. (CASA):** Amendment 39-16002. Docket No. FAA-2009-0386; Directorate Identifier 2008-NM-184-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective October 1, 2009.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to CASA Model CN-235, CN-235-100, CN-235-200, and CN-235-300 airplanes, certificated in any category, all serial numbers up to, but not including, C-139.

**Subject**

- (d) Air Transport Association (ATA) of America Code 30: Ice and rain protection.

**Reason**

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

During operation in icing conditions, an asymmetric configuration of the de-icing boots was detected, occurring during the inflation and deflation check of the de-icing system. This was found to be due to an unexpected failure mode in the pneumatic and de-icing system's control electronic logic. This condition, if not corrected, could affect the de-icing capabilities of the boots installed on the wing and horizontal stabilizers, potentially leading to loss of control of the aircraft.

To address and correct this unsafe condition, EADS-CASA developed modification 31558, approved by DGAC-Spain and incorporated into the Type Design Definition through the approval of CN-235-300 version AE02, revision 14 of Spanish Type Certificate DGAC 01/86, dated 22 March 2002, and modification 31607, Minor Change approved by EADS-CASA under their DOA 21J.032 privileges, complementary to modification 31558. The entire modification package consists of an improvement of the de-icing boots electronic control system, making it capable of detecting all possible boot configurations on wings and horizontal stabilizers without affecting pneumatic system functions. The instructions for the in-service accomplishment of this modification have been published as CN-235 Service Bulletin (SB) 235-30-16 dated 21 January 2005.

For the reasons described above, this EASA AD requires the modification of the De-Icing Boots control system in all aircraft that have not yet implemented the modification.

## **Actions and Compliance**

(f) Unless already done, within six months after the effective date of this AD: Modify the aircraft de-icing boots control system in accordance with the Accomplishment Instructions of European Aeronautic Defense and Space Company (EADS) CASA Service Bulletin SB-235-30-16, dated January 21, 2005.

## **FAA AD Differences**

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

## **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards 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.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## **Related Information**

(h) Refer to MCAI European Aviation Safety Agency (EASA) Airworthiness Directive 2008-0118, dated June 27, 2008; and EADS CASA Service Bulletin SB-235-30-16, dated January 21, 2005; for related information.

## **Material Incorporated by Reference**

(i) You must use EADS CASA Service Bulletin SB-235-30-16, dated January 21, 2005, 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 EADS-CASA, Military Transport Aircraft Division (MTAD), Integrated Customer Services (ICS), Technical Services, Avenida de Aragón 404, 28022 Madrid, Spain; telephone +34 91 585 55 84; fax +34 91 585 55 05; e-mail MTA.TechnicalService@casa.eads.net; Internet <http://www.eads.net>.

(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 or 425-227-1152.

(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 17, 2009.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2009-18-07 Boeing:** Amendment 39-16003. Docket No. FAA-2009-0477; Directorate Identifier 2008-NM-191-AD.

**Effective Date**

- (a) This AD becomes effective October 1, 2009.

**Affected ADs**

- (b) This AD supersedes AD 2005-20-30.

**Applicability**

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-300, 747SP, and 747SR series airplanes; certificated in any category; identified in Boeing Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008.

**Subject**

- (d) Air Transport Association (ATA) of America Code 53: Fuselage.

**Unsafe Condition**

(e) This AD results from fatigue tests and analysis by Boeing that identified areas of the fuselage where fatigue cracks can occur. We are issuing this AD to prevent the loss of the structural integrity of the fuselage, which could result in rapid depressurization of the airplane.

**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.

**Restatement of Requirements of AD 2002-10-10 With Revised Service Information (Excluding Upper Deck Floor Beams)**

**Repetitive Inspections**

(g) Prior to the accumulation of 22,000 total flight cycles, or within 1,000 flight cycles after June 11, 1993 (the effective date of AD 93-08-12, amendment 39-8559, which was superseded by AD 2002-10-10), whichever occurs later, unless accomplished previously within the last 2,000 flight cycles; and thereafter at intervals not to exceed 3,000 flight cycles: Perform an internal detailed inspection to detect cracks in the areas of the fuselage internal structure specified in paragraphs (g)(1) through (g)(6) of this AD; in accordance with Boeing Service Bulletin 747-53-2349, dated June 27, 1991; Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000; Boeing

Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003; or Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-53A2349 may be used. Continue doing the inspections until the inspections required by paragraph (j) of this AD are done.

- (1) Section 42 upper lobe frames.
- (2) Section 46 lower lobe frames.
- (3) Section 42 lower lobe frames.
- (4) Main entry door cutouts.
- (5) Section 41 body station 260, 340, and 400 bulkheads.
- (6) Main entry doors.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

(h) Prior to the accumulation of 25,000 total flight cycles, or within 1,000 flight cycles after June 11, 1993, whichever is later, unless already done within the last 2,000 flight cycles; and thereafter at intervals not to exceed 3,000 flight cycles: Do an internal detailed inspection to detect cracks in the Section 46 upper lobe frames, in accordance with Boeing Service Bulletin 747-53-2349, dated June 27, 1991; Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000; Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003; or Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-53A2349 may be used.

### **Repair of Cracks Detected During Paragraph (g) or (h) Inspections**

(i) Before further flight, repair any cracks detected during the inspections done per paragraph (g) or (h) of this AD by doing the actions specified in paragraph (i)(1) or (i)(2) of this AD, as applicable.

(1) Repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with paragraph (p) of this AD.

(2) Repair in accordance with Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003; or Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-53A2349 may be used. Where either revision of the service bulletin specifies to contact Boeing for repair instructions, repair in accordance with a method approved by the Manager, Seattle ACO; or use a method approved in accordance with paragraph (p) of this AD.

### **Restatement of Requirements of AD 2005-20-30 With Revised Service Information**

#### **Repetitive Inspections**

(j) Do an internal detailed inspection to detect cracking in the areas of the fuselage internal structure specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, and internal and external detailed inspections of the areas specified in paragraphs (j)(4), (j)(5), (j)(6), and (j)(7) of this AD. Do the inspections in accordance with Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003; or Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-53A2349 may be

used. Do the inspections at the applicable time specified in paragraph (k) of this AD. Accomplishment of these inspections terminates the requirements of paragraph (g) of this AD.(1) Section 42 upper lobe frames.

(2) Section 46 lower lobe frames.

(3) Section 42 lower lobe frames.

(4) Main entry door cutouts.

(5) Nose wheel well bulkheads, sidewall panels, and station (STA) 360 and 380 floor beams.

These areas include Section 41 body station 260, 340, and 400 bulkheads.

(6) Main entry doors.

(7) Main electronics bay access door cutout.

(k) Do the inspections required by paragraph (j) of this AD at the applicable time specified in paragraph (k)(1), (k)(2), or (k)(3) of this AD. Repeat the inspections thereafter at intervals not to exceed 3,000 flight cycles.

(1) For airplanes on which the inspections required by paragraphs (g)(1), (g)(2), (g)(3), (g)(4), and (g)(6) of this AD have been done before November 16, 2005 (the effective date of AD 2005-20-30), but the inspections required by paragraphs (j)(5) and (j)(7) of this AD have not been done: Within 3,000 flight cycles since accomplishment of the most recent inspection required by paragraphs (g)(1), (g)(2), (g)(3), (g)(4), and (g)(6) of this AD, except that the inspections specified in paragraphs (j)(5) and (j)(7) of this AD may be done within 3,000 flight cycles since accomplishment of the most recent inspection required by paragraphs (g)(1), (g)(2), (g)(3), (g)(4), and (g)(6) of this AD, or within 1,000 flight cycles after November 16, 2005, whichever is later.

(2) For airplanes on which the inspections required by paragraphs (j)(5) and (j)(7) have been done before November 16, 2005: Within 3,000 flight cycles since accomplishment of the most recent inspection required by paragraphs (j)(5) and (j)(7) of this AD, or within 1,000 flight cycles after November 16, 2005, whichever is later.

(3) For airplanes on which the inspections required by paragraph (g) of this AD have not been done before November 16, 2005: Prior to the accumulation of 22,000 total flight cycles, or within 1,000 flight cycles after November 16, 2005, whichever is later.

### **Repair of Cracks Detected During Paragraph (j) Inspection**

(l) Before further flight, repair any cracking found during any inspection required by paragraph (j) of this AD in accordance with Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003; or Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008. After the effective date of this AD, only Revision 3 of Boeing Alert Service Bulletin 747-53A2349 may be used. Where any revision of the service bulletin specifies to contact Boeing for repair instructions, repair in accordance with a method approved by the Manager, Seattle ACO; or use a method approved in accordance with paragraph (p) of this AD.

### **New Requirements of This AD**

#### **Inspections and Repair**

(m) Do initial and repetitive detailed inspections for cracking in the areas specified in Table 1 of this AD using applicable internal and external detailed inspection methods; and repair all cracks, by doing all the applicable actions in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008, except as required by paragraph (n) of this AD. Do the initial and repetitive inspections at the times specified in paragraph 1.E., "Compliance," of the service bulletin, except as required by paragraph (o) of this AD. Repair all cracks before further flight after detection.

**Table 1 – Additional Inspections**

<b>Inspect the addition portion of area 1 and area 6 as specified in Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008 (“the service bulletin”) –</b>	<b>For airplanes identified as these groups in the service bulletin –</b>
In Area 1: Fuselage frames at body stations 260-520 in areas where the upper deck floor beams are attached (Figure 11 of the Accomplishments Instructions of the service bulletin).	1 through 7 inclusive
In Area 6: Fuselage frames at body stations 400-500 in areas above the Main Entry Door 1 cutouts, from the upper chord of the upper deck floor beams to Stringer 8 (Figure 12 of the Accomplishment Instructions of the service bulletin).	6 and 7

### **Exceptions to Certain Procedures**

(n) If any crack is found during any inspection required by paragraph (m) of this AD, and Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008, specifies to contact Boeing for appropriate action: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

(o) Where Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008, specifies a compliance time after the date on Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 2008, this AD requires compliance within the specified compliance time after the effective date of this AD.

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

(p)(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. Send information to ATTN: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(3) AMOCs approved previously in accordance with AD 2005-20-30 are approved as AMOCs with the corresponding provisions of this AD.

(4) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who 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.

**Material Incorporated by Reference**

(q) You must use Boeing Alert Service Bulletin 747-53A2349, Revision 3, dated October 2, 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 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; 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 or 425-227-1152.

(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 17, 2009.

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