



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
LARGE AIRCRAFT**

**BIWEEKLY 2010-12**

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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 2010-01

2008-04-11 R1		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
2008-09-12 R1		Bombardier	CL-600-2B19 (Regional Jet Series 100 & 440)
2008-10-09 R1		Boeing	737-100, -200, -200C, -300, -400, and -500
2008-11-01 R1		Boeing	767-200, -300, -300F, and -400ER
2009-20-11	Cor	Boeing	737-300, -400, and -500
2009-24-11		General Electric	See AD
2009-26-03		Boeing	See AD
2009-26-04		Boeing	737-600, -700, -700C, -800, and -900
2009-26-10		Airbus	A380-841, -842, and -861
2009-26-12		Engine Components, Inc. (ECi)	See AD
2009-26-14		CONSTRUCCIONES AERONAUTICAS, S.A. (CASA)	CN-235, CN-235-100, CN-235-200, and CN-235-300
2009-26-15		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes, certificated in any category, serial numbers 17000156 through 17000169 inclusive; and Model ERJ 190-100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW
2009-26-16		McDonnell Douglas	MD-11 and MD-11F
2009-26-17		MCDonnell	Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, and DC-10-40F airplanes, and MD-10-10F and MD-10-30F

### Biweekly 2010-02

2008-10-06 R1		Boeing	747-400, -400D, and -400F
2008-10-10 R1		Boeing	737-600, -700, -700C, -800, and -900
2009-26-06		Honeywell International Inc	Engine: ALF502L and ALF502R series, and LF507-1F and LF507-1H
2009-26-09	S 2007-05-16	General Electric Company	Engine: CF34-1A, -3A, -3A1, -3A2, -3B, and -3B1
2010-01-01	S 2006-05-02	Boeing	747-200F, 747-200C, 747-400, 747-400D, and 747-400F
2010-01-04	S 2009-24-11	General Electric Company	Engine: CF34-1A, CF34-3A, CF34-3A1, CF34-3A2, CF34-3B, and CF34-3B1
2010-01-03		Fire Fighting Enterprises Limited	See AD
2010-01-05		CFM International, S.A	Engine: See AD
2010-01-06		Bombardier, Inc.	DHC-8-400, DHC-8-401, and DHC-8-402
2010-01-07		Airbus	A340-211, -212, -213, -311, -312, -313, -541, and -642
2010-01-08		Boeing	737-600, -700, and -800
2010-01-09		Boeing	737-300, -400, and -500
2010-01-11		Fokker Services B.V.	F.28 Mark 0070 and Mark 0100
2010-01-12		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU
2010-02-02		Dassault	Falcon 7X
2010-02-03		Airbus	A340-211, -212, -213, -311, -312, and -313
2010-02-04		Boeing	737-600, -700, -700C, -800, -900, and -900ER

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### Biweekly 2010-03

2009-21-10 R1		AVOX Systems and B/E Aerospace	Appliance: Oxygen cylinder assemblies
2009-26-13		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343, 340-211, -212, -213, -311, -312, and -313
2010-01-02	S 2005-15-08	Boeing	747-100B SUD, -200B, -300, -400, and -400D
2010-01-10	S 2007-01-15	Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP
2010-02-06		Sicma Aero Seat	Appliance: 90xx and 92xx series passenger seats
2010-02-09		Airbus	A318
2010-02-10		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 series airplanes; Model A340-211, -212, -213, -311, -312, -313 series airplanes; and Model A340-541 and -642
2010-02-11		BAE Systems	BAe 146-100A, -200A, and -300A series airplanes; and BAE SYSTEMS (Operations) Limited Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2010-02-12		Fokker Services B.V	F.28 Mark 0070 and 0100

### Biweekly 2010-04

2010-03-05		Boeing	747-200C and -200F
2010-03-07		Embraer	EMB-135BJ, EMB-135ER, -135KE, -135KL, -135LR, EMB-145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP
2010-03-08	S 2003-03-02	Boeing	767-200, -300 and -300F
2010-04-01		Dassault Aviation	Falcon 900EX
2010-04-02		Airbus	A310-221, -222, -322, -324, and -325 airplanes, and Model A300 B4-620, B4-622, B4-622R, and F4-622R
2010-04-03		Airbus	A310-203, -204, -221, -222, -304, -322, -324, and -325

### Biweekly 2010-05

2009-06-05 R1		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)
2010-04-04		Bombardier, Inc	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705)
2010-04-08		Embraer	ERJ 190-100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW
2010-04-09		Airbus	A330-201, -202, -203, -223, and -243, A340-211, -212, and -213 airplanes; and Model A340-311, -312, and -313
2010-04-10	S 2009-10-07	Airbus	A380-841, -842, and -861
2010-04-13		Airbus	A310-203, A310-221, and A310-222, A300 F4-605R and A300 F4-622R
2010-04-16		SICLI	Appliance: Portable fire extinguishers
2010-05-01		ATR-GIE Avions de Transport Régional	ATR42-200, -300, -320, and -500 airplanes; and Model ATR72-101, -201, -102, -202, -211, -212, and -212A
2010-05-04		McDonnell Douglas Corporation	MD-90-30
2010-05-05	S 2007-15-08	BAE Systems	ATP
2010-05-06		Airbus	A340-541 and -642
2010-05-07		Airbus	A340-211, -212, and -213 airplanes; and Model A340-311, -312, and -313

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2010-06</b>			
2009-22-05	S 2008-23-16	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2010-04-09	COR	Airbus	A330-201, -202, -203, -223, and -243, A340-211, -212, and -213 airplanes; and Model A340-311, -312, and -313
2010-04-12		Bombardier, Inc.	DHC-8-101, 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
2010-05-03		Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP
2010-05-09		Dowty Propellers	Propeller: R354/4-123-F/13, R354/4-123-F/20, R375/4-123-F/21, R389/4-123-F/25, R389/4-123-F/26, and R390/4-123-F/27
2010-05-11		Boeing	747-100, 747-200B, 747-300, and 747SR
2010-05-12		Bombardier, Inc	DHC-8-102, DHC-8-103, DHC-8-106, DHC-8-201, and DHC-8-202
2010-05-13	S 2006-07-12	Boeing	737-100, -200, -200C, -300, -400, and -500
2010-05-14		Bombardier, Inc	CL-600-2B19 (Regional Jet Series 100 & 440)
2010-06-01		Airbus	A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232
2010-06-04		Airbus	See AD
2010-06-05		Airbus	See AD
2010-06-51	E	Boeing	737-600, -700, -700C, -800, -900, and -900ER
<b>Biweekly 2010-07</b>			
97-17-04 R1	R	Pratt & Whitney	Engine: JT8D-209, -217, -217C, and -219
2010-05-13	COR, S 2006-07-12	Boeing	737-100, -200, -200C, -300, -400, and -500
2010-06-09		Boeing	777-200, -200LR, -300, -300ER, and 777F
2010-06-13		Learjet	45
2010-06-15		General Electric Company	Engine: CF6-45A, CF6-45A2, CF6-50A, CF6-50C, CF6-50CA, CF6-50C1, CF6-50C2, CF6-50C2B, CF6-50C2D, CF6-50C2F, CF6-50C2R, CF6-50E, CF6-50E1, and CF6-50E2, 767-200, -300, -300F, and -400ER
2010-06-16		Boeing	767-200, -300, -300F, and -400ER
2010-06-18		International Aero Engines	Engine: V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5
2010-07-04		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes; Model ERJ 190-100 STD, -100 LR, -100 ECJ, and -100 IGW
<b>Biweekly 2010-08</b>			
2010-06-10		Boeing	767-200, -300, and -300F
2010-06-14		Rolls-Royce plc	Engine: RB211-Trent 875-17, Trent 877-17, Trent 884-17, Trent 884B-17, Trent 892-17, Trent 892B-17, and Trent 895-17
2010-06-17		Boeing	757-200, -200CB, -200PF, and -300
2010-06-51		Boeing	737-600, -700, -700C, -800, -900, and -900ER
2010-07-01	S 2009-24-05	Rolls-Royce plc	See AD
2010-07-02	S 2006-22-05	Honeywell, Inc.	Appliance: Honeywell Primus II RNZ-850( )/-851( )
2010-07-03	S 2006-08-02	Boeing	747-200C and -200F
2010-07-06		Bombardier, Inc.	BD-100-1A10 (Challenger 300)
2010-07-08		Kelly Aerospace Energy Systems, LLC	Appliance: Kelly Aerospace Energy Systems
2010-07-09	S 2007-02-05	Rolls-Royce plc	Engine: RB211-Trent 768-60, RB211-Trent 772-60, and RB211-Trent 772B-60
2010-07-10		Airbus	A300 B2-1C, B2K-3C, B2-203, B4-2C, B4-103, and B4-20

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<b>Biweekly 2010-09</b>			
2010-08-02		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, -200 SU, ERJ 190-100 STD, -100 LR, -100 IGW, -100 ECJ, -200 STD, -200 LR, and -200 IGW
2010-08-03 2010-08-05	S 2009-04-11	Bombardier, Inc. Airbus	CL-600-2B19 (Regional Jet Series 100 & 440) A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343, A340-311, -312, and -313
2010-08-06		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU, ERJ 190-100 STD, -100 LR, -100 IGW, -200 STD, -200 LR, and -200 IGW
2010-08-07		Airbus	A340-541 and -642
2010-08-08		Airbus	A330-243, -341, -342, and -343
2010-09-08		General Electric Company	Engine: CJ610 series turbojet and CF700
<b>Biweekly 2010-10</b>			
2002-23-20	COR	Dassault Aviation	900EX, Mystere Falcon 900
2010-01-04	COR, S 2009-24-11	General Electric Company	Engine: CF34-1A, CF34-3A, CF34-3A1, CF34-3A2, CF34-3B, and CF34-3B1
2010-06-04	COR	Airbus	A300 B2-1C, A300 B2-203, A300 B2K-3C, A300 B4-103, A300 B4-203, and A300 B4-2C, A310-203, A310-204, A310-221, A310-222, A310-304, A310-322, A310-324, and A310-325, A300 B4-601, A300 B4-603, A300 B4-605R, A300 B4-620, A300 B4-622, and A300 B4-622R
2010-09-02		British Aerospace Regional Aircraft	Jetstream Series 3101 and Jetstream Model 3201
2010-09-03		Boeing	747-200B
2010-09-04		Honeywell International Inc.	Appliance: Primus EPIC and Primus APEX flight management systems (FMS)
2010-09-05	S 2010-06-51	Boeing	737-600, -700, -700C, -800, -900, and -900ER
2010-09-06		Bombardier, Inc.	CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2D15 (Regional Jet Series 705) and Model CL-600-2D24 (Regional Jet Series 900)
2010-09-07		Bombardier, Inc.	DHC-8-400, -401, and -402
2010-09-10	S 2003-04-21 R!	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2010-09-11	S 93-01-11	BAE Systems (Operations) Limited	BAe 146-100A, -200A, and -300A series airplanes, and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2010-09-12		McDonnell Douglas Corporation	Model 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
2010-09-14	S 2009-01-01	CFM International, S.A.	Engine: CFM56-5B1/P, -5B2/P, -5B3/P, -5B3/P1, -5B4/P, -5B5/P, -5B6/P, -5B7/P, -5B8/P, -5B9/P, -5B1/2P, -5B2/2P, -5B3/2P, -5B3/2P1, -5B4/2P, -5B4/P1, -5B6/2P, -5B4/2P1, and -5B9/2P
2010-10-04		Bombardier, Inc.	DHC-8-400, -401, and -402

## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; FR - Final Rule of Emergency			
<b>Biweekly 2010-11</b>			
2009-26-09	COR	General Electric Company	Engine: CF34-1A, -3A, -3A1, -3A2, -3B, and -3B1
2010-10-05	S 94-12-04	Boeing	747-100, 747-100B, 747-100B SUD, 747-200B, 747-300, 747SR, and 747SP
2010-10-07		Empresa Brasileira de Aeronautica S.A.	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU, ERJ 190-100 ECJ, -100 LR, -100 IGW, -100 STD, -200 STD, -200 LR, and -200 IGW
2010-10-08		Airbus	A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232
2010-10-11		Empresa Brasileira de Aeronautica S.A.	EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP
2010-10-13		BAE Systems	BAe 146-100A, -200A, and -300A series airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2010-10-18		Bombardier, Inc.	BD-100-1A10 (Challenger 300)
2010-10-19	S 2010-02-03	Airbus	A340-211, -212, -213, -311, -312, and -313
2010-10-20		McDonnell Douglas	DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-33F, DC-9-34, DC-9-34F, and DC-9-32F (C-9A, C-9B), DC-9-41, and DC-9-51
2010-10-21		Bombardier, Inc.	CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900)
2010-10-22	S 2005-23-12	BAE Systems	BAe 146-100A, -200A, and -300A series airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2010-10-23	S 70-16-02	Dowty Propellers	R175/4-30-4/13; R175/4-30-4/13e; R184/4-30-4/50; R193/4-30-4/50; R193/4-30-4/61; R193/4-30-4/64; R193/4-30-4/65; R193/4-30-4/66; R.209/4-40-4.5/2; R212/4-30-4/22; R.245/4-40-4.5/13; R257/4-30-4/60; and R.259/4-40-4.5/17
2010-10-24		Dassault Aviation	FALCON 2000 and FALCON 2000EX
2010-10-25		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; and Airbus Model A340-311, -312, and -313
2010-10-26	S 2007-14-02	Bombardier, Inc.	CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604)
2010-11-02	S 2007-03-05	Gulfstream Aerospace LP	100 airplanes; and Model Astra SPX and 1125 Westwind
2010-11-03		Airbus	A300 B2-1A, B2-1C, B2K-3C, B2-203, B4-2C, B4-103, B4-203, B4-601, B4-603, B4-620, B4-622, B4-605R, B4-622R, F4-605R, F4-622R, and C4-605R Variant F airplanes; and Model A310-203, -204, -221, -222, -304, -322, -324, and -325

### Biweekly 2010-12

2006-09-11	COR	Airbus	A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; Model A321-111, -112, and -131 airplanes; and Model A321-211 and -231
2010-11-01		Embraer	EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, certificated in any category, all serial numbers, except Model EMB-145LR
2010-11-12	S 99-25-14	McDonnell Douglas	MD-11 and MD-11F
2010-11-13		Embraer	ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU
2010-11-14		Embraer	ERJ 190-100 STD, -100 LR, -100 IGW, -200 STD, -200 LR, and -200 IGW



**2006-09-11 Airbus:** Amendment 39-14582. Docket No. FAA-2005-22919; Directorate Identifier 2005-NM-087-AD.

**Effective Date**

(a) This AD becomes effective June 16, 2006.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Airbus Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-211, -212, -214, -231, -232, and -233 airplanes; Model A321-111, -112, and -131 airplanes; and Model A321-211 and -231 airplanes; certificated in any category; equipped with the lavatories in Table 1 of this AD, onto which at least one cabin attendant seat (CAS) is attached; except those airplanes with lavatory walls that have not been modified since the application of Airbus Modification 31574 in production.

**TABLE 1.—LAVATORY INSTALLATIONS  
AFFECTED BY THIS AD**

<b>Lavatory—</b>	<b>Installed by Airbus Modification</b>
Type A DASELL	23125
Type D DASELL	22815
Type E DASELL	22819
Type F DASELL	23695

**Unsafe Condition**

(d) This AD results from reports of corrosion in the lower part of the lavatory walls due to water ingress. We are issuing this AD to detect and correct corrosion and damage on the lower part of the lavatory walls, which could compromise the structural integrity of the CAS attachments, and cause injury to the cabin attendants during a crash landing.

**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.

**Service Bulletin Reference**

(f) For the purposes of this AD, unless otherwise specified, the term "service bulletin" means the Accomplishment Instructions of Airbus Service Bulletin A320-25-1365, dated February 18, 2005.

## Repetitive Inspections and Corrective Actions

(g) Within 2,400 flight hours or 15 months after the effective date of this AD, whichever occurs earlier: Do a detailed inspection for corrosion and damage in the inside and outside lower walls of each type A, D, E, and F lavatory wall that has at least one wall-mounted CAS, and do all applicable related investigative and corrective actions as applicable, including any supporting non-destructive testing and related investigative actions. Do all actions in accordance with the procedures and time-frames defined in the Accomplishment Instructions of the service bulletin. Repeat the inspection at the applicable time specified in Figure 1 Sheet 1 of the service bulletin.

**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."

## Optional Terminating Action

(h) Doing the permanent repair in paragraph (h)(1) or (h)(2) of this AD terminates the repetitive inspection requirements of this AD.

(1) Repair the aluminum wall with composite material in accordance with a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the Direction Générale de l'Aviation Civile (or its delegated agent). The applicable lavatory component maintenance manual (CMM) in paragraph (h)(1)(i), (h)(1)(ii), (h)(1)(iii), or (h)(1)(iv) of this AD is one approved method.

(i) Airbus CMM Lavatory A 25-41-51.

(ii) Airbus CMM Lavatory D 25-43-51.

(iii) Airbus CMM Lavatory E 25-43-52.

(iv) Airbus CMM Lavatory F 25-43-53.

(2) Replace the aluminum wall with a new wall made of composite material in accordance with the Accomplishment Instructions of the applicable service bulletin in paragraph (h)(2)(i), (h)(2)(ii), or (h)(2)(iii) of this AD.

(i) For lavatory A: Airbus Service Bulletin A320-25-1289, Revision 01, dated October 29, 2003.

(ii) For lavatories D and E: Airbus Service Bulletin A320-25-1365, dated February 18, 2005, references Airbus CMM Lavatory D 25-43-51; and Airbus CMM Lavatory E 25-43-52, as applicable, as an additional source of guidance for doing the replacement.

(iii) For lavatory F: Airbus Service Bulletin A320-25-1357, dated July 19, 2004.

## Actions Accomplished in Accordance With Previous Issue of a Service Bulletin

(i) Replacement of the lavatory A wall done before the effective date of this AD in accordance with Airbus Service Bulletin A320-25-1289, dated October 11, 2002, is acceptable for compliance with the requirements of paragraph (h)(2)(i) of this AD.

## Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

### Related Information

(k) French airworthiness directive F-2005-046, dated March 16, 2005, also addresses the subject of this AD.

### Material Incorporated by Reference

(l) You must use Airbus Service Bulletin A320-25-1365, dated February 18, 2005, to perform the actions that are required by this AD, unless the AD specifies otherwise. The optional terminating action, if accomplished, must be done in accordance with the service information in Table 2 of this AD, as applicable, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Airbus, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**TABLE 2.—MATERIAL FOR OPTIONAL TERMINATING ACTION INCORPORATED BY REFERENCE**

<b>Airbus service bulletin</b>	<b>Revision level</b>	<b>Date</b>
A320-25-1289	01	October 29, 2003.
A320-25-1357	Original	July 19, 2004.
A320-25-1365	Original	February 18, 2005.

Issued in Renton, Washington, on April 26, 2006.

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



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**2010-11-01 Empresa Brasileira de Aeronautica S.A. (EMBRAER):** Amendment 39-16306.  
Docket No. FAA-2009-0132; Directorate Identifier 2008-NM-081-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective July 6, 2010.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135BJ, -135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes, certificated in any category, all serial numbers, except Model EMB-145LR airplanes that have been modified in accordance with Brazilian Supplemental Type Certificates 2002S06-09, 2002S06-10, and 2003S08-01.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (g) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane. The FAA has provided guidance for this determination in Advisory Circular (AC) 25-1529-1.

**Subject**

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

**Reason**

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

During aircraft full scale fatigue test, it has been found the occurrence of cracks in the cockpit windshield post lower eyelet fitting at the attachment of the center post on the forward fuselage (SSI 53-10-19). Further analysis of this cracking resulted in modifications on the aircraft Airworthiness Limitation Items (ALI), to include new inspection tasks and its respective intervals. Undetected fatigue cracking in this area could adversely affect the structural integrity of these airplanes.

The corrective action is revising the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness to incorporate new structural inspection requirements.

### **Actions and Compliance**

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

(1) Within 90 days after the effective date of this AD revise the ALS of the Instructions for Continued Airworthiness to incorporate the structural inspection item (SSI) 53-10-19's applicable tasks identified in Appendix 2, "Airworthiness Limitation Requirements," of the applicable document listed in Table 1 of this AD. The initial compliance times for the task start from the applicable time specified in SSI 53-10-19 or within 200 flight cycles after revising the ALS, whichever occurs later. Repeat the applicable inspection thereafter at the interval specified in Appendix 2 of the applicable document listed in Table 1 of this AD, except as provided by paragraphs (f)(2) and (g) of this AD.

**Table 1 – Service information**

<b>Model -</b>	<b>Appendix 2, "Airworthiness Limitation Requirements," of EMBRAER -</b>
EMB-135ER, -135KE, -135KL, -135LR, -145, -145ER, -145MR, -145LR, -145XR, -145MP, and -145EP airplanes	EMB135/EMB145 Maintenance Review Board Report (MRBR) MRB-145/1150, Revision 12, dated September 19, 2008
EMB-135BJ airplanes	Legacy BJ - Maintenance Planning Guide MPG-1483, Revision 5, dated March 22, 2007

Note 2: Appendix 2, "Airworthiness Limitation Requirements," of EMBRAER EMB135/EMB145 MRBR MRB-145/1150, Revision 12, dated September 19, 2008, includes EMBRAER Temporary Revision 10-6, dated May 23, 2007, which is referred to in the MCAI as an applicable document to incorporate into the maintenance program.

(2) After accomplishing the actions specified in paragraph (f)(1) of this AD, no alternative inspections or inspection intervals may be used unless the inspection or inspection interval is approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, or the Agência Nacional de Aviação Civil (ANAC) (or its delegated agent); or unless the inspection or interval is approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (g)(1) of this AD.

(3) Actions done before the effective date of this AD in accordance with EMBRAER EMB135/EMB145 MRBR MRB-145/1150, Revision 11, dated September 19, 2007, are acceptable for compliance with the corresponding requirements of this AD.

### **FAA AD Differences**

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

(1) We have removed the requirement to mandate the SSI tasks in Section 4—"Structural Inspection Requirements," of the applicable document listed in Table 1 of this AD which are referred to in the MCAI. Those SSI tasks are included in Appendix 2, "Airworthiness Limitation Requirements," of the applicable document listed in Table 1 of this AD.

(2) We have not included the 21,336-flight-cycle threshold specified in the MCAI because the airplanes in the U.S.-registered fleet have surpassed that threshold. Instead, we included a 200-flight-cycle grace period for accomplishing the SSI 53-10-19 tasks.

## 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, 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.

(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 (44 U.S.C. 3501 et seq.), 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 Brazilian Airworthiness Directive 2007-07-02, effective August 21, 2007, and the service information listed in Table 1 of this AD, for related information.

## Material Incorporated by Reference

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

**Table 2 – Material incorporated by reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
EMBRAER EMB135/EMB145 Maintenance Review Board Report MRB-145/1150	12	September 19, 2008
EMBRAER Legacy BJ - Maintenance Planning Guide MPG-1483	5	March 22, 2007

EMBRAER EMB135/EMB145 Maintenance Review Board Report (MRBR) MRB-145/1150, Revision 12, dated September 19, 2008, contains the following effective pages:

### List of Effective Pages:

<b>Page Title/ Description</b>	<b>Page(s)</b>	<b>Revision Number</b>	<b>Date Shown on Page(s)</b>
MRBR Title Page	None shown*	12	September 19, 2008
MRBR Record of Temporary Revisions	None shown*	12	September 19, 2008

MRBR List of Effective Pages	A-L	None shown*	September 19, 2008
Appendix 2 – Airworthiness Limitation Requirements			
	A2-1 through A2-22	None shown*	September 19, 2007
	A2-23 through A2-90	None shown*	September 19, 2008

(\*Only the Record of Temporary Revisions of EMBRAER EMB135/EMB145 Maintenance Review Board Report MRB-145/1150, Revision 12, dated September 19, 2008, contains the revision levels that correspond to the revision dates; no other page of the document contains this information.)  
EMBRAER Legacy BJ–Maintenance Planning Guide (MPG) MPG-1483, Revision 5, dated March 22, 2007, contains the following effective pages:

#### List of Effective Pages

Page Title/ Description	Page(s)	Revision Number	Date Shown on Page(s)
MPG Title Page	None shown*	5	March 22, 2007
MPG Record of Temporary Revisions	None shown*	5	March 22, 2007
MPG List of Effective Pages	A-J	None shown*	March 22, 2007

#### Appendix 2 – Airworthiness Limitation Requirements

	A2-1 through A2-8, A2-12, A2-14 through A2-16	None shown*	October 14, 2005
	A2-9, A2-10, A2-13	None shown*	July 31, 2003
	A2-11	None shown*	April 1, 2004
	A2-17 through A2-40	None shown*	March 22, 2007

(\*Only the Record of Temporary Revisions of EMBRAER Legacy BJ–Maintenance Planning Guide MPG-1483, Revision 5, dated March 22, 2007, contains the revision levels that correspond to the revision dates; no other page of the document contains this information.)

(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 Empresa Brasileira de Aeronautica S.A. (EMBRAER), Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170–Putim–12227-901 São Jose dos Campos–SP–BRASIL; telephone: +55 12 3927-5852 or +55 12 3309-0732; fax: +55 12 3927-7546; e-mail: [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet: <http://www.flyembraer.com>.

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

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

Issued in Renton, Washington, on May 10, 2010.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2010-11-12 McDonnell Douglas Corporation:** Amendment 39-16317. Docket No. FAA-2009-0866; Directorate Identifier 2009-NM-074-AD.

**Effective Date**

(a) This AD becomes effective July 6, 2010.

**Affected ADs**

(b) This AD supersedes AD 99-25-14, Amendment 39-11457.

**Applicability**

(c) This AD applies to McDonnell Douglas Corporation Model MD-11 and MD-11F airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin MD11-28A140, dated November 6, 2008.

**Subject**

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

**Unsafe Condition**

(e) This AD results from reports that the wire assembly for the alternate fuel pump is missing a case ground wire, and the lightning protection wire braid for wire assemblies located in the empennage and number 2 engine inlet are grounded improperly. The Federal Aviation Administration is issuing this AD to prevent insufficient grounding of the fuel pump, which in combination with an electrical failure within the fuel pump and a compromised electrical bond could cause a fuel tank ignition, resulting in consequent fire or explosion.

**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 99-25-14 with No Changes**

**Inspection and Corrective Actions**

(g) Within 30 days after January 18, 2000 (the effective date of AD 99-25-14), perform a one-time visual inspection of the wire harnesses of the tail tank fuel transfer pumps to determine if metallic transitions are installed, and to determine if damaged wires are present, in accordance with McDonnell Douglas Alert Service Bulletin MD11-28A101, dated August 24, 1998.

(1) If all metallic transitions are installed, no further action is required by paragraph (g) of this AD.

(2) If metallic transitions are not installed, accomplish the following:

(i) Prior to further flight, accomplish the temporary repair in accordance with condition 2 of McDonnell Douglas Alert Service Bulletin MD11-28A101, dated August 24, 1998;

(ii) Repeat the visual inspection thereafter at intervals not to exceed 2 years; and

(iii) Within 5 years after January 18, 2000, permanently modify the wire harnesses in accordance with McDonnell Douglas Service Bulletin MD11-28-102, Revision 01, dated June 23, 1999.

Accomplishment of this modification constitutes terminating action for the repetitive inspection requirements of this AD.

Note 1: Modification of the wire harnesses accomplished prior to January 18, 2000, in accordance with McDonnell Douglas Service Bulletin MD11-28-102, dated January 29, 1999, is considered acceptable for compliance with the modification required by paragraph (g)(2)(iii) of this AD.

## **New Requirements of This AD**

### **Modification**

(h) Within 72 months after the effective date of this AD, modify the case grounding for the alternate fuel pump of the tail tank, the leak detection thermal switch grounding for the number 2 engine, and wire braid grounding in the empennage and number 2 engine inlet, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD11-28A140, dated November 6, 2008.

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

(i)(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Samuel Lee, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5262; fax (562) 627-5210.

(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.

### **Material Incorporated by Reference**

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

**Table 1 – All Material incorporated by reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Boeing Alert Service Bulletin MD11-28A140	Original	November 6, 2008
McDonnell Douglas Alert Service Bulletin MD11-28A101	Original	August 24, 1998

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McDonnell Douglas Service Bulletin MD11-28-102 Revision 01 June 23, 1999

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(1) The Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin MD11-28A140, dated November 6, 2008, under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The Director of the Federal Register previously approved the incorporation by reference of McDonnell Douglas Alert Service Bulletin MD11-28A101, dated August 24, 1998; and McDonnell Douglas Service Bulletin MD11-28-102, Revision 01, dated June 23, 1999; on January 18, 2000 (64 FR 69389, December 13, 1999).

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; e-mail [dse.boecom@boeing.com](mailto:dse.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.

(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 May 14, 2010.

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



**2010-11-13 Empresa Brasileira de Aeronautica S.A. (EMBRAER):** Amendment 39-16318.  
Docket No. FAA-2010-0176; Directorate Identifier 2009-NM-201-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective July 6, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170-100 LR, -100 STD, -100 SE, -100 SU, -200 LR, -200 STD, and -200 SU airplanes; certificated in any category.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (h)(1) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane. The FAA has provided guidance for this determination in Advisory Circular (AC) 25-1529-1A.

**Subject**

(d) Air Transport Association (ATA) of America Code 53: Fuselage; 57: Wings.

**Reason**

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

During ERJ 170 airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the airplane Airworthiness Limitation Items (ALI), to include new inspections tasks or modification of existing ones and its respective thresholds and intervals.

Failure to inspect these components according to the new tasks, thresholds and intervals, could prevent a timely detection of fatigue cracks. Undetected fatigue cracks in these areas could adversely affect the structural integrity of these airplanes.

\* \* \* \* \*

The corrective action is revising the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness (ICA) to incorporate new structural inspection requirements.

## Compliance

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

## Actions

(g) Unless already done, do the following actions.

(1) Within 90 days after the effective date of this AD, revise the ALS of the ICA to incorporate the inspection tasks identified in the EMBRAER temporary revisions (TRs) to Appendix A—Part 2 of the EMBRAER 170 Maintenance Review Board Report MRB-1621, listed in Table 1 of this AD. The initial compliance times for the tasks start from the applicable threshold times specified in the TRs for the corresponding tasks of the maintenance review board report or within 500 flight cycles after the effective date of this AD, whichever occurs later. For certain tasks, the compliance times depend on the pre-modification and post-modification status of the actions specified in the associated service bulletin, as specified in the "Applicability" column of the applicable TRs identified in Table 1 of this AD. The threshold values stated in the TRs referenced in Table 1 of this AD are total flight cycles on the airplane since the date of issuance of the original Brazilian airworthiness certificate or the date of issuance of the original Brazilian export certificate of airworthiness.

**Table 1 – Inspection Tasks**

TR	Date	Subject	Task Number
TR 4-1	October 15, 2007	Ram air turbine compartment, support structure and cutout structure—internal	53-10-012-0002
			53-10-012-0003
		Nose landing gear wheel well metallic structure	53-10-021-0005
			53-10-021-0006
TR 4-3	December 6, 2007	Wing stub spar 3 side fitting—internal	57-01-012-001
		Wing upper skin panels—external	57-10-010-0002
		Fixed trailing edge lower skin panel—external	57-50-002-0002
		Fixed trailing edge rib 4A—external	57-50-005-0003
		Fixed trailing edge rib 6—internal	57-50-005-0004
TR 4-4	January 18, 2008	Wing stub main box lower—internal	57-01-002-003

(2) After accomplishing the actions specified in paragraph (g)(1) of this AD, no alternative inspections or inspection intervals may be used unless the inspection or inspection interval is approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, or the Agência Nacional de Aviação Civil (ANAC) (or its delegated agent); or unless the inspection or interval is approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (h)(1) of this AD.

## FAA AD Differences

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

## Other FAA AD Provisions

(h) 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: Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; 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 (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

## Related Information

(i) Refer to MCAI Brazilian Airworthiness Directive 2009-04-01, dated April 29, 2009; and the TRs to Appendix A–Part 2 of the EMBRAER 170 Maintenance Review Board Report MRB-1621, identified in Table 2 of this AD; for related information.

**Table 2 – Temporary Revisions**

<b>EMBRAER Temporary Revisions</b>	<b>Date</b>
TR 4-1	October 15, 2007
TR 4-3	December 6, 2007
TR 4-4	January 18, 2008

## Material Incorporated by Reference

(j) You must use the service information contained in Table 3 of this AD 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 Empresa Brasileira de Aeronautica S.A. (EMBRAER), Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170–Putim–12227-901 São Jose dos Campos–SP–BRASIL; telephone: +55 12 3927-5852 or +55 12 3309-0732; fax: +55 12 3927-7546; e-mail: [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet: <http://www.flyembraer.com>.

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

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

**Table 3 – Material Incorporated By Reference**

<b>EMBRAER Temporary Revision –</b>	<b>Dated –</b>	<b>To –</b>
4-1	October 15, 2007	Appendix A – Part 2 of the EMBRAER 170 Maintenance Review Board Report MRB-1621
4-3	December 6, 2007	Appendix A – Part 2 of the EMBRAER 170 Maintenance Review Board Report MRB-1621
4-4	January 18, 2008	Appendix A – Part 2 of the EMBRAER 170 Maintenance Review Board Report MRB-1621

Issued in Renton, Washington, on May 14, 2010.

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



**2010-11-14 Empresa Brasileira de Aeronautica S.A. (EMBRAER):** Amendment 39-16319.  
Docket No. FAA-2010-0175; Directorate Identifier 2009-NM-187-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective July 6, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 190-100 STD, -100 LR, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes, certificated in any category.

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

**Subject**

(d) Air Transport Association (ATA) of America Code 53: Fuselage; 57: Wings.

**Reason**

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

During ERJ 190 airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the airplane Airworthiness Limitation Items (ALI), to include new inspections tasks or modification of existing ones and its respective thresholds and intervals.

Failure to inspect these components according to the new tasks, thresholds and intervals could prevent a timely detection of fatigue cracks. Undetected fatigue cracks in these areas could adversely affect the structural integrity of these airplanes.

\* \* \* \* \*

The corrective action is revising the Airworthiness Limitations Section (ALS) of the Instructions for Continued Airworthiness (ICA) to incorporate new and modified structural inspections.

### Actions and Compliance

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

(1) Within 90 days after the effective date of this AD: Revise the ALS of the ICA to include the tasks specified in Table 1 of this AD. These tasks are identified in EMBRAER Temporary Revision (TR) 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 Maintenance Review Board Report (MRBR) MRB-1928.

Note 2: The actions required by paragraph (f)(1) of this AD may be done by inserting a copy of EMBRAER TR 2-5 and TR 2-6 into the ALS of the EMBRAER 190 MRBR MRB-1928. When these TRs have been included in general revisions of the EMBRAER 190 MRBR MRB-1928, the general revisions may be inserted in the EMBRAER 190 MRBR MRB-1928, provided the relevant information in the general revision is identical to that in EMBRAER TR 2-5 and TR 2-6, and these TRs may be removed.

(2) The initial compliance times for the tasks specified in EMBRAER TR 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)—Structures, of the EMBRAER 190 MRBR MRB-1928; start at the later of the times specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this AD. For certain tasks, the compliance times depend on the pre-modification and post-modification condition of the associated service bulletin, as specified in the "Applicability" column of these TRs.

(i) Within the applicable threshold times specified in these TRs.

(ii) At the applicable compliance time specified in Table 1 of this AD.

**Table 1 – MRBR TRs and tasks, with compliance times**

<b>EMBRAER MRBR TR</b>	<b>Subject</b>	<b>MRBR task number</b>	<b>Compliance time</b>
TR 2-5, dated December 6, 2007	Wing stub main box lower skin and splices—internal	57-01-002-0002	250 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing stub spar 3—internal/external	57-01-008-0003	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing stub spar 3—external	57-01-008-0004	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing lower skin panel stringers—internal	57-10-007-0004	500 flight cycles after effective date of this AD
TR 2-5, dated December 6, 2007	Wing main box rib 11—internal	57-10-012-0003	500 flight cycles after effective date of this AD
TR 2-6, dated December 12, 2008	Nose landing gear wheel well metallic structure	53-10-021-0004	500 flight cycles after effective date of this AD

(iii) Thereafter, except as provided in paragraph (g) of this AD, no alternative replacement times or structural inspection intervals may be approved for these tasks.

## FAA AD Differences

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

Although the MCAI specifies both revising the airworthiness limitations and doing repetitive inspections, this AD only specifies the revision. Requiring revision of the airworthiness limitations, rather than requiring individual repetitive inspections, is advantageous for operators because it allows them to record AD compliance status only at the time that they make the revision, rather than after every inspection. It also has the advantage of keeping all airworthiness limitations, whether imposed by original certification or by AD, in one place within the operator's maintenance program, thereby reducing the risk of non-compliance because of oversight or confusion.

## 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: Kenny Kaulia, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2848; 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 (44 U.S.C. 3501 et seq.), 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 Brazilian Airworthiness Directive 2009-04-02, effective April 29, 2009; and EMBRAER TR 2-5, dated December 6, 2007, and EMBRAER TR 2-6, dated February 12, 2008, to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)–Structures, of the EMBRAER 190 MRBR MRB-1928; for related information.

## Material Incorporated by Reference

(i) You must use EMBRAER Temporary Revision 2-5, dated December 6, 2007; and EMBRAER Temporary Revision 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI)–Structures, of the EMBRAER 190 Maintenance Review Board Report MRB-1928; 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 Empresa Brasileira de Aeronautica S.A. (EMBRAER), Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170–Putim–12227-901 São Jose dos Campos–SP–BRASIL; telephone: +55 12 3927-5852 or +55 12 3309-0732; fax: +55 12 3927-7546; e-mail: [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet: <http://www.flyembraer.com>.

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

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

Issued in Renton, Washington, on May 13, 2010.

John Piccola,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.