



**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES  
LARGE AIRCRAFT**

**BIWEEKLY 2010-10**

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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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<b>Biweekly 2010-03</b>			
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		Sigma 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
<b>Biweekly 2010-04</b>			
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
<b>Biweekly 2010-05</b>			
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

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<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	S 2009-04-11	Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440)
2010-08-05		Airbus	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		Dassault Aviation	900EX, Mystere Falcon 900
2010-01-04	S 2009-24-11	General Electric Company	Engine: CF34-1A, CF34-3A, CF34-3A1, CF34-3A2, CF34-3B, and CF34-3B1
2010-06-04		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



**CORRECTION:** [*Federal Register: May 4, 2010 (Volume 75, Number 85)*]; Page 23579-23580;  
[www.access.gpo.gov/su\\_docs/aces/aces140.html](http://www.access.gpo.gov/su_docs/aces/aces140.html)]

**2002-23-20 Dassault Aviation (Formerly Avions Marcel Dassault-Breguet Aviation (AMD/BA)):** Amendment 39-12964. Docket 2000-NM-418-AD.

**Applicability:** Model Falcon 900EX, serial numbers 04 and up, and Mystere Falcon 900 series airplanes, serial numbers 161 and up; certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (j)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent jamming of the flap jackscrews during the approach to landing, which could result in the inability to move the flaps or an asymmetric flap condition, and consequent reduced controllability of the airplane, accomplish the following:

### Repetitive Operational Test

(a) Within 5 flight cycles after August 11, 1999 (the effective date of AD 99-14-07, amendment 39-11218): Perform an operational test of the flap asymmetry detection system to ensure that the system is functioning correctly, in accordance with the procedures specified in Dassault Falcon 900 Airplane Maintenance Manual (AMM) 27-502, dated January 1995; or Dassault Falcon 900EX AMM 27-502, dated September 1996; as applicable. Prior to further flight, repair any discrepancy detected, in accordance with a method approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate; or the Direction Generale de l'Aviation Civile (or its delegated agent). Repeat the operational test thereafter at intervals not to exceed 330 flight hours or 7 months, whichever occurs first.

### Repetitive Replacement

(b) Replace each jackscrew having part number (P/N) 5318-1 or 5318-1 Amdt A, which is located on the inboard flap in the inboard position, in accordance with the procedures specified in Dassault Falcon 900 AMM 27-521, dated December 1998; or Dassault Falcon 900EX AMM 27-510, dated September 1996; as applicable. The replacement jackscrew may be new or may have been reconditioned in accordance with paragraph (c) of this AD. Do the initial replacement at the earlier of

the times specified in paragraphs (b)(1) and (b)(2) of this AD. Repeat the replacement of a jackscrew having P/N 5318-1 or 5318-1 Amdt A thereafter at intervals not to exceed 750 flight cycles on the jackscrew located on the inboard flap in the inboard position.

(1) Prior to the accumulation of 1,000 total flight cycles on the inboard jackscrew located on the inboard flap in the inboard position, or within 25 flight cycles after August 11, 1999, whichever occurs later.

(2) Prior to the accumulation of 750 total flight cycles on the inboard jackscrew located on the inboard flap in the inboard position, or within 25 flight cycles after the effective date of this AD, whichever occurs later.

(c) A jackscrew having P/N 5318-1 and located on the inboard flap in the inboard position may be replaced by a reconditioned jackscrew having P/N 5318-1 Amdt A, provided that all of the conditions specified in paragraphs (c)(1) and (c)(2) of this AD are met.

(1) The jackscrew has been reconditioned and reidentified as P/N 5318-1 Amdt A, in accordance with Dassault Service Bulletin AVIAC 5318-27-01, dated September 16, 1999.

(2) The jackscrew has been reconditioned only one time.

(d) Prior to the accumulation of 2,200 total flight cycles on the middle jackscrew located on the inboard flap and in the outboard position, or within 25 flight cycles after August 11, 1999, whichever occurs later: Replace each jackscrew having P/N 5318-1 or 5318-1 Amdt A on the inboard flap and in the outboard position, in accordance with the procedures specified in Dassault Falcon 900 AMM 27-521, dated December 1998; or Dassault Falcon 900EX AMM 27-510, dated September 1996; as applicable. The replacement jackscrew may be new or may have been reconditioned in accordance with paragraph (e) of this AD. Repeat the replacement of a jackscrew having P/N 5318-1 or 5318-1 Amdt A thereafter at intervals not to exceed 2,200 flight cycles on the jackscrew located on the inboard flap and in the outboard position.

(e) A jackscrew having P/N 5318-1 and located on the inboard flap and in the outboard position may be replaced by a reconditioned jackscrew having P/N 5318-1 Amdt A, provided that all of the conditions specified in paragraphs (e)(1) and (e)(2) of this AD are met.

(1) The jackscrew has been reconditioned and reidentified as P/N 5318-1 Amdt A, in accordance with Dassault Service Bulletin AVIAC 5318-27-01, dated September 16, 1999.

(2) The jackscrew has been reconditioned only one time.

## **Repetitive Measurements**

(f) Prior to the accumulation of 1,000 total flight cycles on the outboard jackscrews located on the outboard flaps, or within 25 flight cycles after August 11, 1999, whichever occurs later: Measure the screw/nut play of the jackscrews having P/N 1-5319-1 or 1-5319-1 Amdt A (on the left wing) and P/N 2-5319-1 or 2-5319-1 Amdt A (on the right wing) on the outboard flaps, in accordance with the procedures specified in Dassault Falcon 900 AMM Temporary Revision (TR) 27-514, dated February 1999; or Dassault Falcon 900EX AMM TR 27-514, dated February 1999; as applicable.

**Note 2:** Jackscrews having P/N 1-5319-1 or 2-5319-1 may be reconditioned in accordance with Dassault Service Bulletin AVIAC 5319-27-01, dated September 16, 1999. These jackscrews may be reconditioned and reused more than one time.

(1) If the initial measurement is equal to or less than 0.014 inch: Repeat the measurement thereafter at intervals not to exceed 330 flight hours or 7 months, whichever occurs first. If any

repetitive measurement detects a nut/screw play greater than 0.014 inch, perform the actions required by paragraph (f)(2) of this AD.

(2) If the initial measurement is greater than 0.014 inch: Perform the actions required by paragraphs (f)(2)(i) and (f)(2)(ii) of this AD.

(i) Prior to further flight, replace the jackscrew with a new or reconditioned jackscrew, in accordance with Dassault Falcon 900 AMM 27-521, dated December 1998; or Dassault Falcon 900EX AMM 27-510, dated September 1996; as applicable.

(ii) Prior to the accumulation of 1,000 total flight cycles on the new or reconditioned jackscrew, perform a follow-on measurement of the screw/nut play, in accordance with the procedures specified in Dassault Falcon 900 AMM TR 27-514, dated February 1999; or Dassault Falcon 900EX AMM TR 27-514, dated February 1999; as applicable.

(iii) If any follow-on measurement required by paragraph (f)(2)(ii) of this AD detects a nut/screw play equal to or less than 0.014 inch, perform the actions required by paragraph (f)(1) of this AD. If any follow-on measurement required by (f)(2)(ii) of this AD detects a nut/screw play greater than 0.014 inch, perform the actions required by paragraphs (f)(2)(i) and (f)(2)(ii) of this AD.

(g) Prior to the accumulation of 600 total flight cycles on the jackscrew located on the inboard flap in the inboard position, or within 25 flight cycles after the effective date of this AD, whichever occurs later: Measure the screw/nut play of the jackscrew having P/N 5318-1 or 5318-1 Amdt A, which is located on the inboard flap in the inboard position to detect discrepancies, in accordance with the procedures specified in Dassault Falcon 900 AMM TR 27-514, dated February 1999; or Dassault Falcon 900EX AMM TR 27-514, dated February 1999; as applicable. If the measurement is greater than 0.014 inch, prior to further flight, replace the discrepant jackscrew with a new or reconditioned jackscrew, in accordance with the applicable maintenance manual.

(h) Prior to the accumulation of 1,000 total flight cycles on the jackscrew located on the inboard flap in the outboard position, or within 25 flight cycles after the effective date of this AD, whichever occurs later: Measure the screw/nut play of the jackscrew having P/N 5318-1 or 5318-1 Amdt A, which is located on the inboard flap in the outboard position, in accordance with the procedures specified in Dassault Falcon 900 AMM TR 27-514, dated February 1999; or Dassault Falcon 900EX AMM TR 27-514, dated February 1999; as applicable.

(1) If the initial measurement is equal to or less than 0.014 inch: Repeat the measurements thereafter at intervals not to exceed 330 flight hours or 7 months, whichever occurs first. If any repetitive measurement detects a nut/screw play greater than 0.014 inch, perform the actions required by paragraph (h)(2) of this AD.

(2) If the initial measurement is greater than 0.014 inch: Perform the actions required by paragraphs (h)(2)(i) and (h)(2)(ii) of this AD.

(i) Prior to further flight, replace the discrepant jackscrew with a new or reconditioned jackscrew, in accordance with Dassault Falcon 900 AMM 27-521, dated December 1998; or Dassault Falcon 900EX AMM 27-510, dated September 1996; as applicable.

(ii) Prior to the accumulation of 1,000 total flight cycles on the new or reconditioned jackscrew perform a follow-on measurement of the screw/nut play, in accordance with the procedures specified in Dassault Falcon 900 AMM TR 27-514, dated February 1999; or Dassault Falcon 900EX AMM TR 27-514, dated February 1999; as applicable.

(iii) If any follow-on measurement required by paragraph (h)(2)(ii) of this AD detects a nut/screw play equal to or less than 0.014 inch, perform the actions required by paragraph (h)(1) of this AD. If any follow-on measurement required by paragraph (h)(2)(ii) of this AD detects a nut/screw play greater than 0.014 inch, perform the actions required by paragraphs (h)(2)(i) and (h)(2)(ii) of this AD.

## **Airplane Flight Manual Revision**

(i) Within 7 days after the effective date of this AD: Revise the Abnormal Procedures Section of the FAA-approved Airplane Flight Manual (AFM) to include the following statement (this may be accomplished by inserting a copy of this AD in the AFM):

"In case of discrepancy between the control position and flap position indicator, do not change flap position control handle. Apply flight manual abnormal procedure 'Flight controls--system jamming or asymmetry' for approach speed and landing distance."

## **Alternative Methods of Compliance**

(j)(1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

(2) Alternative methods of compliance, approved previously in accordance with AD 99-14-07, amendment 39-11218, are not considered to be approved as alternative methods of compliance with this AD.

## **Special Flight Permits**

(k) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

## **Incorporation by Reference**

(l) Unless otherwise specified in this AD, the actions shall be done in accordance with Dassault Falcon 900 Airplane Maintenance Manual Temporary Revision 27-514, dated February 1999; or Dassault Falcon 900EX Airplane Maintenance Manual Temporary Revision 27-514, dated February 1999; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Dassault Falcon Jet, P.O. Box 2000, South Hackensack, New Jersey 07606. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**Note 3:** The subject of this AD is addressed in French airworthiness directive 1999-082-024(B) R2, dated September 20, 2000.

## **Effective Date**

(m) This amendment becomes effective on January 3, 2003.

Issued in Renton, Washington, on November 19, 2002.

Vi L. Lipski,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**CORRECTION:** [*Federal Register: April 30, 2010 (Volume 75, Number 83)*]; Page 22693;  
[www.access.gpo.gov/su\\_docs/aces/aces140.html](http://www.access.gpo.gov/su_docs/aces/aces140.html)]

**2010-01-04 General Electric Company:** Amendment 39-16161. Docket No. FAA-2009-0328;  
Directorate Identifier 2008-NE-44-AD.

### **Effective Date**

(a) This airworthiness directive (AD) becomes effective January 25, 2010.

### **Affected ADs**

(b) This AD supersedes AD 2009-24-11, Amendment 39-16103.

### **Applicability**

(c) This AD applies to General Electric Company (GE) CF34-1A, CF34-3A, CF34-3A1, CF34-3A2, CF34-3B, and CF34-3B1 turbofan engines. These engines are installed on, but not limited to, Bombardier Canadair Models CL-600-2A12, CL-600-2B16, and CL-600-2B19 airplanes.

### **Unsafe Condition**

(d) This AD results from the FAA discovering that the existing AD has an incorrect effectivity for certain fan blades requiring corrective actions, and from a report of an under-cowl fire and a failed fan blade. We are issuing this AD to prevent failure of certain part number (P/N) and serial number (S/N) fan blades and aft actuator head hoses, which could result in an under-cowl fire and subsequent 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.

### **CF34-3A1 and CF34-3B1 Engines**

(f) For CF34-3A1 engines that meet all of the following criteria, perform the actions specified in paragraph (i) of this AD:

- (1) Fan drive shaft, P/N 6036T78P02, installed; and
- (2) Airworthiness limitation section fan drive shaft life limit of 22,000 cycles-since-new (CSN);

and

(3) Installed fan blades, P/Ns 6018T30P14 or 4923T56G08, that have any fan blade S/Ns listed in Appendix A of General Electric Aircraft Engines (GEAE) SB No. CF34-AL S/B 72-0245, Revision 01, dated July 30, 2008.

(g) For CF34-3A1 engines that meet all of the following criteria, perform the actions specified in paragraph (i) of this AD:

- (1) Fan drive shaft, P/N 6036T78P02, installed; and
- (2) Airworthiness limitation section fan drive shaft life limit of 15,000 CSN; and
- (3) In compliance with GEAE SB No. CF34-AL S/B 72-0147, dated May 21, 2003, Revision 01, dated October 17, 2003, Revision 02, dated August 5, 2004, or Revision 3, dated August 28, 2003; and
- (4) Installed fan blades, P/Ns 6018T30P14 or 4923T56G08, that have any fan blade S/Ns listed in Appendix A of GEAE SB No. CF34-AL S/B 72-0245, Revision 01, dated July 30, 2008.

(h) For CF34-3B1 engines that meet all of the following criteria, perform the actions specified in paragraph (i) of this AD:

- (1) Installed fan blades, P/Ns 6018T30P14 or 4923T56G08; and
- (2) With any fan blade S/Ns listed in Appendix A of GEAE SB No. CF34-AL S/B 72-0245, Revision 01, dated July 30, 2008.

(i) Do the following for the engines meeting the criteria in paragraph (f), (g), or (h) of this AD, as applicable:

- (1) Remove listed fan blades from service within 4,000 cycles-in-service (CIS) after the effective date of this AD or by December 31, 2010, whichever occurs first.

#### **Initial Visual Inspection of the Fan Blade Abradable Rub Strip for Wear**

(2) For fan blades with 1,200 or more CSN on the effective date of this AD, perform an initial visual inspection of the fan blade abradable rub strip for wear within 20 CIS after the effective date of this AD. Use paragraphs 3.A.(1) through 3.A.(2) of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 72-0250, Revision 01, dated November 26, 2008, to perform the inspection.

(3) For fan blades with fewer than 1,200 CSN on the effective date of this AD, perform an initial visual inspection of the fan blade abradable rub strip for wear within 1,220 CSN. Use paragraphs 3.A.(1) through 3.A.(2) of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 72-0250, Revision 01, dated November 26, 2008, to perform the inspection.

(4) If you find a continuous 360 degree rub indication, before further flight, visually inspect the fan blades using paragraphs 3.A.(2)(a) through 3.A.(2)(b) of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 72-0250, Revision 01, dated November 26, 2008.

(5) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

#### **Repetitive Visual Inspection of the Fan Blade Abradable Rub Strip for Wear**

(6) Within 75 cycles-since-last inspection (CSLI) or 100 hours-since-last-inspection (HSLI), whichever occurs later, perform a visual inspection of the fan blade abradable rub strip for wear. Use paragraphs 3.A.(1) through 3.A.(2) of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 72-0250, Revision 01, dated November 26, 2008, to perform the inspection.

(i) If you find a continuous 360 degree rub indication, before further flight, visually inspect the fan blades using paragraphs 3.A.(2)(a) through 3.A.(2)(b) of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 72-0250, Revision 01, dated November 26, 2008.

(ii) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

## **Inspection of the Aft Actuator Head Hose Fitting on CF34-3A1 and CF34-3B1 Engines**

(7) Within 750 hours time-in-service (TIS) after the effective date of this AD, visually inspect and, if necessary, reposition the aft actuator head hose fitting. Use paragraph 3.A of the Accomplishment Instructions of GEAE SB No. CF34-AL S/B 73-0046, Revision 02, dated August 27, 2008, to perform the inspection.

### **CF34-1A, CF34-3A, CF34-3A2, CF34-3B, and CF34-3A1 Engines**

(j) For CF34-3A1 engines that meet all of the following criteria, perform the actions specified in paragraph (l) of this AD:

- (1) Fan drive shaft, P/N 6036T78P02, installed; and
- (2) Airworthiness limitation section fan drive shaft life limit of 15,000 CSN that are not in compliance with GEAE SB No. CF34-AL S/B 72-0147, dated May 21, 2003, Revision 01, dated October 17, 2003, Revision 02, dated August 5, 2004, or Revision 03, dated August 28, 2003; and
- (3) With fan blades, P/Ns 6018T30P14 or 4923T56G08, that have any fan blade S/Ns listed in Appendix A of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008.

(k) For CF34-1A, CF34-3A, CF34-3A2, and CF34-3B engines that meet all of the following criteria, perform the actions specified in paragraph (l) of this AD:

- (1) Installed fan blades, P/N 6018T30P14 or P/N 4923T56G08; and
- (2) Installed fan blade S/Ns listed in Appendix A of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008:

(l) Do the following for the engines meeting the criteria in paragraph (j) or (k) of this AD as applicable:

- (1) Remove listed fan blades, P/N 6018T30P14, from service within 2,400 CSN.
- (2) Remove listed fan blades, P/N 4923T56G08, from service within 1,200 CIS since the bushing repair of the fan blade hole.

### **Initial Eddy Current Inspection of the Fan Blades**

(3) For fan blades, P/N 6018T30P14, with more than 850 CSN, perform an initial eddy current inspection (ECI) of the fan blades for cracks within 350 CIS after the effective date of this AD. Use paragraphs 3.A. or 3.B. of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008, to perform the inspection.

(4) For fan blades, P/N 6018T30P14, with 850 or fewer CSN on the effective date of this AD, perform an initial ECI of the fan blades for cracks within 1,200 CSN. Use paragraphs 3.A. or 3.B. of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008, to perform the inspection.

(5) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

### **Repetitive ECI of the Fan Blades**

(6) For fan blades, P/N 6018T30P14, within 600 CSLI, perform an ECI of the fan blades for cracks. Use paragraphs 3.A. or 3.B. of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008, to perform the inspection.

(7) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

### **Initial Visual Inspection of the Fan Blade Abradable Rub Strip for Wear**

(8) For engines with fan blades, P/N 6018T30P14, installed that have any fan blade S/Ns listed in Appendix A of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008, with 1,200 or more CSN on the effective date of this AD, and that haven't had an ECI of the fan blades for cracks, do the following:

(i) Perform an initial inspection of the fan blade abradable rub strip for wear within 20 CIS after the effective date of this AD. Use paragraph 3.A.(1) of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0231, Revision 02, dated November 26, 2008, to perform the inspection.

(ii) If you find a continuous 360 degree rub indication, before further flight, perform a visual inspection of the fan blades for cracks. Use paragraphs 3.A(2)(a) or 3.A(2)(b) of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0231, Revision 02, dated November 26, 2008, to perform the inspection.

(iii) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

### **Repetitive Inspection of the Fan Blade Abradable Rub Strip for Wear**

(9) For engines with fan blades, P/N 6018T30P14, installed, if you have performed an ECI of the fan blade, you don't need to inspect the fan blade abradable rub strip for wear.

(10) For engines with fan blades, P/N 6018T30P14, installed, within 75 CSLI or 100 HSLI, whichever occurs later, do the following:

(i) Perform a visual inspection of the fan blade abradable rub strip for wear. Use paragraph 3.A.(1) of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0231, Revision 02, dated November 26, 2008, to perform the inspection.

(ii) If you find a continuous 360 degree rub indication, before further flight, visually inspect the fan blades using paragraphs 3.A.(2)(a) through 3.A.(2)(b) of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 72-0231, Revision 02, dated November 26, 2008.

(iii) If you find a crack in the retaining pin holes of the fan blade, remove the blade from service.

### **Inspection of the Aft Actuator Head Hose Fitting on CF34-3A1 and CF34-3B Engines**

(11) For CF34-3A1 engines, within 300 hours TIS after the effective date of this AD, visually inspect and, if necessary, reposition the aft actuator head hose fitting. Use paragraph 3.A of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 73-0062, Revision 02, dated August 27, 2008, to perform the inspection.

(12) For CF34-3B engines, within 400 hours TIS after the effective date of this AD, visually inspect and, if necessary, reposition the aft actuator head hose fitting. Use paragraph 3.A of the Accomplishment Instructions of GEAE SB No. CF34-BJ S/B 73-0062, Revision 02, dated August 27, 2008, to perform the inspection.

### **Credit for Previous Actions**

(m) Inspections previously performed using the following GEAE SBs meet the requirements specified in the indicated paragraphs:

(1) CF34-AL S/B 72-0250, dated August 15, 2008, meet the requirements specified in paragraphs (i)(2) through (i)(4) of this AD.

(2) CF34-AL S/B 73-0046, Revision 01, dated July 1, 2008, or earlier issue, meet the requirements specified in paragraph (i)(7) of this AD.

(3) CF34-BJ S/B 72-0229, dated April 10, 2008, meet the requirements specified in paragraphs (l)(3) and (l)(4) of this AD.

(4) CF34-BJ S/B 72-0231, Revision 01, dated October 1, 2008, or earlier issue, meet the requirements specified in paragraphs (l)(10)(i) and (l)(10)(ii) of this AD.

(5) CF34-BJ S/B 73-0062, Revision 01, dated July 1, 2008, or earlier issue, meet the requirements specified in paragraphs (l)(11) and (l)(12) of this AD.

### **Installation Prohibitions**

(n) After the effective date of this AD:

(1) Do not install any fan blade into any CF34-3A1 engine with fan drive shaft, P/N 6036T78P02, with an airworthiness limitation section fan drive shaft life limit of 22,000 CSN if that fan blade:

(i) Was installed in a CF34-3A1 engine with fan drive shaft, P/N 6036T78P02, with an airworthiness limitation section fan drive shaft life limit of 15,000 CSN; and

(ii) Is listed in Appendix A of GEAE SB No. CF34-BJ S/B 72-0229, Revision 01, dated July 30, 2008; or

(iii) Is listed in Appendix A of GEAE SB No. CF34-BJ S/B 72-0230, Revision 01, dated July 30, 2008.

(2) Do not install any fan blade into any CF34-3A1 engine with fan drive shaft, P/N 6036T78P02, with an airworthiness limitation section fan drive shaft life limit of 15,000 CSN if that fan blade:

(i) Was installed in any CF34-3A1 engine with fan drive shaft, P/N 6036T78P02, with an airworthiness limitation section fan drive shaft life limit of 22,000 CSN; and

(ii) Is listed in Appendix A of GEAE SB No. CF34-AL S/B 72-0245, Revision 01, dated July 3, 2008.

### **Alternative Methods of Compliance**

(o) 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**

(p) Contact John Frost, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: john.frost@faa.gov; telephone (781) 238-7756; fax (781) 238-7199, for more information about this AD.

### **Material Incorporated by Reference**

(q) You must use the GE Aircraft Engines service information specified in the following Table 1 to do the actions required by this AD.

**Table 1 - Material Incorporated by Reference**

<b>Service Bulletin No.</b>	<b>Page</b>	<b>Revision</b>	<b>Date</b>
CF34-AL S/B 73-0046	All	02	August 27, 2008
Total Pages: 8			
CF34-BJ S/B 73-0062	All	02	August 27, 2008
Total Pages: 8			
CF34-BJ S/B 72-0229	All	01	July 30, 2008
Total Pages: 158			
CF34-BJ S/B 72-0230	All	01	July 30, 2008
Total Pages: 153			
CF34-BJ S/B 72-0231	All	02	November 26, 2008
Total Pages: 8			
CF34-AL S/B 72-0245	All	01	July 03, 2008
Total Pages: 153			
CF34-AL S/B 72-0250	All	01	November 26, 2008
Total Pages: 9			

(1) The Director of the Federal Register previously approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51, as of January 4, 2010.

(2) For service information identified in this AD, contact General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, telephone (513) 552-3272; fax (513) 552-3329; e-mail: [geae.aoc@ge.com](mailto:geae.aoc@ge.com).

(3) 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 December 29, 2009.

Francis A. Favara,  
 Manager, Engine and Propeller Directorate,  
 Aircraft Certification Service.



**CORRECTION:** [*Federal Register: May 4, 2010 (Volume 75, Number 85)*]; Page 23572-23574;  
[www.access.gpo.gov/su\\_docs/aces/aces140.html](http://www.access.gpo.gov/su_docs/aces/aces140.html)]

**2010-06-04 Airbus:** Amendment 39-16228. Docket No. FAA-2009-0789; Directorate Identifier 2008-NM-185-AD.

### **Effective Date**

(a) This airworthiness directive (AD) becomes effective April 15, 2010.

### **Affected ADs**

(b) None.

### **Applicability**

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

(1) Airbus Model A300 B2-1C, A300 B2-203, A300 B2K-3C, A300 B4-103, A300 B4-203, and A300 B4-2C airplanes, all serial numbers incorporating Airbus Modification 02434 or 03599;

(2) Airbus Model A310-203, A310-204, A310-221, A310-222, A310-304, A310-322, A310-324, and A310-325 airplanes, all serial numbers, except airplanes incorporating Airbus Modification 10432;

(3) Airbus Model A300 B4-601, A300 B4-603, A300 B4-605R, A300 B4-620, A300 B4-622, and A300 B4-622R airplanes, all serial numbers, except airplanes incorporating Airbus Modification 10432.

### **Subject**

(d) Air Transport Association (ATA) of America Code 54: Nacelles/Pylons.

### **Reason**

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

"Cracks have been found on pylon side panels (upper section) at rib 8 on Airbus A300, A310 and A300-600 aircraft equipped with General Electric engines. Investigation of these findings indicates that this problem is likely to affect aircraft of this type design with other engine installations. This condition, if not corrected, can lead to reduced strength [structural integrity] of the pylon primary structure.

"In order to detect any crack propagation at an early stage, thus avoiding an extensive repair, Airbus issued Service Bulletins (SB) A300-54-0075, A310-54-2018 and A300-54-6015. \* \* \*

"This AD requires the implementation of this \* \* \* inspection programme."

The unsafe condition is reduced structural integrity of the pylon primary structure, which could cause detachment of the engine from the fuselage. Required actions include repetitive detailed visual inspections, or repetitive eddy current and detailed visual inspections, to detect cracks, depending on the airplane configuration, and corrective actions if necessary. The corrective actions include repairing the cracking, and contacting Airbus for repair instructions and doing the repair, as applicable.

### Actions and Compliance

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

(1) For Configuration 01 airplanes as identified in the applicable service bulletin identified in Table 2 of this AD: At the applicable time specified in Table 1 of this AD, except as required by paragraphs (f)(2) and (f)(3) of this AD, perform a detailed visual inspection of the pylons 1 and 2 side panels (upper section) at rib 8, in accordance with paragraph 3.B. of the Accomplishment Instructions of the applicable service bulletin identified in Table 2 of this AD. Repeat the inspection at the time specified in Table 1 of this AD.

**Table 1 – Compliance Times for Configuration 1**

For Model –	That have accumulated –	Inspect before the accumulation of –	Or within –	And repeat the inspection at intervals not to exceed –
		Whichever occurs later		
A300 B2-1C, B2-203, and B2K-3C airplanes	≤17,500 total flight cycles <sup>1</sup>	5,350 total flight cycles	2,500 flight cycles <sup>2</sup>	4,300 flight cycles.
A300 B2-1C, B2-203, and B2K-3C airplanes	>17,500 total flight cycles <sup>1</sup>	20,000 total flight cycles or 40,000 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	4,300 flight cycles.
A300 B4-103, B4-203, and B4-2C airplanes	≤18,000 total flight cycles <sup>1</sup>	5,350 total flight cycles	2,000 flight cycles <sup>2</sup>	4,300 flight cycles.
A300 B4-103, B4-203, and B4-2C airplanes	>18,000 total flight cycles <sup>1</sup>	20,000 total flight cycles or 40,000 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	4,300 flight cycles.

A300 B4-601, B4-603, B4-605R, B4-620, B4-622, and B4-622R airplanes	≤18,000 total flight cycles <sup>1</sup>	4,200 total flight cycles	2,000 flight cycles <sup>2</sup>	3,600 flight cycles.
A300 B4-601, B4-603, B4-605R, B4-620, B4-622, and B4-622R airplanes	>18,000 total flight cycles <sup>1</sup>	20,000 total flight cycles or 40,000 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	3,600 flight cycles.
A310-200 airplanes with GE CF6-80A3 or Pratt & Whitney engines	≤18,000 total flight cycles <sup>1</sup>	9,700 total flight cycles or 19,400 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	6,700 flight cycles or 13,400 flight hours, whichever occurs first.
A310-200 airplanes with GE CF6-80A3 or Pratt & Whitney engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	6,700 flight cycles or 13,400 flight hours, whichever occurs first.
A310-200 airplanes with GE CF6-80C2 engines	≤18,000 total flight cycles <sup>1</sup>	7,800 total flight cycles or 15,600 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	5,800 flight cycles or 11,600 flight hours, whichever occurs first.
A310-200 airplanes with GE CF6-80C2 engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	5,800 flight cycles or 11,600 flight hours, whichever occurs first.
A310-300 SR <sup>3</sup> airplanes with Pratt & Whitney JT9D engines	≤18,000 total flight cycles <sup>1</sup>	8,600 total flight cycles or 24,000 total flight hours, whichever occurs first	1,500 total flight cycles <sup>2</sup>	6,700 flight cycles or 18,700 flight hours, whichever occurs first.
A310-300 SR <sup>3</sup> airplanes with Pratt & Whitney JT9D engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	6,700 flight cycles or 18,700 flight hours, whichever occurs first.
A310-300 SR <sup>3</sup> airplanes with GE engines	≤18,000 total flight cycles <sup>1</sup>	7,000 total flight cycles or 19,600 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	5,700 flight cycles or 15,900 flight hours, whichever occurs first.
A310-300 SR <sup>3</sup> airplanes with GE engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	5,700 flight cycles or 15,900 flight hours, whichever occurs first.

A310-300 SR <sup>3</sup> airplanes with Pratt & Whitney 4000 engines	≤18,000 total flight cycles <sup>1</sup>	7,000 total flight cycles or 19,600 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	5,800 flight cycles or 16,200 flight hours, whichever occurs first.
A310-300 SR <sup>3</sup> airplanes with Pratt & Whitney 4000 engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	5,800 flight cycles or 16,200 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with Pratt & Whitney JT9D engines	≤18,000 total flight cycles <sup>1</sup>	5,900 total flight cycles or 29,500 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	6,000 flight cycles or 30,300 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with Pratt & Whitney JT9D engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	6,000 flight cycles or 30,300 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with GE engines	≤18,000 total flight cycles <sup>1</sup>	4,800 total flight cycles or 24,100 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	5,100 flight cycles or 25,500 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with GE engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	5,100 flight cycles or 25,500 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with Pratt & Whitney 4000 engines	≤18,000 total flight cycles <sup>1</sup>	4,800 total flight cycles or 24,000 total flight hours, whichever occurs first	1,500 flight cycles <sup>2</sup>	5,200 flight cycles or 26,300 flight hours, whichever occurs first.
A310-300 LR <sup>4</sup> airplanes with Pratt & Whitney 4000 engines	>18,000 total flight cycles <sup>1</sup>	19,500 total flight cycles or 55,500 total flight hours, whichever occurs first	250 flight cycles <sup>2</sup>	5,200 flight cycles or 26,300 flight hours, whichever occurs first.

<sup>1</sup> As of the effective date of this AD.

<sup>2</sup> After the effective date of this AD.

<sup>3</sup> "SR" applies to airplanes with average flights less than 4 flight hours.

<sup>4</sup> "LR" refers to airplanes with average flights of 4 or more flight hours.

(2) For Model A300 and A300-600 airplanes that have accumulated more than 40,000 total flight hours as of the effective date of this AD: Within 250 flight cycles after the effective date of this AD, do the actions specified in paragraph (f)(1) of this AD.

(3) For Model A310 airplanes that have accumulated more than 55,500 total flight hours as of the effective date of this AD: Within 250 flight cycles after the effective date of this AD, do the actions specified in paragraph (f)(1) of this AD.

(4) For Configuration 01 airplanes, as identified in the applicable service bulletin identified in Table 2 of this AD: If a crack is found during any inspection required by this AD, before further flight, install a doubler, in accordance with paragraph 3.C. of the Accomplishment Instructions of the applicable service bulletin identified in Table 2 of this AD.

(5) For Configuration 02 airplanes, as identified in the applicable service bulletin identified in Table 2 of this AD: At the applicable time specified in paragraph 1.E.(2) of the applicable service bulletin identified in Table 2 of this AD, or within 250 flight cycles after the effective date of this AD, whichever occurs later, perform a detailed visual inspection of the pylons 1 and 2 side panels (upper section) at rib 8, in accordance with paragraph 3.B. of the Accomplishment Instructions of the applicable service bulletin identified in Table 2 of this AD.

(6) For Configuration 03 airplanes, as identified in the applicable service bulletin identified in Table 2 of this AD: At the applicable time specified in paragraph 1.E.(2) of the applicable service bulletin identified in Table 2 of this AD, or within 250 flight cycles after the effective date of this AD, whichever occurs later, perform a detailed visual inspection, and a high frequency eddy current inspection as applicable, of the pylons 1 and 2 side panels (upper section) at rib 8, in accordance with paragraph 3.B. of the Accomplishment Instructions of the applicable service bulletin identified in Table 2 of this AD.

(7) For Configuration 02 and 03 airplanes, as identified in the applicable service bulletin identified in Table 2 of this AD: If a crack is found during any inspection required by paragraph (f)(1), (f)(5), or (f)(6) of this AD, before further flight, repair in accordance with paragraph 3.C. of the Accomplishment Instructions of the applicable service bulletin identified in Table 2 of this AD.

(8) For all airplanes, except those in Configuration 01, as identified in the applicable service bulletin identified in Table 2 of this AD: Repeat the inspection specified in paragraph (f)(1), (f)(5), or (f)(6) of this AD, as applicable, at the intervals specified in paragraph 1.E.(2) of the applicable service bulletin identified in Table 2 of this AD.

**Table 2 – Service Bulletins**

<b>For Model –</b>	<b>Use Airbus Mandatory Service Bulletin –</b>	<b>Revision –</b>	<b>Dated –</b>
A300 B2-1C, B2-203, B2K-3C, B4-103, B4-203, and B4-2C airplanes	A300-54-0075, excluding Appendices 1, 2, and 3	02	June 26, 2008.
A300 B4-601, B4-603, B4-605R, B4-620, B4-622, and B4-622R airplanes	A300-54-6015, excluding Appendices 1, 2, and 3	02	June 26, 2008.
A310 series airplanes	A310-54-2018, excluding Appendices 1, 2, and 3	02	June 26, 2008.

(9) Inspections and corrective actions accomplished prior to the effective date of this AD in accordance with the service bulletins identified in Table 3 of this AD, as applicable, are acceptable for compliance with the corresponding requirements of this AD.

**Table 3 – Previous Service Information**

<b>Service Bulletin</b>	<b>Revision</b>	<b>Date</b>
Airbus Mandatory Service Bulletin A300-54-0075	01	November 9, 2007
Airbus Mandatory Service Bulletin A300-54-6015	01	November 9, 2007
Airbus Mandatory Service Bulletin A310-54-2018	01	November 16, 2007
Airbus Service Bulletin A300-54-0075	Original	August 11, 1993
Airbus Service Bulletin A300-54-6015	Original	August 11, 1993
Airbus Service Bulletin A310-54-2018	Original	August 11, 1993

**FAA AD Differences**

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

- (1) Although the MCAI/service information allows further flight after cracks are found during compliance with certain actions, this AD requires that you repair the crack(s) before further flight.
- (2) Although the MCAI specifies to send all inspection results to Airbus, this AD does not include that requirement.

**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: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2125; fax (425) 227-1149. Before using any approved AMOC 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. 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 European Aviation Safety Agency Airworthiness Directive 2008-0181, dated October 1, 2008, and the applicable service bulletins identified in Table 2 of this AD, for related information.

**Material Incorporated by Reference**

(i) You must use the service information specified in Table 4 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

**Table 4 – Service Information**

<b>Airbus Mandatory Service Bulletin –</b>	<b>Revision –</b>	<b>Dated –</b>
A300-54-0075, excluding Appendices 1, 2, and 3	02	June 26, 2008
A300-54-6015, excluding Appendices 1, 2, and 3	02	June 26, 2008
A310-54-2018, excluding Appendices 1, 2, and 3	02	June 26, 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 Airbus SAS–EAW (Airworthiness Office), 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; e-mail: [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 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 March 4, 2010.  
Suzanne Masterson,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2010-09-02 British Aerospace Regional Aircraft:** Amendment 39-16267; Docket No. FAA-2010-0123; Directorate Identifier 2010-CE-004-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective June 3, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Jetstream Series 3101 and Jetstream Model 3201 airplanes, all serial numbers, certificated in any category.

**Subject**

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

**Reason**

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

BAE Systems have received three reports of uncommanded flap extensions affecting different Jetstream 31 aeroplanes. In one instance, the aeroplane exceeded the airspeed limit allowed for the uncommanded flap configuration, resulting in damage to the wing trailing edge.

Following investigation, it was considered that a loss of electrical signal to the "up" solenoid of the flap selector valve had occurred and, combined with the normal internal leakage in the hydraulic system, resulted in hydraulic pressure being supplied to the "down" side of the flap hydraulic jack. The loss of signal could have been intermittent, and the evidence strongly implicated oxide debris contamination of the flap selector switch contacts.

This condition, if not corrected, could lead to further cases of damage to the aeroplane due to airspeed limit exceedance, possibly resulting in asymmetric flap deployment, which could lead to loss of control of the aeroplane.

To address this unsafe condition, BAE Systems have developed a modification for the wiring to the flap selector switch, connecting a different (unused) pair of contacts to provide a duplicated signal path within the switch.

For the reasons described above, this AD requires the modification of the flap selector switch wiring.

## **Actions and Compliance**

(f) Unless already done, within 6 months after June 3, 2010 (the effective date of this AD), install modification JM7861, Introduction of a Wire Link to Flap Selector Switch, following the accomplishment instructions of BAE Systems British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 27-JM7861, dated February 12, 2008.

## **FAA AD Differences**

**Note:** 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, Standards 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: Taylor Martin, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4138; fax: (816) 329-4090. 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 (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 European Aviation Safety Agency AD No.: 2009-0267, dated December 17, 2009; and BAE Systems British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 27-JM7861, dated February 12, 2008, for related information.

## **Material Incorporated by Reference**

(i) You must use BAE Systems British Aerospace Jetstream Series 3100 & 3200 Service Bulletin 27-JM7861, dated February 12, 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 BAE Systems (Operations) Ltd, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207, fax: +44 1292 675704; E-mail: RApuplications@baesystems.com.

(3) You may review copies of the service information incorporated by reference for this AD at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the Central Region, call (816) 329-3768.

(4) You may also review copies of the service information incorporated by reference for this AD 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 Kansas City, Missouri, on April 12, 2010.

John R. Colomy,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.  
[FR Doc. 2010-9093 Filed 4-28-10; 8:45 am]  
BILLING CODE 4910-13-P



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**2010-09-03 The Boeing Company:** Amendment 39-16268. Docket No. FAA-2010-0381; Directorate Identifier 2009-NM-146-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective May 14, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to The Boeing Company Model 747-200B series airplanes, certificated in any category, identified as Group 1, Configuration 2, in Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009.

**Subject**

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

**Unsafe Condition**

(e) This AD results from reviews done by Boeing, which show that airplanes modified to the stretched upper deck (SUD) configuration by Boeing require inspection for cracking of the upper-fastener row of the left and right side stringer 6 lap joints earlier than expected. The Federal Aviation Administration is issuing this AD to detect and correct cracking of the stringer 6 lap joints where certain external doublers were not installed, which could result in rapid decompression and loss of structural integrity 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.

**Inspections**

(g) Except as required by paragraphs (h) and (i) of this AD: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, do the inspections specified in paragraphs (g)(1) and (g)(2) of this AD, and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009. Do all applicable corrective actions before further flight. Repeat the inspections specified in paragraph (g)(1) of this AD thereafter at intervals not to exceed 3,000 flight cycles, except as provided by paragraph (j) of this AD.

(1) Inspect the left and right side stringer 6 lap joints from station (STA) 340 to STA 400. The inspections include external detailed and high frequency eddy current (HFEC) inspections for cracks in the skin in areas that have not been modified or repaired as specified in paragraph 3.B., Part 2 or Part 3, respectively, of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009.

(2) Do a one-time general visual inspection of the lap joints to determine if certain fasteners are installed and to determine if structural repair manual (SRM) repairs or repair doublers are installed.

Note 1: For airplanes on which external doublers have been installed on both side of the airplanes in accordance with Boeing Service Bulletin 747-53-2272, Zone 1 modification, no further work is necessary.

### **Exceptions to Service Bulletin**

(h) Where Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, specifies a compliance time after the date on that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(i) For any condition in which Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, specifies to contact Boeing for appropriate action: those actions must be approved using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

### **Optional Terminating Action**

(j) Accomplishing the modification, including the open-hole HFEC inspections to detect skin cracks, and applicable corrective actions, specified in paragraph 3.B., Part 2, of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, terminates the repetitive inspections and repair requirements specified in paragraph (g) of this AD for the side of the airplane on which the modification is done.

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

(k)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 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) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

## Material Incorporated by Reference

(1) You must use Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, to do the actions required by this AD, unless the AD specifies otherwise. If you accomplish the optional terminating actions specified by this AD, you must use Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, as applicable, to perform those actions, 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.

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

Issued in Renton, Washington, on April 9, 2010.

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



**2010-09-04 Honeywell International Inc.:** Amendment 39-16269. Docket No. FAA-2010-0385; Directorate Identifier 2010-NM-068-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective May 14, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to Honeywell International Inc., Primus EPIC and Primus APEX flight management systems (FMS), having the FMS part numbers (P/N) listed in Table 1 of this AD, installed on, but not limited to, Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model ERJ 170 and ERJ 190 airplanes, and Pilatus Aircraft Ltd. Model PC-12/47E airplanes, certificated in any category.

**Table 1 – Part numbers**

<b>FMS Part Number</b>	<b>Model</b>
Primus EPIC FMS P/N PS7027709-00127 (Load 23.1), and PS7027709-00129 (Load 23.2), both with NZ7.1 VAR12ZS FMS software	ERJ 170 airplanes
Primus EPIC FMS P/N PS7027709-00214 (Load 23.1), and PS7027709-00217 (Load 23.2), both with NZ7.1 VAR12ZS FMS software	ERJ 190 airplanes
Primus APEX FMS P/N EB7037248-00103, with NZ7.1 VAR12 FMS software	PC-12/47E airplanes

**Subject**

(d) Air Transport Association (ATA) of America Code 34: Navigation.

**Unsafe Condition**

(e) This AD results from discovery of software anomalies which, in certain situations, can cause the FMS to generate misleading navigational guidance to the pilots and to the autopilot system of

various airplanes having this same system software. The Federal Aviation Administration is issuing this AD to provide the flightcrew with procedures to recover from or work around these software anomalies during flight, which could lead to an airplane departing from its scheduled flight path, and result in possible collision with other aircraft or terrain.

## 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.

### Revise the Airplane Flight Manual (AFM)

(g) Within 14 days after the effective date of this AD, revise the Limitations section of the applicable AFM to include the information in the applicable service information letter (SIL) specified in Table 2 of this AD.

**Table 2 – Service information**

<b>Honeywell Service Information Letter –</b>	<b>Revision –</b>	<b>Model –</b>	<b>Dated –</b>
D201002000007	Original	PC-12/47E airplanes	February 16, 2010
D201002000051	1	ERJ 170 and ERJ 190 airplanes	March 26, 2010
D201002000052	Original	ERJ 170 and ERJ 190 airplanes	March 3, 2010

Note 1: The actions required by paragraph (g) of this AD may be done by inserting a copy of the applicable SIL specified in Table 2 of this AD into the applicable AFM. When the applicable SIL has been included in the general revisions of the applicable AFM, the general revisions may be inserted into the AFM, provided the relevant information in the general revision is identical to that in the SIL.

### Alternative Methods of Compliance (AMOCs)

(h) The manager of the office having certificate responsibility for the affected airplanes has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Before using any approved AMOC on any aircraft 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.

(1) For transport airplanes: Send information to ATTN: Chip Adam, Flight Test Pilot, Flight Test Branch, ANM-160L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5369; fax (562) 627-5210.

(2) For small airplanes: Send information to ATTN: Doug Rudolph, Aerospace Engineer, Small Airplane Directorate, FAA, 901 Locust Street, Room 301, Kansas City, Missouri 64106; telephone (816) 329-4059; fax (816) 329-4090.

### Material Incorporated by Reference

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

**Table 3 – Material incorporated by reference**

<b>Document</b>	<b>Revision</b>	<b>Date</b>
Honeywell Service Information Letter D201002000007	Original	February 16, 2010
Honeywell Service Information Letter D201002000051	1	March 26, 2010
Honeywell Service Information Letter D201002000052	Original	March 3, 2010

(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 Honeywell Technical Operations Center, 1944 E. Sky Harbor Circle, Phoenix, Arizona 85034; telephone 602-365-3099 or 800-601-3099; fax 602-365-3343; e-mail AeroTechSupport@Honeywell.com; Internet <http://portal.honeywell.com/wps/portal/aero>.

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

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

Issued in Renton, Washington on April 8, 2010.

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



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**2010-09-05 The Boeing Company:** Amendment 39-16270. Docket No. FAA-2010-0430; Directorate Identifier 2010-NM-098-AD.

**Effective Date**

(a) This AD becomes effective April 29, 2010.

**Affected ADs**

(b) This AD supersedes AD 2010-06-51, Amendment 39-16250.

**Applicability**

(c) This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes; certificated in any category.

**Subject**

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

**Unsafe Condition**

(e) This AD results from a report of failure of the aft attach lugs on the left elevator tab control mechanism, which resulted in severe elevator vibration; this event occurred on an airplane on which the existing AD had been done. The Federal Aviation Administration is issuing this AD to detect and correct a loose bearing in the aft lug of the elevator tab control mechanism, which could result in unwanted elevator and tab vibration. Consequent structural failure of the elevator or horizontal stabilizer could result in loss of structural integrity and aircraft control.

**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 2010-06-51**

**Inspection and Corrective Action**

(g) For Groups 1, 2, and 3; and Group 4, Configuration 2; as identified in Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010: At the applicable time specified in paragraph 1.E. Compliance of Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010, except as required by paragraph (i) of this AD, do a detailed inspection of the inboard and outboard aft attach

lugs of the left and right elevator control tab mechanisms for gaps between the swage ring and the aft attach lug, and between the spacer and the aft attach lug; and try to move or rotate the spacer using hand pressure; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010. Doing the inspection required by paragraph (m) or (o) of this AD, as applicable, terminates the requirements of this paragraph.

(h) If, during accomplishment of the actions required by paragraph (g) of this AD, any gap is found between the swage ring and the aft attach lug, or between the spacer and the aft attach lug; or if the spacer moves or rotates: Before further flight, do the actions required by paragraphs (h)(1) and (h)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010.

(1) Inspect the replacement elevator tab control mechanism for discrepancies, as specified in paragraph (g) of this AD; and, if no discrepancy is found, install the replacement elevator tab control mechanism.

(2) Re-inspect the installed elevator tab control mechanism, as required by paragraph (g) of this AD.

### **Exception to Service Bulletin Specifications**

(i) Where Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010, specifies a compliance time after the date of the original issue of the service bulletin, this AD requires compliance within the specified compliance time after April 7, 2010 (the effective date of AD 2010-06-51).

### **Inspection Done According to Multi Operator Message (MOM)**

(j) An inspection done before April 7, 2010, according to Boeing Multi Operator Message Number MOM-MOM-10-0159-01B, dated March 10, 2010, is considered acceptable for compliance with the corresponding inspection specified in paragraph (g) of this AD.

### **Reporting**

(k) At the applicable time specified in paragraph (k)(1) or (k)(2) of this AD: Submit a report of the findings (both positive and negative) of the inspections required by paragraph (g) of this AD to Boeing Commercial Airplanes Group, Attention: Manager, Airline Support, e-mail: rse.boecom@boeing.com. The report must include the inspection results including a description of any discrepancies found, the airplane line number, and the number of flight cycles and flight hours accumulated on the airplane. 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 contained in this AD and has assigned OMB Control Number 2120-0056.

(1) If the inspection was done on or after April 7, 2010: Submit the report within 10 days after the inspection.

(2) If the inspection was done before April 7, 2010: Submit the report within 10 days after April 7, 2010.

### **Parts Installation Specified in AD 2010-06-51**

(l) For all airplanes: As of April 7, 2010, and until the effective date of this AD, no person may install an elevator tab control mechanism, part number 251A2430-( ), on any airplane, unless the

mechanism has been inspected before and after installation, in accordance with the requirements of paragraph (g) of this AD, and no discrepancies have been found. As of the effective date of this AD, comply with paragraph (u) of this AD.

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

#### **Repetitive Inspections for Group 1 Airplanes, as Identified in Boeing Alert Service Bulletin 737-27A1297, Dated April 16, 2010**

(m) For Group 1 airplanes, as identified in Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010: Except as required by paragraph (n) of this AD, within 12 days after the effective date of this AD, do a detailed inspection for discrepancies of the inboard and outboard aft attach lugs of the left and right elevator control tab mechanisms, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010. Repeat the inspection thereafter at intervals not to exceed 300 flight hours until the replacement specified in paragraph (r) of this AD is done. Doing the initial inspection required by this paragraph terminates the requirements of paragraph (g) of this AD.

(n) For Group 1 airplanes as identified in Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010: Beginning 7 days after the effective date of this AD, no person may operate an airplane on an extended twin operations (ETOPS) flight unless the initial inspection required by paragraph (m) of this AD has been accomplished.

#### **One-Time Inspection for Group 2, Configuration 1 Airplanes, as Identified in Boeing Alert Service Bulletin 737-27A1297, Dated April 16, 2010**

(o) For Group 2, Configuration 1 airplanes as identified in Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010: Within 30 days after the effective date of this AD, do a one-time detailed inspection for discrepancies of the inboard and outboard aft attach lugs of the left and right elevator control tab mechanisms, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010. Doing the inspection required by this paragraph terminates the requirements of paragraph (g) of this AD.

### **Corrective Actions**

(p) If, during any inspection required by paragraph (m), (o), or (q) of this AD, any discrepancy is found, before further flight, replace the elevator tab control mechanism by doing the actions specified in paragraphs (p)(1) and (p)(2) of this AD.

(1) Do a detailed inspection for discrepancies of the replacement elevator tab control mechanism; and, if no discrepancy is found, install the replacement elevator tab control mechanism; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010. If any discrepancy is found, then that elevator tab control mechanism cannot be installed and the actions specified in this paragraph must be done before further flight on another replacement elevator tab control mechanism.

(2) Re-inspect the installed elevator tab control mechanism using the inspection procedure specified in paragraph (o) of this AD.

## **Repetitive Inspections for Certain Group 2, Configuration 1 Airplanes, as Identified in Boeing Alert Service Bulletin 737-27A1297, Dated April 16, 2010**

(q) For Group 2, Configuration 1 airplanes as identified in Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010, on which the elevator control tab mechanism is replaced with a mechanism other than a new, Boeing-built mechanism: Within 300 flight hours after doing the replacement, do a detailed inspection for discrepancies of the inboard and outboard aft attach lugs of the left and right elevator control tab mechanisms, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010. Repeat the inspection thereafter at intervals not to exceed 300 flight hours until the replacement specified in paragraph (r) of this AD is done.

### **Terminating Action**

(r) Replacing an elevator tab mechanism with a new, Boeing-built mechanism, as specified in paragraphs (r)(1) and (r)(2) of this AD, terminates the inspections required by paragraphs (m), (o), and (q) of this AD.

Note 1: Refer to paragraphs 3.B.7.b.(1)(a)1 and 3.B.7.b.(1)(a)2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010, to establish whether the mechanism is Boeing-built.

(1) Do a detailed inspection for discrepancies of the new, Boeing-built replacement elevator tab control mechanism; and, if no discrepancy is found, install the replacement elevator tab control mechanism; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010. If any discrepancy is found, then that elevator tab control mechanism cannot be installed and the actions specified in this paragraph must be done on another new, Boeing-built replacement elevator tab control mechanism.

(2) Re-inspect the installed elevator tab control mechanism using the inspection procedure specified in paragraph (o) of this AD.

### **Reporting**

(s) At the applicable time specified in paragraph (s)(1) or (s)(2) of this AD: Submit a report of any findings (positive and negative) of the first inspection required by paragraphs (m), (o), and (q) of this AD, and any positive findings from the repetitive inspections required by this AD, to Boeing Commercial Airplanes Group, Attention: Manager, Airline Support, e-mail: [rse.boecom@boeing.com](mailto:rse.boecom@boeing.com). The report must include the inspection results including a description of any discrepancies found, the airplane line number, and the total number of flight cycles and flight hours accumulated on the airplane. 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 contained in this AD and has assigned OMB Control Number 2120-0056.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 10 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 10 days after the effective date of this AD.

## **Return of Discrepant Parts**

(t) If, during any inspection required by paragraph (m), (o), or (q) of this AD, any discrepancy is found, and if the inspection was done on or after the effective date of this AD: Within 30 days after the inspection, return the discrepant elevator tab control mechanism, and include a copy of the inspection report sent to Boeing, as specified in paragraph (s) of this AD, to: Spares Distribution Center, Attention: Manager, Airline Support, Repair Overhaul and Exchange Services, SSA 111, Boeing Commercial Airplane Group, 2201 South 142nd Street, Door W10, Seatac, Washington, USA, 98168.

## **Parts Installation**

(u) For all airplanes identified in paragraph (c) of this AD: As of the effective date of this AD, comply with the conditions specified in paragraphs (u)(1) and (u)(2) of this AD.

(1) No person may install an elevator tab control mechanism, part number 251A2430-(), on any airplane, unless the mechanism has been inspected before and after installation using the inspection procedures specified in either paragraphs (p)(1) and (p)(2) of this AD, or in paragraphs (r)(1) and (r)(2) of this AD; and no discrepancies have been found.

(2) An elevator tab control mechanism, part number 251A2430-(), that is not a new, Boeing-built elevator tab control mechanism may be installed, provided that the mechanism is inspected using the inspection procedures specified in paragraph (m) of this AD within 300 flight hours after doing the installation, and that the inspection is repeated thereafter at the interval specified in paragraph (m) of this AD.

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

(v)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Kelly McGuckin, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-917-6490; fax 425-917-6590. Information may be e-mailed 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 refer to this AD.

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

(4) AMOCs approved previously in accordance with AD 2010-06-51 are approved as AMOCs for the corresponding provisions of paragraph (g) or (l) of this AD.

## **Material Incorporated by Reference**

(w) You must use Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010; or Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010; 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 Boeing Alert Service Bulletin 737-27A1297, dated April 16, 2010, 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 Boeing Alert Service Bulletin 737-27A1296, dated March 12, 2010, on April 7, 2010 (75 FR 16648, April 2, 2010).

(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.

(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 April 19, 2010.

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



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**2010-09-06 Bombardier, Inc.:** Amendment 39-16271. Docket No. FAA-2009-1111; Directorate Identifier 2009-NM-147-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective June 3, 2010.

**Affected ADs**

- (b) None.

**Applicability**

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

(1) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes having serial numbers 10003 through 10259 inclusive.

(2) Model CL-600-2D15 (Regional Jet Series 705) and Model CL-600-2D24 (Regional Jet Series 900) airplanes having serial numbers 15001 through 15099 inclusive.

**Subject**

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

**Reason**

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

During an elevator Power Control Unit (PCU) Centering Functional Check on two CL-600-2C10 aircraft, sustained oscillations were discovered when a control rod was disconnected. These sustained oscillations could render the elevator surface inoperable and cause subsequent loss of pitch control of the aircraft.

This directive mandates incorporation of a new centering mechanism on the elevator torque tube to prevent these sustained oscillations.

Loss of pitch control could result in reduced controllability of the airplane.

**Actions and Compliance**

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

(1) Within 6,000 flight hours after the effective date of this AD, install a new PCU centering mechanism, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-27-042, Revision C, dated December 10, 2009.

(2) Incorporation of Bombardier Service Bulletin 670BA-27-042, dated October 14, 2008; or Revision A, dated January 8, 2009; before the effective date of this AD, is considered acceptable for compliance with this AD only if Bombardier Repair Engineering Order (REO) 670-27-31-001, dated January 12, 2009; or Bombardier Service Non-Incorporated Engineering Order (SNIEO) S01 or S02 from Bombardier Kit Drawing KBA670-93702, Revision C, dated January 28, 2009; is incorporated at the same time. Incorporation of Bombardier Service Bulletin 670BA-27-042, Revision B, dated June 2, 2009, before the effective date of this AD, is considered acceptable for compliance with the corresponding actions 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, New York Aircraft Certification Office, ANE-170, 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: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC 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 Canadian Airworthiness Directive CF-2009-28, dated June 29, 2009; and Bombardier Service Bulletin 670BA-27-042, Revision C, dated December 10, 2009; for related information.

### **Material Incorporated by Reference**

(i) You must use Bombardier Service Bulletin 670BA-27-042, Revision C, dated December 10, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

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

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

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

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

Issued in Renton, Washington, on April 15, 2010.

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



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**2010-09-07 Bombardier, Inc.:** Amendment 39-16272. Docket No. FAA-2010-0431; Directorate Identifier 2010-NM-072-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective May 14, 2010.

**Affected ADs**

- (b) None.

**Applicability**

(c) This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes; certificated in any category, that are equipped with Thales angle of attack (AOA) vanes having part number (P/N) C16177AC.

**Subject**

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

**Reason**

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

Although there have been no in-service reported incidents related to AOA failures on the DHC-8 Series 400 aeroplanes, two separate issues have been identified that would affect proper operation of the AOA vane, P/N C16177AC. These issues are:

1. A potential freezing of the AOA Vane Resolver, which may restrict the dynamic behavior (lag) of the vane and could lead to a potential seize-up condition at lower temperatures. This condition, if not corrected, may provide inaccurate AOA data to the Stall Protection System (SPS).
2. As a result of ageing, the AOA vane heating element could degrade to a point where there is insufficient heat to prevent ice build-up on the AOA vanes. The ice build-up may lead to a change in the aerodynamic properties of the AOA vane and, under certain conditions, send inaccurate information to the SPS. This ageing condition cannot be detected by the aircraft AOA vane heater current monitor.

This directive mandates replacement of the vanes equipped with suspect resolvers and a periodic inspection of the in-rush current to verify the AOA vane heating capability.

These conditions, if not corrected, could result in inaccurate AOA data provided to the SPS and could lead to a change in the aerodynamic properties of the AOA vane and reduced ability of the flight crew to maintain safe flight and landing 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.

## **Actions**

(g) Within 250 flight hours after the effective date of this AD: Do an inspection to determine the serial number of the AOA sensors installed on the airplane, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the AOA sensors can be conclusively determined from that review.

(1) If neither serial number is specified in paragraph 1.A., Table 1, of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009, do the actions required by paragraph (h) of this AD.

(2) If the serial numbers of both AOA sensors are specified in paragraph 1.A., Table 1, of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009, and both serial numbers have suffix

"B," do the actions required by paragraph (h) of this AD.

(3) If the serial numbers of both AOA sensors are specified in paragraph 1.A., Table 1, of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009, do the actions required by either paragraph (g)(3)(i) or (g)(3)(ii) of this AD.

(i) Before further flight, replace the AOA sensors with new or serviceable sensors, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009.

(ii) Before further flight, replace one of the two AOA sensors with a new or serviceable sensor, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009. Replace the remaining sensor with a new or serviceable sensor within 750 flight hours after the inspection required by paragraph (g) of this AD.

(4) If only one of the serial numbers of the AOA sensors is specified in paragraph 1.A., Table 1, of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009, replace that sensor with a new or serviceable sensor within 750 flight hours after the inspection required by paragraph (g) of this AD.

(h) At the applicable compliance time specified in Table 1 of this AD: Measure the inrush current of the AOA vane, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-27-46, dated October 20, 2009.

(1) If, during any measurement required by paragraph (h) of this AD, an AOA vane is found to have an inrush current less than or equal to 1.6 amps, before further flight, replace the vane with a new or serviceable vane, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-27-46, dated October 20, 2009. Repeat the measurement of the newly installed vane within 2,000 flight hours after replacement.

(2) If, during any measurement required by paragraph (h) of this AD, an AOA vane is found to have an inrush current greater than 1.6 amps, repeat the measurement of the vane at the applicable compliance time specified in Table 2 of this AD.

**Table 1 - Initial measurement**

<b>For any AOA vane that, as of the effective date of this AD, has accumulated –</b>	<b>Do the initial inrush current measurement –</b>
Less than 5,000 total flight hours	Before the AOA vane has accumulated 5,900 total flight hours.
5,000 or more total flight hours, but less than 6,000 total flight hours	Within 900 flight hours after the effective date of this AD, or before the AOA vane has accumulated 6,500 total flight hours, whichever occurs first.
6,000 or more total flight hours	Within 500 flight hours after the effective date of this AD.

**Table 2 - Repetitive measurement intervals**

<b>If the last inrush current measurement of the serviceable AOA transducer is -</b>	<b>Then repeat the measurement -</b>
More than 1.60 amps, but less than or equal to 1.70 amps	Within 1,000 flight hours after the last inrush current measurement of the serviceable AOA transducer.
More than 1.70 amps	Within 2,000 flight hours after the last inrush current measurement of the serviceable AOA transducer.

(i) As of the effective date of this AD, no person may install, on any airplane, an AOA sensor having P/N C16177AC with any serial number specified in paragraph 1.A., Table 1, of Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009, unless the sensor has been inspected in accordance with this AD and unless the serial number has a suffix "B."

### **FAA AD Differences**

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

(1) Canadian Airworthiness Directive CF-2010-05, dated February 2, 2010, requires an inspection to determine the serial number of the AOA vanes installed on the airplane. However, for clarification, we are requiring an inspection to determine the serial number of the AOA sensors (which are part of the vane), as specified in Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009.

(2) Canadian Airworthiness Directive CF-2010-05, dated February 2, 2010, states that an airplane may be dispatched with one serviceable unit for a maximum of 1,000 flight hours. However, paragraph (g)(3)(ii) of this AD allows an airplane to be dispatched with one serviceable unit for a maximum of 750 flight hours. This difference has been coordinated with Transport Canada Civil Aviation (TCCA).

(3) Canadian Airworthiness Directive CF-2010-05, dated February 2, 2010, states that if only one of the serial numbers of the affected AOA sensors is found, replace that sensor with a new or serviceable sensor within 1,000 flight hours. However, paragraph (g)(4) of this AD requires

replacement with a new or serviceable sensor within 750 flight hours. This difference has been coordinated with TCCA.

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), 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: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC 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**

(k) Refer to MCAI Canadian Airworthiness Directive CF-2010-05, dated February 2, 2010; Bombardier Alert Service Bulletin A84-27-46, dated October 20, 2009; and Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009; for related information.

### **Material Incorporated by Reference**

(l) You must use Bombardier Alert Service Bulletin A84-27-46, dated October 20, 2009; and Bombardier Alert Service Bulletin A84-27-51, dated December 22, 2009; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

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

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

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

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

Issued in Renton, Washington, on April 15, 2010.

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



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**2010-09-10 Bombardier, Inc.:** Amendment 39-16275. Docket No. FAA-2009-0525; Directorate Identifier 2009-NM-027-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective June 3, 2010.

**Affected ADs**

- (b) This AD supersedes AD 2003-04-21 R1, Amendment 39-13070.

**Applicability**

- (c) This AD applies to Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, serial numbers 7003 and subsequent.

**Subject**

- (d) Air Transport Association (ATA) of America Code 11: Placards and markings.

**Reason**

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

AD CF-2002-12 [which corresponds to FAA AD 2003-04-21, amendment 39-13070] mandated installation of revised overwing emergency exit placards showing that the exit door should be opened and disposed from a seated position. However, it was later discovered that the new placards illustrated an incorrect hand position for removal of the exit upper handle cover. These incorrect instructions could cause difficulty or delay when opening the overwing emergency exit.

As a result, the timely and safe evacuation of passengers and crew may be impeded. The required action includes replacing the incorrect placards with revised placards.

**Restatement of Certain Requirements of AD 2003-04-21 R1**

- (f) Unless already done, for airplanes identified in Table 1 of this AD, within 12 months after April 4, 2003 (the effective date of AD 2003-04-21 R1), replace the door weight placards, and no-baggage placards with new placards (including cleaning of the applicable surface), as applicable, per Bombardier Alert Service Bulletin A601R-11-077, Revision A, dated December 11, 2001, excluding

Service Bulletin Comment Sheet–Facsimile Reply Sheet and CRJ 100/200 Service Bulletin Compliance Facsimile Reply Sheet.

**Table 1 – Serial Numbers**

<b>Serial Nos.</b>
7003 through 7434 inclusive
7436 through 7442 inclusive
7444 through 7452 inclusive
7454 through 7458 inclusive
7460 through 7497 inclusive
7499 through 7504 inclusive

(g) Replacement accomplished before April 4, 2003, per Bombardier Alert Service Bulletin A601R-11-077, dated July 12, 2001, is considered acceptable for compliance with the replacement specified in paragraph (f) of this AD.

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

#### **Actions and Compliance**

(h) Unless already done, within 24 months after the effective date of this AD, replace the existing overwing emergency exit placards with new placards in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 601R-11-088, Revision B, dated November 17, 2009.

(i) Replacing the overwing emergency exit placards with new placards before the effective date of this AD in accordance with Bombardier Service Bulletin 601R-11-088, dated June 25, 2008; or Revision A, dated March 24, 2009; is 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: The MCAI applicability includes certain airplanes. This AD expands the applicability to include serial numbers 7003 and subsequent.

#### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office, 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: Program Manager, ANE-170, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York, 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC 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. AMOCs approved previously in accordance with AD 2003-04-21, Amendment 39-13070, are approved as AMOCs for the corresponding provisions of 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**

(k) Refer to MCAI Canadian Airworthiness Directive CF-2009-02, dated January 19, 2009; Bombardier Alert Service Bulletin A601R-11-077, Revision A, dated December 11, 2001; and Bombardier Service Bulletin 601R-11-088, Revision B, dated November 17, 2009; for related information.

### **Material Incorporated by Reference**

(l) You must use Bombardier Service Bulletin 601R-11-088, Revision B, dated November 17, 2009; and Bombardier Alert Service Bulletin A601R-11-077, Revision A, dated December 11, 2001, excluding Service Bulletin Comment Sheet–Facsimile Reply Sheet and CRJ 100/200 Service Bulletin Facsimile Reply Sheet; 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 Bombardier Service Bulletin A601R-11-088, Revision B, dated November 17, 2009, 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 Bombardier Alert Service Bulletin A601R-11-077, Revision A, dated December 11, 2001, excluding Service Bulletin Comment Sheet–Facsimile Reply Sheet and CRJ 100/200 Service Bulletin Compliance Facsimile Reply Sheet, on April 4, 2003 (68 FR 9509, February 28, 2003).

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

(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 April 16, 2010.

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



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**2010-09-11 BAE Systems (Operations) Limited:** Amendment 39-16276. Docket No. FAA-2009-1250; Directorate Identifier 2008-NM-169-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective June 8, 2010.

**Affected ADs**

- (b) The AD supersedes AD 93-01-11, Amendment 39-8465.

**Applicability**

(c) This AD applies to all BAE SYSTEMS (Operations) Limited Model BAe 146-100A, -200A, and -300A series airplanes, and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category.

**Subject**

- (d) Air Transport Association (ATA) of America Code 57: Wings.

**Reason**

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

In 1991, the UK Civil Aviation Authority (CAA) issued AD 015-08-91 [which corresponds to FAA AD 93-01-11], requiring the accomplishment of inspections of, and in case of crack findings, corrective actions on, the wing top skin at rib '0' of pre-modification HCM00851C BAe 146 series aircraft in accordance with British Aerospace Service Bulletin (SB) 57-41 dated 26 July 1991. Recently, BAE Systems (Operations) Ltd has determined that a revised inspection programme for the wing top skin and joint strap at rib '0' on all BAe 146 and AVRO 146-RJ aircraft is necessary to assure the continued structural integrity of this area. Cracking of the wing centre section top skin, if undetected, could lead to structural failure and consequent loss of the aircraft.

For the reasons described above, this new EASA [European Aviation Safety Agency] AD supersedes UK CAA AD 015-08-91 and requires repetitive high-frequency eddy current (HFEC), radiographic, ultrasonic, and detailed visual inspections [for cracking and corrosion] of the wing top skin and joint strap at rib '0', the reporting of all inspection results to BAE Systems and, in case of findings, the accomplishment of corrective actions.

The corrective actions include repairing cracking and corrosion, and contacting BAE Systems (Operations) Limited for repair instructions and doing the repair.

### **Restatement of Requirements of AD 93-01-11, With No Changes**

(f) Unless already done, for Model BAe 146-100A, -200A, and -300A series airplanes: Prior to the accumulation of 24,000 landings, or within 60 days after March 2, 1993 (the effective date of AD 93-01-11), whichever occurs later: Perform an X-ray inspection to detect fatigue cracks in the left and right wing upper skins, joint straps, and stringers in the vicinity of rib "0," in accordance with British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991. Doing the inspection required by paragraph (g)(1) of this AD terminates the inspection required by this paragraph.

(1) If cracks are found, prior to further flight, repair in accordance with a method approved by the Manager, Standardization Branch, ANM-113, Transport Airplane Directorate, FAA; or the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA. As of the effective date of this AD, repair in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA. Thereafter, repeat the inspection required by paragraph (f) of this AD at intervals not to exceed 9,000 landings, in accordance with British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991, until the initial inspection required by paragraph (g)(1) of this AD is accomplished.

(2) If no cracks are found, repeat the inspection required by paragraph (f) of this AD at intervals not to exceed 9,000 landings, in accordance with British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991, until the initial inspection required by paragraph (g)(1) of this AD is accomplished.

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

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

Note 1: The instructions of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007, which is the subject of this AD, are divided into two parts; consequently, the statement in paragraph 1.C. of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007, that there are three parts is incorrect and can be disregarded.

(1) At the applicable compliance time specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD: Do an HFEC inspection of the front and rear spar flanges, a detailed visual inspection of the stringers, and a detailed visual inspection of the stringer crown fittings, all at the rib "0" joint strap, for cracking and corrosion, and do all applicable corrective actions, in accordance with "Part 1" of paragraph 2.C., "Inspection," of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007. Repeat the inspections thereafter at intervals not to exceed 4,000 flight cycles. Do all applicable corrective actions before further flight. Accomplishment of these initial inspections terminates the inspections required by paragraphs (f), (f)(1), and (f)(2) of this AD.

(i) For airplanes on which an inspection was not done in accordance with Supplemental Structural Inspection (SSI) 57-10-101 (MPD 571001-DVI-10000-1) as of the effective date of this AD: Prior to the accumulation of 20,000 total flight cycles, or within 4,000 flight cycles after the effective date of this AD, whichever occurs later.

(ii) For airplanes on which an inspection was done in accordance with SSI 57-10-101 (MPD 571001-DVI-10000-1) as of the effective date of this AD: Within 3,000 flight cycles after the effective date of this AD.

(2) At the applicable compliance time specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD: Do detailed visual and HFEC inspections to detect cracking and corrosion of the rib "0" strap, a radiographic inspection of the rib "0" joint, and an ultrasonic inspection of the skin at the rib "0" joint strap, and do all applicable corrective actions, in accordance with "PART 2" of paragraph 2.C. "Inspection" of BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007. Do all applicable corrective actions before further flight. Repeat the inspections thereafter at intervals not to exceed 4,000 flight cycles.

(i) For airplanes on which an inspection was not done in accordance with SSI 57-10-102 and 57-10-102A (MPD 571002-SDI-10000-1 and 571002-SDI-10000-2) as of the effective date of this AD: Before the accumulation of 24,000 total flight cycles, or within 4,000 flight cycles after the effective date of this AD, whichever occurs later.

(ii) For airplanes on which an inspection was done in accordance with SSI 57-10-102 or 57-10-102A (MPD 571002-SDI-10000-1 or 571002-SDI-10000-2) as of the effective date of this AD: Within 3,000 flight cycles after the effective date of this AD.

(3) Submit a report of the findings (both positive and negative) of the initial inspections required by paragraphs (g)(1) and (g)(2) of this AD to BAE Systems (Operations) Limited, at the applicable time specified in paragraph (g)(3)(i) or (g)(3)(ii) of this AD. The report must include the inspection results, a description of any discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane. Send reports to Customer Liaison, Customer Support (Building 37), BAE SYSTEMS (Operations) Limited, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland; fax +44 (0) 1292 675432; e-mail raengliaison@baesystems.com.

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

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

(4) Accomplishment of any repair does not constitute terminating action for the inspection requirements 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, 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 (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 European Aviation Safety Agency (EASA) Airworthiness Directive 2008-0168, dated September 2, 2008; British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991; and BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007; for related information.

### **Material Incorporated by Reference**

(j) You must use British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991; and BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007; 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 BAE Systems (Operations) Limited Inspection Service Bulletin ISB.57-070, dated October 15, 2007, 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 British Aerospace Inspection Service Bulletin 57-41, dated July 26, 1991, on March 2, 1993 (58 FR 6081, January 26, 1993).

(3) 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>.

(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 April 22, 2010.

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



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**2010-09-12 McDonnell Douglas Corporation:** Amendment 39-16277. Docket No. FAA-2010-0032; Directorate Identifier 2009-NM-213-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective June 8, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to 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 airplanes; certificated in any category.

**Subject**

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

**Unsafe Condition**

(e) This AD results from fuel system reviews conducted by the manufacturer. The Federal Aviation Administration is issuing this AD to prevent point-of-contact arcing or filament heating damage in the fuel tanks, which could result in fuel tank explosions and consequent loss 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.

**Installation**

(g) Within 60 months after the effective date of this AD, install electrical bonding jumpers for the fill valve controllers of the fuel tanks, in accordance with the Accomplishment Instructions of Boeing Service Bulletin DC10-28-249, Revision 1, dated November 6, 2008 (for 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, and MD-10-30F airplanes); or Boeing Service Bulletin MD11-28-135, Revision 1, dated November 6, 2008 (for Model MD-11 and MD-11F airplanes).

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

(h)(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: Philip Kush, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5263; 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**

(i) You must use Boeing Service Bulletin DC10-28-249, Revision 1, dated November 6, 2008; or Boeing Service Bulletin MD11-28-135, Revision 1, dated November 6, 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, 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>.

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

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

Issued in Renton, Washington, on April 22, 2010.

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



**2010-09-14 CFM International, S.A.:** Amendment 39-16279. Docket No. FAA-2008-1353; Directorate Identifier 2008-NE-46-AD.

### **Effective Date**

- (a) This airworthiness directive (AD) becomes effective June 8, 2010.

### **Affected ADs**

- (b) This AD supersedes AD 2009-01-01, Amendment 39-15779.

### **Applicability**

(c) This AD applies to CFM International, S.A. 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 turbofan engines. 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 reduction of the affected engine models listed in AD 2009-01-01 from 25 to 19, a reduction in the engine exhaust gas temperature (EGT) margin deterioration threshold from 80 °C to 75 °C, the introduction of terminating action to the continuous EGT monitoring for certain engines, and a change to the removal plan for the remaining engines if the EGT margin deterioration is greater than 75 °C. We are issuing this AD to prevent high-pressure compressor stalls, which could prevent continued safe flight or 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.

(f) On the effective date of this AD, and at any time after the effective date of this AD, for CFM International, S.A. CFM56-5B1/P, -5B2/P, -5B3/P, -5B3/P1, -5B4/P, -5B4/P1, -5B5/P, -5B6/P, -5B7/P, -5B8/P and -5B9/P turbofan engines:

(1) Monitor and calculate engine EGT margin deterioration. Use paragraphs 3.A.(2) and 3.A.(3) of the Accomplishment Instructions and Appendix A of CFM International, S.A. Alert Service Bulletin (ASB) No. CFM56-5B S/B 72-A0722, Revision 1, dated March 20, 2009, to do the monitoring and calculating.

(2) As mandatory terminating action to the repetitive recalculating and monitoring of EGT margin deterioration, remove FADEC software version 5.B.Q and earlier versions from engines that have greater than 75 °C of EGT margin deterioration within 150 additional cycles-in-service (CIS).

(3) As mandatory terminating action to the repetitive recalculating and monitoring of EGT margin deterioration, remove FADEC software version 5.B.Q and earlier versions from engines that have less than or equal to 75 °C of EGT margin deterioration within 900 additional CIS.

(g) On the effective date of this AD, and at any time after the effective date of this AD, for CFM International, S.A. CFM56-5B1/2P, -5B2/2P, -5B3/2P, -5B3/2P1, -5B4/2P, -5B4/2P1, -5B6/2P and -5B9/2P turbofan engines:

(1) Monitor and calculate engine EGT margin deterioration. Use paragraphs 3.A.(2) and 3.A.(3) of the Accomplishment Instructions and Appendix A of CFM International, S.A. ASB No. CFM56-5B S/B 72-A0722, Revision 1, dated March 20, 2009, to do the monitoring and calculating.

(2) Remove engines from service that have greater than 75 °C of EGT margin deterioration within 150 additional CIS.

### **Installation Prohibitions**

(h) For engines listed in paragraph (f) of this AD, after the effective date of this AD, do not install FADEC software version 5.B.Q or any earlier software versions.

(i) For engines listed in paragraph (g) of this AD, after the effective date of this AD, do not install an engine that has greater than 75 °C of EGT margin deterioration.

### **Interim Actions**

(j) These actions are interim actions and we anticipate further rulemaking actions in the future, including further action to address the remaining engines in service that are above 75 °C deterioration of EGT margin.

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

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

### **Related Information**

(l) Refer to European Aviation Safety Agency Airworthiness Directive 2009-0088, Revision 1, dated April 28, 2009, for related information.

(m) Contact Wayne Maguire, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: wayne.maguire@faa.gov; telephone (781) 238-7778; fax (781) 238-7199, for more information about this AD.

### **Material Incorporated by Reference**

(n) You must use CFM International, S. A. Alert Service Bulletin No. CFM56-5B S/B 72-A0722, Revision 1, dated March 20, 2009, to perform the EGT calculating and monitoring 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, S.A., Technical Customer Support, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-3272; fax (513) 552-3329, Web address <http://customer.geae.com>, 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 April 23, 2010.  
Peter A. White,  
Assistant Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.



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**2010-10-04 Bombardier, Inc.:** Amendment 39-16283. Docket No. FAA-2010-0435; Directorate Identifier 2010-NM-084-AD.

**Effective Date**

- (a) This airworthiness directive (AD) becomes effective May 20, 2010.

**Affected ADs**

- (b) None.

**Applicability**

- (c) This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, serial numbers 4001 through 4169 inclusive, certificated in any category.

**Subject**

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

**Reason**

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

Operators of DHC-8 400 Series aeroplanes have been reporting chafing of wires in the AC wire harnesses located along the lower wing shroud on either wing resulting in a loss of various system services. Chafed wires may lead to arcing, local overheating and AC generator failure. The AC generators provide power to the anti-icing heaters, including pitot/static heater, engine adapter heater, and propeller heater. Failure of both AC generators would result in the loss of these systems and poses a safety concern.

Investigation has revealed that at four wiring harness tie down mount locations, the blind fasteners used to attach the tie down mount base were found to have protruding stems which chafed through the wire insulation leading to arcing damage. In addition, the wire chafing along the wing rear spar lower shroud has been attributed to sagging wire bundles resting on the structure and insufficient support in low clearance areas.

This directive mandates the replacement of the blind fasteners with solid rivets, and to inspect for and rectify damaged wiring along the wing lower shroud.

Loss of both AC generators could lead to unannounced loss of heat to both engine inlets, which could lead to loss of power in both engines during icing conditions. The required actions also include a detailed inspection for damage and chafing of the wires in the wiring harness installation, and the Teflon tubing if necessary. The corrective actions (rectifying) include replacement or repair of the chafed or damaged wire or Teflon tubing.

### **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.

### **Replacement of Blind Fasteners, Inspection for Chafing at Four Wiring Harness Tie Down Mount Locations and Corrective Action**

(g) Within 200 flight hours after the effective date of this AD: Replace the blind fasteners installed at the four wiring harness tie down mount locations with solid rivets; and do a detailed inspection for chafing and damage of the wires and, as applicable, of any Teflon tubing and do all applicable corrective actions; in accordance with paragraph B.(6) of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-24-44, Revision A, dated February 2, 2010. Do all applicable corrective actions before further flight.

### **Inspection of AC Feeder Cables Along Lower Wing Shroud and Corrective Action**

(h) At the applicable time in paragraph (h)(1) or (h)(2) of this AD: Do a detailed inspection of the wiring harness installation along the wing rear spar lower shroud for any chafing and damage, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-24-44, Revision A, dated February 2, 2010. Do all applicable corrective actions before further flight.

(1) For airplanes with AC feeder cables not covered with protective Teflon tubing (Modsum Number IS4Q2450001 or production Modsum 4Q109946 not incorporated): Within 600 flight hours after the effective date of this AD.

(2) For airplanes with AC feeder cables covered with protective Teflon tubing (Modsum Number IS4Q2450001 or production Modsum 4Q109946 incorporated): Within 4,000 flight hours after the effective date of this AD.

(i) For airplanes on which the temporary repair specified in Bombardier Repair Drawing 8/4-24-011, Issue 2, dated January 21, 2010, has been done: Within 600 flight hours after accomplishing the temporary repair or 60 flight hours after the effective date of this AD, whichever occurs later, do the permanent repair or replace the wiring, in accordance with Bombardier Repair Drawing 8/4-24-011, Issue 2, dated January 21, 2010.

### **Actions According to Previous Issue of Service Information**

(j) Actions done before the effective date of this AD in accordance with Bombardier Alert Service Bulletin A84-24-44, dated January 27, 2010, are acceptable for compliance with the corresponding requirements of paragraphs (g) and (h) of this AD.

(k) Actions done before the effective date of this AD in accordance with any modification summary identified in Table 1 of this AD are acceptable for compliance with the corresponding requirements of paragraph (g) of this AD.

**Table 1 – Modification Summaries**

<b>Bombardier Modification Summary -</b>	<b>Revision -</b>	<b>Dated -</b>
IS4Q5700013	A	January 12, 2010
IS4Q5700013	B	January 20, 2010
IS4Q5700013	C	January 27, 2010

### **Reporting Requirement**

(1) Submit a report of the findings (both positive and negative) of the inspection required by paragraph (h) of this AD to Bombardier Technical Help Desk; telephone 416-375-4000; e-mail thd.qseries@aero.bombardier.com; at the applicable time specified in paragraph (1)(1) or (1)(2) of this AD. Use Figures 1 and 2 (Feedback Form) of Bombardier Alert Service Bulletin A84-24-44, Revision A, dated February 2, 2010, to submit the report. The report must include the inspection results, a description of any discrepancies found, the airplane serial number, and the number of landings and flight hours on the airplane.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 14 days after the inspection.

(2) If the inspection was accomplished prior to the effective date of this AD: Submit the report within 14 days after the effective date of this AD.

### **FAA AD Differences**

Note 1: This AD differs from the MCAI and/or service information as follows: The MCAI does not specify a compliance time for doing a permanent repair or replacement for airplanes on which a temporary repair is done. This AD requires that the temporary repair is replaced by a permanent repair or replacement of the wiring. We have coordinated this difference with Transport Canada Civil Aviation (TCCA).

### **Other FAA AD Provisions**

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

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANE-170, New York 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: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York, 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC 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

(n) Refer to MCAI Canadian Airworthiness Directive CF-2010-08, dated March 16, 2010; Bombardier Alert Service Bulletin A84-24-44, Revision A, dated February 2, 2010; and Bombardier Repair Drawing 8/4-24-011, Issue 2, dated January 21, 2010; for related information.

### Material Incorporated by Reference

(o) You must use Bombardier Alert Service Bulletin A84-24-44, Revision A, dated February 2, 2010; and Bombardier Repair Drawing 8/4-24-011, Issue 2, dated January 21, 2010; as applicable; to do the actions required by this AD, unless the AD specifies otherwise. Bombardier Repair Drawing 8/4-24-011, Issue 2, dated January 21, 2010, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1, 3	2	January 21, 2010.*
2, 4-7	1	January 18, 2010.*

\* Only the first page of this repair drawing contains the issue dates.

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

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

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

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

Issued in Renton, Washington, on April 27, 2010.

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