

**FEDERAL AVIATION ADMINISTRATION  
AIRWORTHINESS DIRECTIVES**

**LARGE AIRCRAFT**

**BIWEEKLY 2014-07**

*3/24/2014 - 4/6/2014*



Federal Aviation Administration  
Engineering Procedures Office, AIR-110  
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# LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Information Key: E - Emergency; COR - Correction; S - Supersedes

## Biweekly 2014-01

2013-25-04		Embraer S.A.	ERJ 170-100 LR, -100 STD, -100 SE., -100 SU, ERJ 170-200 LR, -200 SU, -200 STD, ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, ERJ 190-200 STD, -200 LR, and -200 IGW
2013-25-06		Airbus	A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-26-01 2013-26-02		CFM International S.A. Bombardier, Inc.	CFM56-3 series and CFM56-7B series turbofan engines CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705) and CL-600-2D24 (Regional Jet Series 900)
2013-26-03	S 2011-24-09	Airbus	A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, and A340-642
2013-26-04 2013-26-06	S 2010-19-01	The Boeing Company Rolls-Royce Corporation	747-400, -400D, and -400F series AE 3007A, A1, A1/1, A1/2, A1/3, A1P, A1E, and A3 turbofan engines
2013-26-07		Airbus	A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2013-26-08 2013-26-10		The Boeing Company Rolls-Royce plc	737-600, -700, -700C, -800, -900, and -900ER series RB211-524G2-19, RB211-524G3-19, RB211-524H-36, and RB211-524H2-19 turbofan engines
2013-26-12	S 2009-14-02	The Boeing Company	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series

## Biweekly 2014-02

There were no AD's published in this Large Bi-weekly period

## Biweekly 2014-03

2013-24-04	S 2003-19-11	Learjet Inc.	60
2013-25-03	S 2000-17-05 S 2001-04-09	The Boeing Company	767-200, -300, -300F, and -400ER series
2014-01-04		Bae Systems (Operations) Limited	BAe 146-100A, -200A, -300A, Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A
2014-01-05 2014-02-01	S 2011-03-13	The Boeing Company Bombardier, Inc.	737-100, -200, -200C, -300, -400, and -500 series CL-600-2C10 (Regional Jet Series 700, 701, & 702), CL-600-2D15 (Regional Jet Series 705), and CL-600-2D24 (Regional Jet Series 900)

## Biweekly 2014-04

2014-03-07 2014-03-08	S 2009-26-16	The Boeing Company Airbus	MD-11 and MD-11F A318-111, -112, -121, -122, A319-111, -112, -113, -114, -115, -131, -132, -133, A320-111, -211, -212, -214, -231, -232, -233, A321-111, -112, -131, -211, -212, -213, -231, and -232
2014-03-09		ATR-GIE Avions de Transport Régional	ATR42-200, -300, -320, -500, ATR72-101, -201, -102, -202, -211, -212, and -212A
2014-03-14		Airbus	A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, -343, A340-211, -212, -213, -311, -312, -313, -541, and -642
2014-03-16		Rolls-Royce Deutschland Ltd & Co. KG	Tay 620-15, 650-15, and 651-54 turbofan engines
2014-03-17		Bombardier, Inc.	CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A, CL-601-3R, & CL-604 Variants)

## Biweekly 2014-05

2014-01-03 2014-03-04 2014-03-05 2014-03-06		Saab AB, Saab Aerosystems Bombardier, Inc. Bombardier, Inc. Boeing	340A (SAAB/SF340A) and SAAB 340B airplanes DHC-8-400, -401, and -402 airplanes BD-700-1A10 airplanes 737-100, -200, -200C, -300, -400, and -500 series airplanes
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## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S - Supersedes			
2014-03-12	S 2002-23-19	Dassault Aviation	FALCON 2000 airplanes
2014-03-13		Fokker Services B.V.	F.28 Mark 0070 and 0100 airplanes
2014-03-15	S 2008-14-16	328 Support Services GmbH	328-100, 328-300 airplanes
2014-03-19		Boeing	737-600, -700, -800, -900, and -900ER series airplanes
2014-03-21		Boeing	727-200 and 727-200F series airplanes
2014-04-05		Boeing	737-100, -200, -200C, -300, -400, and -500 series airplanes
2014-04-08		Bombardier, Inc.	CL-600-2B19 (Regional Jet Series 100 & 440) airplanes
2014-05-02	S 2002-10-11	Boeing	737-100, -200, -200C, -300, -400, and -500 series airplanes
2014-05-03		Boeing	777-200, -200LR, -300, -300ER, and -777F series airplanes
2014-05-05		Boeing	777-200, -200LR, -300, -300ER, and 777F series airplanes
<b>Biweekly 2014-06</b>			
2014-05-09	S 2012-12-08	Boeing	777-200 and -300 series airplanes
2014-05-12	S 2010-15-08	Boeing	737-100, -200, -200C, -300, -400, and -500 series airplanes
2014-05-13	S 2004-12-07	Boeing	757-200, -200PF, and -200CB series airplanes
2014-05-16		Boeing	747-200B, 747-300, 747-400, 747-400D, and 747-400F series airplanes; 767-200, -300, -300F, and -400ER series airplanes
2014-05-18		Bombardier	DHC-8-400, -401, and -402 airplanes
2014-05-19		Boeing	747-200B, 747-200F, 747-300, and 747SP series airplanes; 747-400 and 747-400F series airplanes; 767-300 series airplanes
2014-05-20		Boeing	757-200, -200PF, -200CB, and -300 series airplanes
2014-05-21	S 2008-11-04	Boeing	737-100, -200, -200C, -300, -400, and -500 series airplanes
2014-05-22		Boeing	717-200 airplanes
2014-05-23		Bombardier	BD-100-1A10 (Challenger 300) airplanes
2014-05-24	S 84-19-01	Boeing	747-100, 747-200B, and 747-200F series airplanes
2014-05-25		Rolls-Royce plc	RB211-Trent 970-84, RB211-Trent 970B-84, RB211-Trent 972-84, RB211-Trent 972B-84, RB211-Trent 977-84, RB211-Trent 977B-84, and RB211-Trent 980-84 turbofan engines
2014-05-30	S 2013-07-07	Boeing	737-600, -700, -700C, -800, -900, and -900ER series airplanes
2014-06-02		Boeing	747-400 series airplanes
<b>Biweekly 2014-07</b>			
2013-26-14	S 2008-08-04	Airbus	A318, A319, A320, A321 airplanes
2014-04-09		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes
2014-04-10		Airbus	A330, A340 airplanes
2014-05-14		Boeing	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes
2014-05-17		Bombardier	DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes
2014-05-27		Rockwell Collins	Mode S transponders
2014-05-28		Bombardier	DHC-8-400, -401, and -402 airplanes
2014-05-31	S 2008-08-25	Boeing	747-400F, 747-400 series airplanes
2014-05-32		Pratt & Whitney	PW2037, PW2037D, PW2037M, PW2040, PW2040D, PW2043, PW2143, PW2240, PW2337, PW2643, and F117-PW-100 turbofan engines
2014-06-04		Boeing	747-8 and 747-8F series airplanes
2014-06-05	S 2007-03-02	Rolls-Royce Deutschland	Tay 620-15, Tay 650-15 and Tay 651-54 turbofan engines
2014-06-08		Bombardier	DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes
2014-06-09	S 2009-18-18	ATR-GIE Avions de Transport Régional	ATR42-200, -300, -320, and -500 airplanes; ATR72-101, -201, -102, -202, -211, -212, and -212A airplanes
2014-06-10	S 2014-06-10	Airbus	A330, A340 airplanes
2014-07-02		Rolls-Royce Deutschland	BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines



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**2013-26-14 Airbus:** Amendment 39-17723. Docket No. FAA-2011-1253; Directorate Identifier 2011-NM-079-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 2, 2014.

**(b) Affected ADs**

This AD supersedes AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008).

**(c) Applicability**

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

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Reason**

This AD was prompted by reports of cracks found in the forward lug of the main landing gear (MLG) support rib 5 fitting. We are issuing this AD to prevent cracking in the forward lug of the MLG, which could result in failure of the lug and consequent collapse of the MLG during takeoff or landing.

**(f) Compliance**

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

**(g) Retained Repetitive Detailed Inspections With Changes**

This paragraph restates the requirements of paragraph (f) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), with changes. Except for airplanes on which Airbus modification 32025 has been accomplished in production, within 8 days after June 7, 2006 (the effective date of AD 2006-11-04, Amendment 39-14608 (71 FR 29578, May 23, 2006)), or before further flight after a hard landing, whichever is first: Perform a detailed inspection for cracking in the forward lug of the support rib 5 fitting of the left- and right-hand MLG, and, if any crack is found, replace the MLG fitting with a new fitting before further flight, in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, or

the European Aviation Safety Agency (EASA) (or its delegated agent). Repeat the inspection thereafter at intervals not to exceed 8 days, or before further flight after a hard landing, whichever is first. As of May 19, 2008 (the effective date of AD 2008-08-04), the repetitive inspections required by paragraph (k) of this AD must be accomplished in lieu of the repetitive inspections required by this paragraph.

#### **(h) Retained Optional Inspection Method With Revised Service Information**

This paragraph restates the provisions of paragraph (g) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), with revised service information. Performing an ultrasonic inspection for cracking in the forward lug of the support rib 5 fitting of the left- and right-hand MLG, in accordance with an applicable method specified in paragraph (h)(1) or (h)(2) of this AD, is an acceptable alternative method of compliance for the initial and repetitive inspections required by paragraph (g) of this AD.

(1) In accordance with a method approved by the Manager, International Branch, ANM-116, or the EASA (or its delegated agent).

(2) In accordance with Task 57-29-03-270-801-A-01, Gear Rib Forward Lug Attachment for the Main Gear Before Modification 32025J2211, of Subject 57-29-03, Inspection of the Gear Rib Forward and Aft Lug Attachment for the Main Gear (for Model A318, A319, and A320 series airplanes); or Task 57-29-04-270-801-A-01, Gear Rib Forward Lug Attachment for the Main Gear Before Modification 32025J2211, of Subject 57-29-04, Inspection of the Gear Rib Forward and Aft Lug Attachment for the Main Gear (for Model A321 series airplanes); both of Chapter 57, Wings, of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision 89, dated August 1, 2011.

#### **(i) Retained Optional Terminating Action With Changes**

This paragraph restates the provisions of paragraph (h) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), with changes. Repair of the forward lugs of the support rib 5 fitting of the left- and right-hand MLG done before the effective date of this AD, in accordance with a method approved by the Manager, International Branch, ANM-116, or the EASA (or its delegated agent), constitutes terminating action for the requirements of paragraphs (g), (h), (k), (l), and (m) of this AD.

#### **(j) New Referenced Conditions With Revised Affected Airplanes**

To identify affected airplanes in paragraphs (k), (m), and (o) of this AD, this AD refers to the following conditions:

(1) Airplanes on which the modification of the MLG rib bushes specified in Airbus Mandatory Service Bulletin A320-57-1118 has been done.

(2) Airplanes on which a repair of the MLG support rib 5 fitting, as specified in paragraph 5.C. of Subsection 57-26-13, Attachments–Main Landing Gear, of the Airbus A319 Structural Repair Manual (SRM), Revision November 1, 2004; paragraph 5.D. of Subsection 57-26-13, Attachments–Main Landing Gear, of the Airbus A320 SRM, Revision November 1, 2004; or paragraph 5.D. of Subsection 57-26-13, Attachments–Main Landing Gear, of the Airbus A321 SRM, Revision February 1, 2005; as applicable; has been done.

(3) Airplanes on which replacement in service of the MLG support rib 5 specified in Airbus Repair Instruction R572-58507 and Airbus Repair Drawing R572-58209, or Airbus Repair Instruction R572-45020 and Airbus Repair Drawing R572-45019, as applicable, has been done.

### **(k) Retained Repetitive Inspections With Changes**

This paragraph restates the requirements of paragraph (i) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), with changes. For airplanes on which none of the actions specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD have been done, except for airplanes on which Airbus modification 32025 has been accomplished: At the applicable time specified in paragraphs (k)(1) and (k)(2) of this AD, or before further flight after a hard landing, whichever is first, do a visual inspection or ultrasonic inspection for cracking in the forward lug of the support rib 5 fitting of the left and right MLG, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1138, Revision 01, dated October 27, 2006. Repeat the inspection thereafter at the applicable interval specified paragraphs (k)(1) and (k)(2) of this AD, or before further flight after a hard landing, whichever is first, until the modification required by paragraph (m) of this AD has been accomplished. Accomplishing the initial inspection terminates the requirements of paragraph (g) of this AD.

(1) For Model A318, A319, and A320 airplanes, inspect at the applicable times specified in paragraphs (k)(1)(i) and (k)(1)(ii) of this AD.

(i) If the most recent inspection is a detailed inspection done in accordance with paragraph (g) of this AD: Inspect within 150 flight cycles after the most recent detailed inspection. Repeat the inspection thereafter at intervals not to exceed 150 flight cycles after a visual inspection.

(ii) If the most recent inspection is an ultrasonic inspection done in accordance with paragraph (h) of this AD: Inspect within 940 flight cycles after the most recent ultrasonic inspection. Repeat the inspection thereafter at intervals not to exceed 940 flight cycles after an ultrasonic inspection.

(2) For Model A321 airplanes, inspect at the applicable times specified in paragraphs (k)(2)(i) and (k)(2)(ii) of this AD.

(i) If the most recent inspection is a detailed inspection done in accordance with paragraph (g) of this AD: Inspect within 100 flight cycles after the most recent detailed inspection. Repeat the inspection thereafter at intervals not to exceed 100 flight cycles after a visual inspection.

(ii) If the most recent inspection is an ultrasonic inspection done in accordance with paragraph (h) of this AD: Inspect within 630 flight cycles after the most recent ultrasonic inspection. Repeat the inspection thereafter at intervals not to exceed 630 flight cycles after an ultrasonic inspection.

### **(l) Retained Corrective Action**

This paragraph restates the requirements of paragraph (j) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008). If any cracking is found during any inspection required by paragraph (k) of this AD: Before further flight, repair or replace the cracked MLG fitting, in accordance with a method approved by the Manager, International Branch, ANM-116, or the EASA (or its delegated agent).

### **(m) Retained Rib Bushing Modification With Revised Service Information**

This paragraph restates the requirements of paragraph (k) of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), with revised service information. Except for airplanes on which the actions specified in paragraph (j)(1) or (j)(3) of this AD have been done, and except for airplanes on which Airbus modification 32025 have been done: Within 60 months after May 19, 2008 (the effective date of AD 2008-08-04), modify the rib bushings of the left and right MLG, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-57-1118, Revision 05, dated July 23, 2012, except that the liquid penetrant inspection specified in this service information is not required by this AD. Accomplishing this modification terminates the requirements of paragraphs (g) and (k) of this AD, and then the requirements of paragraph (n) of this AD must be done.

**(n) New Post-Modification/Post-Repair Inspections**

For airplanes on which the actions specified in paragraph (j)(1), (j)(2), or (m) of this AD have been done: At the later of the times specified in paragraphs (n)(1) and (n)(2) of this AD, do a detailed inspection for cracks of the forward lug of each left-hand and right-hand MLG support rib 5 fitting, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-57A1166, Revision 01, dated October 19, 2011. Repeat the inspection thereafter at intervals not to exceed 500 flight cycles.

(1) Within 2,000 flight cycles after accomplishing the modification specified in paragraph (j)(1) or (m) of this AD, or the repair specified in paragraph (j)(2) of this AD, as applicable.

(2) Within 250 flight cycles after the effective date of this AD, without exceeding 3 months after the effective date of this AD.

**(o) New Repair of Cracking Found During Post-Modification/Post-Repair**

If any crack is detected during any inspection required by paragraph (n) of this AD: Before further flight, repair using a method approved by either the Manager, International Branch, ANM-116, FAA, or the EASA (or its delegated agent).

**(p) New Optional Terminating Action**

Replacement of a MLG support rib 5 fitting at any position (left-hand or right-hand), as specified in paragraph (j)(3) of this AD, terminates the requirements of paragraphs (k) and (n) of this AD for the MLG support rib 5 fitting at that position.

**(q) New Repetitive Detailed Inspection for Certain Airplanes**

For airplanes on which the actions specified in paragraph (j)(3) of this AD have been done: Within 60 months after the replacement or within 500 flight cycles after the effective date of this AD, whichever occurs later, do a detailed inspection of the forward lug of each left-hand and right-hand MLG support rib 5 fitting that has been replaced, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-57A1166, Revision 01, dated October 19, 2011. Repeat the inspection thereafter at intervals not to exceed 500 flight cycles.

**(r) New Repetitive Inspections for Airplanes With Airbus Modification 32025**

For airplanes on which Airbus modification 32025 has been done: At the applicable time specified in paragraph (r)(1) (r)(2), (r)(3), or (r)(4) of this AD, do a detailed inspection for cracks of the forward lug of each left-hand and right-hand MLG support rib 5 fitting, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1168, dated November 7, 2011. Repeat the inspection thereafter at intervals not to exceed 500 flight cycles.

(1) For airplanes on which the MLG support rib 5 has not been modified or repaired since the first flight of the airplane as of the effective date of this AD: Within 60 months after the first flight of the airplane, or within 500 flight cycles after the effective date of this AD, whichever occurs later.

(2) For airplanes on which the MLG support rib 5 has been replaced as specified in paragraph (j)(3) of this AD as of the effective date of this AD: Within 60 months after the replacement of the MLG support rib 5, or within 500 flight cycles after the effective date of this AD, whichever occurs later.

(3) For airplanes on which the MLG support rib 5 has been repaired according to the SRM or a repair approval sheet as of the effective date of this AD: At the later of the times specified in paragraph (r)(3)(i) or (r)(3)(ii) of this AD.

(i) Within 2,000 flight cycles after the repair.

(ii) Within 250 flight cycles or 3 months after the effective date of this AD, whichever occurs first.

(4) For airplanes having a manufacturer serial number (S/N) listed in figure 1 to paragraph (r)(4) of this AD, and on which the MLG support rib 5 has been inspected before the effective date of this AD according to specific Airbus repair instructions or technical disposition: At the later of the times specified in paragraph (r)(4)(i) or (r)(4)(ii) of this AD.

**Figure 1 to Paragraph (r)(4) of This AD**  
**[Manufacturer serial number (S/N)]**

S/N—		
1965	2056	2155
2274	2278	2288
2321	2478	2586
2588	2612	2672
2688	2707	2929
2942	3089	3117
3361	3427	3486
3489	3806	3891
3937	4243	4345

(i) Within 2,000 flight cycles after the last inspection done using specific Airbus repair instructions or a technical disposition, or within 60 months since first flight of the airplane, whichever occurs later.

(ii) Within 250 flight cycles or 3 months after the effective date of this AD, whichever occurs first.

#### **(s) New Repair of Cracking**

If any crack is detected during any inspection required by paragraph (q) or (r) of this AD: Before further flight, repair using a method approved by either the Manager, International Branch, ANM-116, FAA, or the EASA (or its delegated agent).

#### **(t) Credit for Previous Actions**

(1) This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Chapter 51-90-00 of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision February 1, 2003, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraph (t)(2)(i) or (t)(2)(ii) of this AD.

(i) Chapter 57-29-03 of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision February 1, 2005 (for Model A318, A319, and A320 airplanes), which is not incorporated by reference in this AD.

(ii) Chapter 57-29-04 of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision May 1, 2005 (for Model A321 airplanes), which is not incorporated by reference in this AD.

(3) This paragraph provides credit for the actions specified in paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the applicable service information specified in paragraph (t)(3)(i), (t)(3)(ii), or (t)(3)(iii) of this AD.

(i) Paragraph 5.C. of Chapter 57-26-13, Attachments–Main Landing Gear, of the Airbus A319 SRM, Revision November 1, 2004, which is not incorporated by reference in this AD.

(ii) Paragraph 5.D. of Chapter 57-26-13, Attachments–Main Landing Gear, of the Airbus A320 SRM, Revision November 1, 2004, which is not incorporated by reference in this AD.

(iii) Paragraph 5.D. of Chapter 57-26-13, Attachments–Main Landing Gear, of the Airbus A321 SRM, Revision February 1, 2005, which is not incorporated by reference in this AD.

(4) This paragraph provides credit for the inspections required by paragraphs (n) and (r) of this AD, if the inspections were performed before the effective date of this AD using Airbus Service Bulletin A320-57A1166, dated January 12, 2011, which is not incorporated by reference in this AD.

(5) This paragraph provides credit for the modification required by paragraph (m) of this AD, if the modification was performed before May 19, 2008 (the effective date of AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008), using the service information identified in paragraph (t)(5)(i), (t)(5)(ii), (t)(5)(iii), (t)(5)(iv), or (t)(5)(v) of this AD.

(i) Airbus Service Bulletin A320-57-1118, dated September 5, 2002, which is not incorporated by reference in this AD.

(ii) Airbus Service Bulletin A320-57-1118, Revision 01, dated August 28, 2003, which is not incorporated by reference in this AD.

(iii) Airbus Service Bulletin A320-57-1118, Revision 02, dated August 2, 2006, which is not incorporated by reference in this AD.

(iv) Airbus Service Bulletin A320-57-1118, Revision 03, dated April 23, 2007, which is not incorporated by reference in this AD.

(v) Airbus Mandatory Service Bulletin A320-57-1118, Revision 04, dated June 4, 2008, which is not incorporated by reference in this AD.

#### **(u) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD. AMOCs approved previously in accordance with AD 2006-11-04, Amendment 39-14608 (71 FR 29578, May 23, 2006); and AD 2008-08-04, Amendment 39-15456 (73 FR 19975, April 14, 2008); 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 ensure the product is airworthy before it is returned to service.

**(v) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2012-0032, dated February 24, 2012, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2011-1253-0002>.

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (w)(5) and (w)(6) of this AD.

**(w) Material Incorporated by Reference**

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

(2) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on May 2, 2014.

(i) Airbus Mandatory Service Bulletin A320-57-1118, Revision 05, dated July 23, 2012.

(ii) Airbus Mandatory Service Bulletin A320-57A1166, Revision 01, dated October 19, 2011.

(iii) Airbus Service Bulletin A320-57-1168, dated November 7, 2011.

(iv) Task 57-29-03-270-801-A-01, Gear Rib Forward Lug Attachment for the Main Gear Before Modification 32025J2211, of Subject 57-29-03, Inspection of the Gear Rib Forward and Aft Lug Attachment for the Main Gear, of Chapter 57, Wings, of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision 89, dated August 1, 2011.

(v) Task 57-29-04-270-801-A-01, Gear Rib Forward Lug Attachment for the Main Gear Before Modification 32025J2211, of Subject 57-29-04, Inspection of the Gear Rib Forward and Aft Lug Attachment for the Main Gear, of Chapter 57, Wings, of the Airbus A318/A319/A320/A321 Nondestructive Testing Manual, Revision 89, dated August 1, 2011.

(4) The following service information was approved for IBR on May 19, 2008 (73 FR 19975, April 14, 2008):

(i) Airbus Service Bulletin A320-57-1138, Revision 01, dated October 27, 2006.

(ii) Reserved.

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

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

(7) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on December 26, 2013.

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



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**2014-04-09 The Boeing Company:** Amendment 39-17768; Docket No. FAA-2013-0701; Directorate Identifier 2013-NM-073-AD.

**(a) Effective Date**

This AD is effective May 2, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category.

**(d) Subject**

Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD will complete certain mandated programs intended to support the airplane reaching its limit of validity (LOV) of the engineering data that support the established structural maintenance program. We are issuing this AD to prevent cracks in the rib upper chord, which could result in the inability of the wing structure to support the limit load condition, and consequent loss of structural integrity of the wing.

**(f) Compliance**

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

**(g) Post-Repair Inspection**

For any small repair that has been done as specified in Boeing 727 Service Bulletin 57-112; or Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112: Within 3,500 flight cycles after the small repair was installed or inspected as specified in Boeing Service Bulletin 727-57-0112, or within 18 months after the effective date of this AD, whichever occurs latest, do a high frequency eddy current inspection for cracking of the vertical flange of the rib chord from the inboard side, and do a detailed (close visual) inspection for cracking along the upper fillet radius of the rib chord, in accordance with Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Repeat the inspections thereafter at intervals not to exceed 3,500 flight cycles until accomplishment of the repair or modification specified in paragraph (i) or (j) of this AD.

Note 1 to paragraph (g) of this AD: Boeing 727 Service Bulletin 57-112 and Boeing Service Bulletin 727-57-0112 are both versions of the same document. The formatting of service bulletins was revised by Boeing following publication of Boeing 727 Service Bulletin 57-112, Revision 1, dated April 23, 1976. Boeing Service Bulletin 727-57-0112, Revision 2, dated May 19, 1988, was published using Boeing's revised formatting.

#### **(h) Inspection Definition**

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

#### **(i) Corrective Action for Cracks**

If any crack is found during any inspection required by paragraph (g) of this AD, before further flight, do either action specified in paragraph (i)(1) or (i)(2) of this AD. Accomplishment of either action terminates the requirements of paragraph (g) of this AD.

(1) Do a large repair, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997.

(2) Do a preventive modification, in accordance with Part V of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997.

#### **(j) Optional Terminating Action**

Accomplishment of the actions specified in either paragraph (j)(1) or (j)(2) of this AD terminates the requirements of paragraphs (g) and (i) of this AD.

(1) A large repair, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Any crack found must be repaired before further flight using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(2) A preventive modification, in accordance with Part V of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997. Any crack found must be repaired before further flight using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

#### **(k) Credit for Previous Actions**

This paragraph provides credit for the inspections, large repair, and modification specified in this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 727-57-0112, Revision 4, dated October 29, 1992.

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

(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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles 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.

**(m) Related Information**

For more information about this AD, contact Chandraduth Ramdoss, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712-4137, phone: 562-627-5329; fax: 562-627-5210; email: Chandraduth.Ramdoss@faa.gov.

**(n) Material Incorporated by Reference**

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

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

(i) Boeing Service Bulletin 727-57-0112, Revision 5, dated July 31, 1997.

(ii) Reserved.

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

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 14, 2014.

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



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**2014-04-10 Airbus:** Amendment 39-17769. Docket No. FAA-2013-0363; Directorate Identifier 2013-NM-031-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 8, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

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

(1) Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes, all manufacturer serial numbers.

(2) Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes, all manufacturer serial numbers.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report that an airplane equipped with Angle of Attack (AOA) sensors installed with conic plates recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. We are issuing this AD to prevent reduced control of the airplane.

**(f) Compliance**

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

**(g) Airplane Flight Manual Revision**

For airplanes identified in paragraphs (g)(1) and (g)(2) of this AD, except as provided by paragraph (j) of this AD: Within 10 days after the effective date of this AD, revise the Emergency Procedures of the Airbus A330 and A340 Airplane Flight Manuals (AFMs), by incorporating Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012; as applicable; to advise the flightcrew of emergency procedures for addressing AOA sensor blockage. This can be done by inserting Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary

Revision TR294, Issue 1.0, dated December 4, 2012; into the applicable AFM. When the information in Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012; or Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012; is included in the general revisions of the applicable AFM, the general revisions may be incorporated into the AFM, and the temporary revisions may be removed.

(1) Model A330-201, -202, -203, -223, 223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes, all manufacturer serial numbers, on which Airbus modification 201609 or 201610 has been embodied in production; or on which Airbus Service Bulletin A330-34-3255 has been embodied in service.

(2) Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes, all manufacturer serial numbers, on which Airbus modification 201609 or 201610 has been embodied in production; or on which Airbus Service Bulletin A340-34-4250 or A340-34-5081 has been embodied in service.

#### **(h) Replacement**

Except as provided by paragraph (j) of this AD: Within 5 months after the effective date of this AD, replace all AOA sensor conic plates having part number (P/N) F3411060200000 or P/N F3411060900000 with an applicable AOA sensor flat plate identified in paragraph (h)(1) or (h)(2) of this AD. Performing this replacement constitutes terminating action for the AFM revision required by paragraph (g) of this AD; and Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012, and Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012, to the Airbus A330 and A340 AFMs, as applicable, must be removed from the AFM before further flight after doing the replacement.

(1) Replace with a flat plate having P/N F3411007920200 or P/N F3411007920300, as applicable, in accordance with the applicable service information specified in paragraph (h)(1)(i), (h)(1)(ii), or (h)(1)(iii) of this AD.

(i) Airbus Mandatory Service Bulletin A330-34-3293, Revision 01, including Appendix 01, dated June 12, 2013.

(ii) Airbus Mandatory Service Bulletin A340-34-4273, Revision 01, including Appendix 01, dated June 12, 2013.

(iii) Airbus Mandatory Service Bulletin A340-34-5093, Revision 01, including Appendix 01, dated June 12, 2013.

(2) Replace with a flat plate having P/N F3411007920000 or P/N F3411007920100, in accordance with a method approved by either the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) or its delegated agent.

#### **(i) Modification of Installation**

For airplanes on which any AOA sensor conic plate has been replaced with an AOA sensor flat plate, in accordance with the applicable service information specified in paragraph (i)(1), (i)(2), or (i)(3) of this AD: Within 5 months after the effective date of this AD, modify the installation of the AOA sensor flat plates so that the plates are flush with the fuselage, in accordance with the applicable service information identified in paragraph (h)(1)(i), (h)(1)(ii), or (h)(1)(iii) of this AD.

(1) Airbus Mandatory Service Bulletin A330-34-3293, including Appendix 01, dated January 31, 2013.

(2) Airbus Mandatory Service Bulletin A340-34-4273, including Appendix 01, dated January 30, 2013.

(3) Airbus Mandatory Service Bulletin A340-34-5093, including Appendix 01, dated January 30, 2013.

**(j) Exception to the Requirements of Paragraphs (g) and (h) of this AD**

For airplanes on which Airbus modification 203285 (improved AOA flat plate protection treatment) has been embodied in production: The actions specified in paragraphs (g) and (h) of this AD are not required, provided that, since first flight, no AOA probe conic plate having P/N F3411060200000 or P/N F3411060900000 has been installed.

**(k) Parts Installation Prohibition**

As of the effective date of this AD, no person may install, on any airplane, an AOA sensor conic plate having P/N F3411060200000 or P/N F3411060900000 or an AOA protection cover having P/N 98D34203003000.

**(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information EASA Airworthiness Directive 2013-0023, dated February 1, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0363-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

**(n) Material Incorporated by Reference**

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

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

(i) Airbus A330 Temporary Revision TR293, Issue 1.0, dated December 4, 2012, to the Airbus A330 Airplane Flight Manual (AFM).

(ii) Airbus A340 Temporary Revision TR294, Issue 1.0, dated December 4, 2012, to the Airbus A340 Airplane Flight Manual (AFM).

(iii) Airbus Mandatory Service Bulletin A330-34-3293, Revision 01, including Appendix 01, dated June 12, 2013.

(iv) Airbus Mandatory Service Bulletin A340-34-4273, Revision 01, including Appendix 01, dated June 12, 2013.

(v) Airbus Mandatory Service Bulletin A340-34-5093, Revision 01, including Appendix 01, dated June 12, 2013.

(3) For service information identified in this AD, contact Airbus SAS–Airworthiness Office–EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 14, 2014.

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



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**2014-05-14 The Boeing Company:** Amendment 39-17787; Docket No. FAA-2013-0545; Directorate Identifier 2013-NM-048-AD.

**(a) Effective Date**

This AD is effective May 1, 2014.

**(b) Affected ADs**

This AD affects AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

**(c) Applicability**

This AD applies to The Boeing Company Model 727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes, certificated in any category, having line position 1433 through 1832 inclusive, identified as Group 2 airplanes in Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by certain mandated programs intended to support the airplane reaching its limit of validity of the engineering data that support the established structural maintenance program. We are issuing this AD to prevent cracking in the main wheel well pressure floor, which could result in reduced structural integrity of the airplane, and decompression of the cabin.

**(f) Compliance**

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

**(g) Definition of Detailed Inspection**

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

**(h) Inspection and Repair/Modification**

At the later of the times specified in paragraphs (h)(1) and (h)(2) of this AD: Do a one-time detailed, high frequency eddy current (HFEC), or dye penetrant inspection for cracks in the main

wheel well pressure floor at body stations 930, 940, and 950, between left and right buttock line 50 and the side of the airplane body, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

- (1) Prior to the accumulation of 60,000 total flight cycles; or
- (2) Within 2,500 flight cycles or 2 years after the effective date of this AD, whichever occurs first.

Note 1 to paragraph (h) of this AD: If a detailed inspection is performed, stripping the paint will help ensure accurate inspection results.

#### **(i) Preventive Modification**

If no cracks are found during the inspection required by paragraph (h) of this AD: Before further flight, do the preventive modification, in accordance with Part IV of the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991. Doing the preventive modification terminates the repetitive inspections required by paragraph (d) of AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

#### **(j) Permanent Repair**

If any crack is found during the inspection required by paragraph (h) of this AD: Before further flight, do the permanent repair, in accordance with Part III of the Accomplishment Instructions of Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991. Doing the permanent repair terminates the repetitive inspections required by paragraph (d) of AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

#### **(k) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin 727-53-0149, Revision 3, dated November 2, 1989, which was incorporated by reference in AD 92-19-11, Amendment 39-8369 (57 FR 53247, November 9, 1992).

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

(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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles 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.

**(m) Related Information**

(1) For more information about this AD, contact Chandraduth Ramdoss, Aerospace Engineer, Airframe Branch, ANM-120L, Los Angeles Aircraft Certification Office (ACO), FAA, 3960 Paramount Boulevard, Suite 100, Lakewood, CA 90712-4137; phone: 562-627-5329; fax: 562-627-5210; email: chandraduth.ramdoss@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (n)(4) and (n)(5) of this AD.

**(n) Material Incorporated by Reference**

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

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

(3) The following service information was approved for IBR on December 14, 1992 (57 FR 53247, November 9, 1992).

(i) Boeing Service Bulletin 727-53-0149, Revision 4, dated June 27, 1991.

(ii) Reserved.

(4) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>.

(5) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 18, 2014.

Ross Landes,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2014-05-17 Bombardier, Inc.:** Amendment 39-17790. Docket No. FAA-2013-0835; Directorate Identifier 2013-NM-095-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 2, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers (S/Ns) 002 through 672 inclusive.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

**(f) Compliance**

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

**(g) Modifications—Part I**

Within 6,000 flight hours or 36 months, whichever occurs first, after the effective date of this AD, do the modifications specified in paragraphs (g)(1) through (g)(14) of this AD, as applicable.

(1) For airplanes having S/Ns 003 through 624 inclusive: Accomplish Bombardier ModSum 8Q101512, "Fuel System—Fuel Tank Mechanical Design, SFAR 88 Compliance (Retrofit)," Revision G, dated June 10, 2009, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-57-44, Revision D, dated October 8, 2008.

(2) For airplanes having S/Ns 003 through 629 inclusive on which a long range fuel system specified in de Havilland Change Request (CR) CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or Special Order Option (SOO) 8061 has been installed: Accomplish Bombardier ModSum 8Q902091, "Fuel System—Fuel Tank Mech. Design, SFAR 88 Compl.—Extended Range Tank Option (Retrofit)," Revision C, dated December 22, 2006, in accordance with the

Accomplishment Instructions of Bombardier Service Bulletin 8-28-39, Revision B, dated August 19, 2009.

(3) For airplanes having S/Ns 003 through 624 inclusive on which de Havilland SOO 8155, SOO 8098, SOO 8099, SOO 6082, or CR849SO08155; Supplemental Type Certificate SA85-1; or Limited Supplemental Type Certificate W-LSA98-005/D; has been incorporated: Accomplish Bombardier ModSum 8Q902144, "Fuel System–Fuel Tank Mechanical Design, SFAR 88 Compliance–APU Option (Retrofit)," Revision E, dated June 17, 2009, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-44, Revision B, dated July 25, 2009.

(4) For airplanes having S/Ns 003 through 624 inclusive: Accomplish Bombardier ModSum 8Q101865, "Fuel System–Fuel Tank Mechanical Design, SFAR 88 Compliance (Retrofit)," Revision B, dated May 26, 2008, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-47, dated May 2, 2008.

(5) For Model DHC-8-102, -103, and -106 airplanes having S/Ns 002 through 014 inclusive: Accomplish Bombardier ModSum 8Q101916, "Fuel System–Fuel Tank Secondary Pressure Relief Valve Rework SFAR 88 Compliance (Retrofit)," Revision A, dated October 19, 2010, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-58, dated July 25, 2011.

(6) For airplanes having S/Ns 002 through 629 inclusive on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, or CR828SO00006, or SOO 8061 has been installed, including airplanes on which metric refuel/defuel indicators specified in de Havilland CR828CH00029 have been installed: Accomplish Bombardier ModSum 8Q902122, "Production/Retrofit–Fuel System–Long Range Wiring Installation–SFAR 88 Compliance," Revision F, dated December 8, 2011, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-41, Revision B, dated August 8, 2012.

(7) For airplanes having S/Ns 002 through 619 inclusive with imperial refuel/defuel indicators, excluding airplanes on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 0861, has been installed: Accomplish Bombardier ModSum 8Q101511, "Production/Retrofit–Fuel System–Fuel Tank Wiring Installation–SFAR88 Compliance," Revision C, dated January 30, 2009, in accordance with the Accomplishment Instruction of Bombardier Service Bulletin 8-28-35, Revision C, dated January 14, 2013.

(8) For airplanes having S/Ns 002 through 619 inclusive on which metric refuel/defuel indicators specified in de Havilland CR828CH00020 have been installed, excluding airplanes on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed: Accomplish Bombardier ModSum 8Q901117, "Production/Retrofit–Fuel System–Metric Indication–Fuel Tank Wiring Installation–SFAR 88," Revision C, dated March 23, 2009, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-43, Revision A, dated June 25, 2009.

(9) For airplanes having S/Ns 003 through 619 inclusive, excluding airplanes on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, Revision A, dated November 17, 2006; or Revision B, dated February 12, 2008; has been installed: Accomplish Bombardier ModSum 8Q101652, "Electrical–Fuel Quantity Indication Wire Routing Segregation and Identification," Revision F, dated March 10, 2011, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-36, Revision C, dated October 7, 2009. In addition, for Model DHC-8-102, -103, -106, -201, and -202 airplanes on which an active noise and vibration suppression (ANVS) system has been installed, and on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, Revision A, dated November 17, 2006; or Revision B, dated February 12, 2008; has been incorporated: Do the actions specified in paragraph (h)(1) of this AD.

(10) For airplanes having S/Ns 003 through 672 inclusive on which Bombardier ModSum 8Q101513 or 8Q101652 specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828CO00006, or SOO 8061 has been installed, excluding airplanes having a long range fuel system installed: Accomplish Bombardier ModSum 8Q101907, "Fuel System–Fuel Qty Ind., Wire Routing Segregation, Installation of Top Hat Support–SFAR88 (Standard Aircraft),"

Revision B, dated September 10, 2010, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-48, Revision A, dated July 23, 2012.

(11) For airplanes having S/Ns 003 through 619 inclusive, excluding airplanes on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed; and excluding airplanes on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, Revision A, dated November 17, 2006, Revision B, dated February 12, 2008, or Revision C, dated October 7, 2009, has been installed: Accomplish Bombardier ModSum 8Q101908, "Fuel System–Fuel Qty Ind., Wire Routing Segregation, Installation of Dual Spacers–SFAR88 (Standard A/C)," Revision B, dated September 10, 2010, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-55, dated July 23, 2012. In addition, for airplanes on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, dated August 9, 2006; Revision A, dated November 17, 2006; Revision B, dated February 12, 2008; or Revision C, dated October 7, 2009; has been installed: Do the actions in paragraph (i)(1) of this AD.

(12) For airplanes having S/Ns 002 through 629 inclusive on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed; excluding airplanes on which Bombardier ModSum 8Q902064 specified in Bombardier Service Bulletin 8-28-42 has been incorporated: Accomplish Bombardier ModSum 8Q902064, "Electrical–Long Range Fuel Quantity Indication Wire Routing Segregation and Identification–SFAR 88," Revision G, dated March 10, 2011, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-42, Revision A, dated October 1, 2008.

(13) For airplanes having S/Ns 003 through 672 inclusive on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed; and on which Bombardier ModSum 8Q902064, and either Bombardier ModSum 8Q101513 or ModSum 8Q101652, has been installed: Accomplish Bombardier ModSum 8Q902382, "Fuel System–Fuel Qty Ind., Wire Routing Segregation, Installation of Top Hat Support–SFAR88 (Long Range Aircraft)," Revision B, dated September 10, 2010, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-49, Revision A, dated July 23, 2012.

(14) For airplanes having S/Ns 003 through 629 inclusive on which a long range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed; excluding airplanes on which Bombardier ModSum 8Q902064 specified in Bombardier Service Bulletin 8-28-42, dated December 21, 2006, or Revision A, dated October 1, 2008, has been installed: Accomplish Bombardier ModSum 8Q902383, "Fuel System–Fuel Qty Ind., Wire Routing Segregation, Installation of Dual Spacers–SFAR88 (Long Range A/C)," Revision B, dated September 10, 2010, including installing dual spacers inside the center fuselage at certain locations, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-56, dated July 23, 2012.

#### **(h) Inspections, Modifications, and Corrective Actions–Part II**

For airplanes identified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD: Within 12,000 flight hours or 72 months, whichever occurs first, after the effective date of this AD, do the actions specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(1) For Model DHC-8-102, -103, -106, -201, and -202 airplanes having S/Ns 003 through 619 inclusive; on which an ANVS system has been installed; and on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, dated August 9, 2006, Revision A, dated November 17, 2006, or Revision B, dated February 12, 2008, has been installed: Accomplish Bombardier ModSum 8Q101652, "Electrical–Fuel Quantity Indication Wire Routing Segregation and Identification," Revision F, dated March 10, 2011, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-36, Revision C, dated October 7, 2009.

(2) For Model DHC-8-102, -103, -106, -201, and -202 airplanes having S/Ns 002 through 629 inclusive on which an ANVS system has been installed, and on which Bombardier ModSum 8Q902064 specified in Bombardier Service Bulletin 8-28-42, Revision A, dated October 1, 2008, has been installed: Accomplish Bombardier ModSum 8Q902064, "Electrical–Long Range Fuel Quantity Indication Wire Routing Segregation and Identification–SFAR 88," Revision G, dated March 10, 2011, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-42, Revision A, dated October 1, 2008.

(3) For Model DHC-8-102, -103, -106, -201, and -202 airplanes having S/Ns 620 through 666 inclusive on which an ANVS system has been installed: Do a one-time visual inspection to determine whether the fuel quantity indicating system (FQIS) wiring harness is routed correctly and relocate the wiring harness if necessary, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-52, dated November 3, 2009.

### **(i) Wire Routing Segregation and Installation of Dual Spacers–Part III**

Within 18,000 flight hours or 108 months, whichever occurs first, after the effective date of this AD, do the modification specified in paragraph (i)(1) or (i)(2) of this AD, as applicable.

(1) For airplanes having S/Ns 003 through 672 inclusive on which Bombardier ModSum 8Q101513 has been incorporated; or on which Bombardier ModSum 8Q101652 specified in Bombardier Service Bulletin 8-28-36, dated August 9, 2006, Revision A, dated November 17, 2006, Revision B, dated February 12, 2008; or Revision C, dated October 7, 2009, has been incorporated; excluding airplanes on which a long-range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed: Accomplish Bombardier ModSum 8Q101908, "Fuel System–Fuel Qty Ind., Wire Routing Segregation, Installation of Dual Spacers–SFAR88 (Standard A/C)," Revision B, dated September 10, 2010, including installing dual spacers inside certain center fuselage locations, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-55, dated July 23, 2012.

(2) For airplanes having S/Ns 003 through 672 inclusive on which a long-range fuel system specified in de Havilland CR828CH00044, CR828SO08061, CR828CH00027, CR828SO00006, or SOO 8061, has been installed; and on which Bombardier ModSum 8Q902064 has been incorporated, or on which ModSum 8Q902064 as specified in Bombardier Service Bulletin 8-28-42, dated December 21, 2006, or Revision A, dated October 1, 2008, has been incorporated: Accomplish Bombardier ModSum 8Q902383, "Fuel System–Fuel Qty Ind., Wire routing Segregation, Installation of Dual Spacers–SFAR88 (Long Range A/C)," Revision B, dated September 10, 2010, including installing dual spacers inside certain center fuselage locations, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-28-56, dated July 23, 2012.

### **(j) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (g)(2) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-39, Revision A, March 15, 2007.

(2) This paragraph provides credit for actions required by paragraph (g)(3) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-44, dated August 9, 2006; or Revision A, dated November 15, 2006.

(3) This paragraph provides credit for actions required by paragraph (g)(6) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-41, Revision A, dated April 11, 2007.

(4) This paragraph provides credit for actions required by paragraph (g)(8) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-43, dated August 10, 2006.

(5) This paragraph provides credit for actions required by paragraph (g)(10) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-48, dated October 1, 2010.

(6) This paragraph provides credit for actions required by paragraph (g)(13) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-49, dated October 1, 2010.

(7) This paragraph provides credit for actions required by paragraph (h)(3) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-28-53, dated November 3, 2008.

### **(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

### **(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2013-07, dated March 1, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0835-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the addresses specified in paragraphs (m)(3) and (m)(4) of this AD.

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

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

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

- (i) Bombardier Service Bulletin 8-28-35, Revision C, dated January 14, 2013.
- (ii) Bombardier Service Bulletin 8-28-36, Revision C, dated October 7, 2009.
- (iii) Bombardier Service Bulletin 8-28-39, Revision B, dated August 19, 2009.
- (iv) Bombardier Service Bulletin 8-28-41, Revision B, dated August 8, 2012.
- (v) Bombardier Service Bulletin 8-28-42, Revision A, dated October 1, 2008.
- (vi) Bombardier Service Bulletin 8-28-43, Revision A, dated June 25, 2009.
- (vii) Bombardier Service Bulletin 8-28-44, Revision B, dated July 25, 2009.
- (viii) Bombardier Service Bulletin 8-28-47, dated May 2, 2008.
- (ix) Bombardier Service Bulletin 8-28-48, Revision A, dated July 23, 2012.
- (x) Bombardier Service Bulletin 8-28-49, Revision A, dated July 23, 2012.

(xi) Bombardier Service Bulletin 8-28-52, dated November 3, 2009.

(xii) Bombardier Service Bulletin 8-28-55, dated July 23, 2012.

(xiii) Bombardier Service Bulletin 8-28-56, dated July 23, 2012.

(xiv) Bombardier Service Bulletin 8-28-58, dated July 25, 2011.

(xv) Bombardier Service Bulletin 8-57-44, Revision D, dated October 8, 2008.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 19, 2014.

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



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**2014-05-27 Rockwell Collins, Inc.:** Amendment 39-17799; Docket No. FAA-2013-0966; Directorate Identifier 2013-CE-040-AD.

**(a) Effective Date**

This AD is effective May 2, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

(1) This AD applies to the following Rockwell Collins, Inc. Mode S transponders that are installed on but not limited to the airplanes listed in paragraphs (c)(2)(i) and (c)(2)(ii) of this AD:

(i) TPR-720: CPN 622-7878-001, 622-7878-020, 622-7878-120, 622-7878-200, 622-7878-201, 622-7878-301, 622-7878-440, 622-7878-460, 622-7878-480, 622-7878-901; and

(ii) TPR-900: CPN 822-0336-001, 822-0336-020, 822-0336-220, 822-0336-440, 822-0336-460, 822-0336-480, 822-0336-902.

(2) The products listed in paragraphs (c)(1)(i) and (c)(1)(ii) of this AD may be installed on but not limited to the following airplanes, certificated in any category:

(i) Airbus Models A319, A320, A330, A340; and

(ii) The Boeing Company Models B737, B747, B757, B767, B777, MD-80, and DC-9.

(3) The listing of airplanes in paragraphs (c)(2)(i) and (c)(2)(ii) of this AD is not intended as all-inclusive. The affected transponders may be installed using a supplemental type certificate or other means on other airplanes not listed in those paragraphs.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 34, Navigation.

**(e) Unsafe Condition**

This AD was prompted by the identification that the TPR-720 and TPR-900 Mode S transponders respond intermittently to Mode S interrogations from both ground-based and traffic collision avoidance system equipped airplanes. We are issuing this AD to correct possible misalignment issues with the transponders that could result in increased pilot and air traffic controller workload as well as reduced separation of airplanes.

**(f) Compliance**

Comply with this AD within the compliance times specified in paragraph (g) of this AD, unless already done.

**(g) Test and Calibration**

(1) Within the next 2 years after the effective date of this AD and repetitively thereafter at intervals not to exceed every 4 years, send the TPR-720 and TPR-900 Mode S transponders to a properly certified repair facility for test and calibration to assure proper alignment following Rockwell Collins Service Information Letter 13-1, Revision No. 1, 523-0821603-101000, dated October 24, 2013.

(2) Rockwell Collins Service Information Letter 13-1, Revision No. 1, 523-0821603-101000, dated October 24, 2013, recommends the affected transponders be sent to a Rockwell Collins authorized repair facility for the alignment and return to service testing; however, any properly certified repair facility may do this alignment and return to service testing.

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

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

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(i) Related Information**

For more information about this AD, contact Roger A. Souter, FAA, Wichita ACO, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: 316-946-4134; facsimile: 316-946-4107; email address: roger.souter@faa.gov.

**(j) Material Incorporated by Reference**

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

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

(i) Rockwell Collins Service Information Letter 13-1, Revision No. 1, 523-0821603-101000, dated October 24, 2013.

(ii) Reserved.

(3) For service information identified in this AD, contact Rockwell Collins, Inc., Collins Aviation Services, 350 Collins Road NE., M/S 153-250, Cedar Rapids, IA 52498-0001; telephone: 888-265-5467 (U.S.) or 319-265-5467; fax: 319-295-4941 (outside U.S.); email: techmanuals@rockwellcollins.com; Internet: [http://www.rockwellcollins.com/Services\\_and\\_Support/Publications.aspx](http://www.rockwellcollins.com/Services_and_Support/Publications.aspx).

(4) You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Kansas City, Missouri, on March 4, 2014.  
Steven W. Thompson,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.



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**2014-05-28 Bombardier, Inc.:** Amendment 39-17800. Docket No. FAA-2013-0419; Directorate Identifier 2012-NM-129-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 8, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001 and subsequent, equipped with a main landing gear (MLG) up-lock having part number 46500-7 or 46500-9.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by reports of excessive wear on the lower latch surface of the MLG up-lock hook. We are issuing this AD to detect and correct up-lock hooks worn beyond the wear limit, which could prevent the successful extension of the MLG using the primary landing gear extension system, which in combination with an alternate extension system failure could result in the inability to extend the MLG.

**(f) Compliance**

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

**(g) Maintenance/Inspection Program Revision**

Within 30 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the information specified in Task Number 323100-202 of Bombardier Temporary Revision MRB-66, dated December 7, 2011, to Section 1-32, Systems/Powerplant Maintenance Program of MRB Report Part 1, Bombardier Q400 Dash 8 Maintenance Requirements Manual, PSM 1-84-7. The compliance time for the initial functional check is at the applicable time specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD. The compliance time for the repetitive interval is at intervals not to exceed 6,000 flight hours or 60 months, whichever occurs first.

Note 1 to Paragraph (g) of this AD: The maintenance or inspection program revision required by paragraph (g) of this AD may be done by inserting a copy of Bombardier Temporary Revision MRB-66, dated December 7, 2011, to Section 1-32, Systems/Powerplant Maintenance Program of MRB Report Part 1, Bombardier Q400 Dash 8 Maintenance Requirements Manual, PSM 1-84-7. When this temporary revision has been included in general revisions of the PSM, the general revisions may be inserted in the PSM, provided the relevant information in the general revision is identical to that in TR MRB-66.

(1) For up-lock hook assemblies that have 15,000 total flight cycles or more as of the effective date of this AD: The compliance time for doing the initial functional check is within 600 flight cycles after the effective date of this AD.

(2) For up-lock hook assemblies that have 12,000 total flight cycles or more, but fewer than 15,000 total flight cycles, as of the effective date of this AD: The compliance time for doing the initial functional check is within 1,200 flight cycles after the effective date of this AD, but before the accumulation of 15,600 total flight cycles on the assembly.

(3) For up-lock hook assemblies with fewer than 12,000 total flight cycles as of the effective date of this AD: The compliance time for doing the initial functional check is within 6,000 flight cycles after the effective date of this AD, but before the accumulation of 13,200 total flight cycles on the assembly.

#### **(h) Optional Method of Compliance**

For any up-lock assembly outside the wear limit specified in the Inspection Notes of Bombardier Repair Drawing 8/4-32-0190, Issue 2, dated January 14, 2013; and on which the up-lock roller on the MLG shock strut is free to rotate and free of any damage or flat spots on the riding surface: In lieu of doing the initial functional check, as required by paragraph (g) of this AD, accomplishing the actions specified in paragraphs (h)(1) through (h)(4) of this AD in accordance with Bombardier Repair Drawing 8/4-32-0190, Issue 2, dated January 14, 2013, may be done. However, as of 36 months after the effective date of this AD, the initial functional check must be done in accordance with the requirements of paragraph (g) of this AD.

(1) Do a detailed inspection for deformation, corrosion, or broken springs of the up-lock assembly of the MLG. If deformation, corrosion, or broken springs are found, before further flight, replace the spring.

(2) Measure the groove depth of the lower latch working surface.

(i) If the groove depth is greater than or equal to 0.022 inch, before further flight, replace the up-lock assembly part number (P/N) 46500-7 or 46500-9 with a new assembly, or an assembly with a new or reworked hook installed.

(ii) If the groove depth is greater than 0.017 inch and less than or equal to 0.0215 inch: Within 600 flight cycles after accomplishing the measurement, do the up-lock inspection as specified in paragraphs (h)(1) and (h)(2) of this AD, and repeat the inspections thereafter at intervals not to exceed 600 flight cycles. Replacing the up-lock hook with a new or reworked hook, or installing a new up-lock assembly, terminates the repetitive inspections.

(iii) If the groove depth is between 0.0215 and 0.0220 inch: Within 300 flight cycles after the measurement, replace the up-lock hook with a new or reworked hook, or with a new up-lock assembly.

(3) Unless already accomplished, within 6,000 flight hours or 36 months after doing the initial inspection specified in paragraph (h)(1) of this AD: Replace the up-lock assembly with a new assembly, or a new or reworked hook installed.

(4) Inspect the up-lock roller on both main gear shock struts for freedom of movement.

(i) If the up-lock roller cannot be freely rotated by finger force, or any flat spots exceeding 0.060 inch (across the flats) are found, before further flight, replace the up-lock roller.

(ii) Repeat the inspections thereafter at intervals not to exceed 50 flight hours until the up-lock has been replaced with a new assembly, or a new or reworked up-lock hook has been installed. Replacing the up-lock with a new assembly, or installing a new or reworked up-lock hook, terminates the repetitive inspection requirements.

**(i) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Repair Drawing 8/4-32-0190, Issue 1, dated April 2, 2012, which is not incorporated by reference in this AD.

**(j) No Alternative Actions or Intervals**

After accomplishing the revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used, except as provided by paragraph (h) of this AD unless the actions or intervals are approved as an alternative method of compliance in accordance with the procedures specified in paragraph (l) of this AD.

**(k) Reporting**

For airplanes on which the requirements of paragraph (g) or (h) of this AD have been accomplished after the effective date of this AD: Within 30 days after the functional check, submit a report of the initial functional check findings using Form No ISETS-03-AOM Q400 in Bombardier Q400 All Operator Message DHC8-400-AOM-515, Revision 2009-06-24, dated April 4, 2012. Send the report to Bombardier, Inc., Technical Help Desk, phone: 416-375-4000; fax: 416-375-4539; email: thd.qseries@aero.bombardier.com.

**(l) Other FAA AD Provisions**

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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or by the Design Approval Holder with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions,

completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2012-21, dated June 25, 2012, for related information. This MCAI can be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0419-0002>.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**(n) Material Incorporated by Reference**

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

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

(i) Bombardier Q400 All Operator Message DHC8-400-AOM-515, Revision 2009-06-24, dated April 4, 2012.

(ii) Bombardier Repair Drawing 8/4-32-0190, Issue 2, including handwritten annotations, dated January 14, 2013.

(iii) Bombardier Temporary Revision MRB-66, dated December 7, 2011, to Section 1-32, Systems/Powerplant Maintenance Program of MRB Report Part 1, Bombardier Q400 Dash 8 Maintenance Requirements Manual, PSM 1-84-7.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 28, 2014.

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



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**2014-05-31 The Boeing Company:** Amendment 39-17803; Docket No. FAA-2012-0862; Directorate Identifier 2011-NM-198-AD.

**(a) Effective Date**

This AD is effective May 2, 2014.

**(b) Affected ADs**

This AD supersedes AD 2008-08-25, Amendment 39-15479 (73 FR 21240, April 21, 2008).

**(c) Applicability**

This AD applies to The Boeing Company airplanes, certificated in any category, as specified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model 747-400F series airplanes, as identified in Boeing Alert Service Bulletin 747-25A3580, Revision 2, dated May 13, 2013.

(2) Model 747-400 series airplanes, as identified in Boeing Alert Service Bulletin 747-25A3581, Revision 1, dated June 30, 2011.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of continued water damage to diode fire card 285U0072-1 in the M826 automatic fire overheat logic test system cardfile following a false FWD CARGO FIRE message, with no change in frequency, which resulted in an air turn back. We are issuing this AD to prevent water from exiting over the edge of the existing drip shield and contaminating electrical components in the M826 cardfile, which could result in an electrical short and potential loss of several functions essential for safe flight.

**(f) Compliance**

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

**(g) Installation and Replacement**

Within 24 months after the effective date of this AD, install aft and forward drain tubes, relocate wire bundle routing, install a new drip shield and drip shield deflectors, and replace insulation blankets, in accordance with the Accomplishment Instructions of the service information identified in paragraph (g)(1), (g)(2), or (g)(3); as applicable; of this AD.

(1) (For Model 747-400F series airplanes) Boeing Alert Service Bulletin 747-25A3580, Revision 2, dated May 13, 2013.

(2) (For Model 747-400 series airplanes) Boeing Alert Service Bulletin 747-25A3581, Revision 1, dated June 30, 2011.

(3) (For Model 747-400 series airplanes) Boeing Alert Service Bulletin 747-25A3581, Revision 2, dated September 11, 2012 (for Model 747-400 series airplanes).

#### **(h) Concurrent Actions**

For Group 1 airplanes as identified in Boeing Alert Service Bulletin 747-25A3581, Revision 1, dated June 30, 2011: Prior to or concurrently with the actions required by paragraph (g) of this AD, seal the drain slot, install spuds, and install left- and right-side drain tubes, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-25A3526, Revision 1, dated February 20, 2009 (for Model 747-400 series airplanes), except as specified in paragraphs (h)(1) and (h)(2) of this AD.

(1) Steps 1 through 5 of Figure 2 of Boeing Alert Service Bulletin 747-25A3526, Revision 1, dated February 20, 2009, are not required if work is being accomplished concurrently with the actions specified in Boeing Alert Service Bulletin 747-25A3581, Revision 1, dated June 30, 2011 (for Model 747-400 series airplanes).

(2) The portion of "More Data" in step 8 of Figure 3 of Boeing Alert Service Bulletin 747-25A3526, Revision 1, dated February 20, 2009, which says "Attach drain tube and strap above bead on the spud," is not required.

#### **(i) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-25A3580, Revision 1, dated July 14, 2011, which is not incorporated by reference in this AD.

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

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

#### **(k) Related Information**

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

(2) Service information identified in this AD that is not incorporated by reference in this AD may be obtained at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

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

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

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

(i) Boeing Alert Service Bulletin 747-25A3526, Revision 1, dated February 20, 2009.

(ii) Boeing Alert Service Bulletin 747-25A3580, Revision 2, dated May 13, 2013.

(iii) Boeing Alert Service Bulletin 747-25A3581, Revision 1, dated June 30, 2011.

(iv) Boeing Alert Service Bulletin 747-25A3581, Revision 2, dated September 11, 2012.

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

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA 98057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 5, 2014.

Michael J. Kaszycki,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**Corrected:** The PW2143 model was incorrectly listed as PW2146 throughout the AD. This copy has been corrected.

**2014-05-32 Pratt & Whitney:** Amendment 39-17804 Docket No. FAA-2013-0740; Directorate Identifier 2013-NE-24-AD.

**(a) Effective Date**

This AD is effective May 5, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Pratt & Whitney (PW) PW2037, PW2037D, PW2037M, PW2040, PW2040D, PW2043, PW2143, PW2240, PW2337, PW2643, and F117-PW-100 turbofan engines.

**(d) Unsafe Condition**

This AD was prompted by a rupture of the diffuser-to-high-pressure turbine (HPT) case flange. We are issuing this AD to prevent failure of the diffuser-to-HPT case flange, which could lead to uncontained engine failure and damage to the airplane.

**(e) Compliance**

Unless already done, comply with this AD within the compliance times specified.

(1) For diffuser case part number (P/N) 1B7461, serial numbers (S/Ns) DGGUAK1306 and DGGUAK1308, and HPT case P/N 1B2440, S/N DKLBCS1032:

(i) Within 100 flight cycles or 30 days after the effective date of this AD, whichever is later, eddy current inspect (ECI) the diffuser case and the HPT case M-flange. Use PW Service Bulletin (SB) No. PW2000 72-763, Revision 1, dated August 30, 2013, to do the inspection.

(ii) Reserved.

(2) For all diffuser and HPT cases at the next piece part opportunity and every piece part opportunity thereafter, perform a high sensitivity fluorescent-penetrant inspection (FPI) of the entire diffuser case rear flange (M-flange) and bolt holes, and the entire HPT case forward flange (M-flange) and bolt holes.

**(f) Optional Terminating Action**

As a terminating action to the repetitive inspection requirements of this AD, you may insert the repetitive inspection requirement identified in paragraph (e)(2) of this AD into the required inspection portion of your continuous airworthiness maintenance program.

**(g) Definition**

For the purpose of this AD, piece part opportunity is defined as when the part is completely disassembled.

**(h) Prohibition Statement**

After the effective date of this AD, do not install any engine with a diffuser or HPT case onto any airplane that was not inspected using paragraph (e) of this AD.

**(i) Credit for Previous Actions**

If you performed an ECI of the diffuser case and HPT case M-flange using the Accomplishment Instructions of PW SB No. PW2000 72-763, dated March 22, 2013, or you performed a high sensitivity FPI of the diffuser case and HPT case at the piece part opportunity after January 1, 2010, you met the requirements of paragraph (e)(1) of this AD.

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

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

**(k) Related Information**

(1) For more information about this AD, contact Mark Riley, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7758; fax: 781-238-7199; email: mark.riley@faa.gov.

(2) Pratt & Whitney Engine Manual, P/N 1A6231, (PW2000) and P/N 1B2412 (F117), Chapter 72-41-00, Inspection/Check-02, (Task 72-41-00-230-002) and Chapter 72-52-00, Inspection/Check-02 (Task 72-52-00-230-000), which are not incorporated by reference in this AD, can be obtained from Pratt & Whitney, using the contact information in paragraph (l)(3) of this AD.

**(l) Material Incorporated by Reference**

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

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

(i) Pratt & Whitney Service Bulletin No. PW2000 72-763, Revision 1, dated August 30, 2013.

(ii) Reserved

(3) For PW service information identified in this AD, contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108; phone: 860-565-8770; fax: 860-565-4503.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information 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 March 6, 2014.  
Colleen M. D'Alessandro,  
Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2014-06-04 The Boeing Company:** Amendment 39-17808; Docket No. FAA-2014-0169; Directorate Identifier 2014-NM-020-AD.

**(a) Effective Date**

This AD is effective April 9, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-8 and 747-8F series airplanes, certificated in any category, powered by General Electric (GE) Aviation GENx-2B67 or GENx-2B67B engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7600, Engine Controls.

**(e) Unsafe Condition**

This AD was prompted by a determination that the existing electronic engine control (EEC) software logic can prevent stowage of the thrust reversers (TRs) during certain circumstances, which could cause the TRs to move back to the deployed position. We are issuing this AD to prevent in-flight deployment of one or more TRs due to loss of the TR auto restow function, which could result in inadequate climb performance at an altitude insufficient for recovery, and uncontrolled flight into terrain.

**(f) Compliance**

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

**(g) Removal/Installation of Certain EEC Software**

For airplanes having any EEC software part number identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD: Within 90 days after the effective date of this AD, remove the EEC software, as applicable; and install new EEC software that is approved by the FAA.

(1) Software C032: GE P/N 2124M22P05, EEC kit number 738L370G02, Boeing P/N GEC43-2124-2205.

(2) Software C040: GE P/N 2124M22P07, EEC kit number 738L370G04, Boeing P/N GEC43-2124-2207.

(3) Software C045: GE P/N 2124M22P08, EEC kit number 738L370G05, Boeing P/N GEC43-2124-2208.

**(h) Parts Installation**

As of the effective date of this AD, no person may install EEC software having any P/N identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD on any airplane.

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

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

For more information about this AD, contact Sue Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6438; fax: 425-917-6590; email: suzanne.lucier@faa.gov.

**(k) Material Incorporated by Reference**

None.

Issued in Renton, Washington, on March 14, 2014.  
Jeffrey E. Duven,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



**2014-06-05 Rolls-Royce Deutschland Ltd & Co KG:** (Type Certificate previously held by Rolls-Royce plc) Amendment 39-17809; Docket No. FAA-2006-24777; Directorate Identifier 2006-NE-19-AD.

**(a) Effective Date**

This AD is effective May 8, 2014.

**(b) Affected ADs**

This AD supersedes AD 2007-03-02, Amendment 39-14913 (72 FR 3936, January 29, 2007).

**(c) Applicability**

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (RRD) Tay 620-15 turbofan engines with low-pressure (LP) compressor module, part number (P/N) M01100AA or P/N M01100AB, installed, and Tay 650-15 and Tay 651-54 turbofan engines with LP compressor module, P/N M01300AA or P/N M01300AB, installed.

**(d) Unsafe Condition**

This AD was prompted by a report of an additional engine failure due to multiple fan blade separation. We are issuing this AD to prevent failure of the LP compressor fan blade, engine failure, and damage to the airplane.

**(e) Compliance**

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

(1) For Tay 650-15 and Tay 651-54 engine LP compressor fan blade ultrasonic inspection (UI):

(i) After the effective date of this AD, whenever LP compressor fan blades are removed from an engine, before re-installation on a different engine, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction I of paragraph 3 of RRD Alert Non-Modification Service Bulletin (NMSB) TAY-72-A1442, Revision 6, dated August 26, 2013.

(ii) After the effective date of this AD, during each engine shop visit, before return to service of the engine, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction II of paragraph 3 of RRD Alert NMSB TAY-72-A1442, Revision 6, dated August 26, 2013.

(2) For Tay 620-15 engine LP compressor fan blade UI, after the effective date of this AD, before return to service of an engine after every mid-life, or every calendar-life, or every overhaul shop visit, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction II of paragraph 3 of RRD Alert NMSB TAY-72-A1442, Revision 6, dated August 26, 2013.

(3) For Tay 620-15, Tay 650-15, and Tay 651-54 engine LP compressor fan blade and rotor disk replacement, if during any inspection required by paragraph (e)(1) or (e)(2) of this AD, any LP

compressor fan blade is found cracked, before next flight or return to service of the engine, replace the complete set of the LP compressor fan blades and the LP compressor rotor disk.

**(f) Credit for Previous Actions**

If, before the effective date of this AD, you inspected or replaced any Tay 620-15, Tay 650-15, or Tay 651-54 turbofan engine LP compressor fan blade or rotor disk assembly using RRD Alert NMSB TAY-72-A1442, Revision 5, dated May 31, 2013, or earlier, you have satisfied the requirements of paragraphs (e)(1) through (e)(3) of this AD.

**(g) Definitions**

For the purposes of this AD for Tay 620-15 engines:

- (1) A mid-life shop visit is an engine shop visit accomplished before accumulating 12,000 engine flight cycles since new (FCSN) or flight cycles (FC) since last engine mid-life shop visit;
- (2) A calendar-life shop visit is an engine shop visit accomplished within 10 years since new or since the last engine calendar-life shop visit; and
- (3) An overhaul shop visit is an engine shop visit accomplished before accumulating 22,000 engine FCSN or FC since the last engine overhaul shop visit.

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

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

**(i) Related Information**

- (1) For more information about this AD, contact Anthony W. Cerra Jr., Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7128; fax: 781-238-7199; email: anthony.cerra@faa.gov.
- (2) Refer to MCAI European Aviation Safety Agency, AD 2013-151R2, dated September 2, 2013, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2006-24777-0012>.
- (3) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

**(j) Material Incorporated by Reference**

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

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

(i) Rolls-Royce Deutschland Ltd & Co KG Alert Non-Modification Service Bulletin No. TAY-72-A1442, Revision 6, dated August 26, 2013.

(ii) Reserved.

(3) For RRD service information identified in this AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, D-15827 Blankenfelde-Mahlow, Germany; phone: 49 0 33 7086 1200; fax: 49 0 33 7086 1212.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information 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 March 18, 2014.

Ann C. Mollica,

Acting Assistant Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.



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**2014-06-08 Bombardier, Inc.:** Amendment 39-17812. Docket No. FAA-2014-0171; Directorate Identifier 2014-NM-038-AD.

**(a) Effective Date**

This AD becomes effective April 14, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-101, -102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers 003 through 672 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by a report that the emergency downlock indication system had given a false landing gear down-and-locked indication. We are issuing this AD to detect and correct a false down-and-locked landing gear indication, which, on landing, could result in possible collapse of the landing gear.

**(f) Compliance**

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

**(g) Functional Check**

Within 600 flight hours or 100 days, whichever occurs first after the effective date of this AD: Perform a functional check of the alternate indication phototransistors of the nose and main landing gear; and do all applicable corrective actions; in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-173, Revision A, dated December 17, 2012. Do all applicable corrective actions before further flight. Repeat the functional check thereafter at intervals not to exceed 600 flight hours or 100 days, whichever occurs first, until accomplishment of the applicable actions specified in paragraph (h) of this AD.

**(h) Optional Terminating Action**

Accomplishment of the applicable actions specified in paragraphs (h)(1) through (h)(3) of this AD terminates the requirements of paragraph (g) of this AD.

(1) For airplanes configured as described in Modsum 8/1519: Incorporate Modsum 8Q101968, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-33-56, Revision A, dated February 22, 2013.

(2) For airplanes configured as described in Modsum 8/0235, 8/0461, and 8/0534: Incorporate Modsum 8Q101955, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-176, Revision A, dated February 22, 2013.

(3) For airplanes not configured as described in Modsum 8/0534: Incorporate Modsum 8Q101969, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-32-177, dated October 9, 2013.

#### **(i) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-32-173, dated October 28, 2011, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (h)(1) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-33-56, dated February 11, 2013, which is not incorporated by reference in this AD.

(3) This paragraph provides credit for actions required by paragraph (h)(2) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-32-176, dated February 11, 2013, which is not incorporated by reference in this AD.

#### **(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7300; fax: 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority's design organization approval, as applicable). You are required to ensure the product is airworthy before it is returned to service.

#### **(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2014-11, dated February 13, 2014, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0171.

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the addresses specified in paragraphs (l)(3) and (l)(4) of this AD.

**(I) Material Incorporated by Reference**

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

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

(i) Bombardier Service Bulletin 8-32-173, Revision A, dated December 17, 2012.

(ii) Bombardier Service Bulletin 8-32-176, Revision A, dated February 22, 2013.

(iii) Bombardier Service Bulletin 8-32-177, dated October 9, 2013.

(iv) Bombardier Service Bulletin 8-33-56, Revision A, dated February 22, 2013.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone: 416-375-4000; fax: 416-375-4539; email: [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet: <http://www.bombardier.com>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 19, 2014.

Ross Landes,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2014-06-09 ATR–GIE Avions de Transport Régional:** Amendment 39-17813. Docket No. FAA-2013-0975; Directorate Identifier 2013-NM-082-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 8, 2014.

**(b) Affected ADs**

This AD supersedes AD 2009-18-18, Amendment 39-16014 (74 FR 46336, September 9, 2009).

**(c) Applicability**

This AD applies to all ATR–GIE Avions de Transport Régional Model ATR42-200, -300, -320, and -500 airplanes; and Model ATR72-101, -201, -102, -202, -211, -212, and -212A airplanes; certificated in any category; all manufacturer serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 56, Windows.

**(e) Reason**

This AD was prompted by reports of a cockpit forward right-hand side blow out during flight. We are issuing this AD to detect and correct air/water leakage of the cockpit forward side window, which could lead to rapid cabin decompression, resulting in loss of control of the airplane.

**(f) Compliance**

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

**(g) Inspections**

For airplanes that are equipped with any PPG Aerospace cockpit forward side glass window having part number (P/N) NP158862-1 or P/N NP158862-2: At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD, do a detailed inspection of the cockpit forward side window to detect any damage and discrepancies (z-bar existing sealant repair, z-bar deformation, separation or gap in the sealant bond between the retainer and inner glass ply, z-bar deformation and retainer gap at same location, or z-bar deformation and retainer gap in window corner), in accordance with the Accomplishment Instructions of PPG Aerospace Component Service Bulletin NP-158862-001 Revision 1, dated January 10, 2013. Repeat the inspection thereafter at intervals not to exceed 550 flight hours or 750 flight cycles, whichever occurs first, except as required by paragraph (h) of this AD.

(1) For windows for which the total flight cycles can be established, inspect within 2,000 flight cycles since first installation of the cockpit forward side window, or within 10 days after the effective date of this AD, whichever occurs later.

(2) For windows for which the total flight cycles cannot be established, inspect before the accumulation of 2,000 total flight cycles on the airplane, or within 10 days after the effective date of this AD, whichever occurs later.

#### **(h) Conditions for Reduced Interval**

If any of the conditions specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD is found during any inspection required by paragraph (g) of this AD, reduce the interval of each subsequent inspection as required by paragraph (g) of this AD to 50 flight cycles or 7 days, whichever occurs later.

(1) Sealant separation between the z-bar and the outer glass ply, with depth less than 4 millimeter (mm) (0.160 inches (in)).

(2) Sealant separation between the inboard retainer and inner glass ply, with depth less than 7.5 mm (0.300 in) and cumulative length less than 300 mm (12.000 in).

(3) Window showing both sealant separation between the z-bar and the outer ply, and separation between inboard retainer and inner glass ply, common to the same hole location with a length less than 225 mm (8.860 in), and not covering the entire arc of a window corner.

#### **(i) Replacement**

If, during any inspection required by this AD, any damage or discrepant condition, as defined in PPG Aerospace Component Service Bulletin NP-158862-001 Revision 1, dated January 10, 2013 (z-bar existing sealant repair, z-bar deformation, separation or gap in the sealant bond between the retainer and inner glass ply, z-bar deformation and retainer gap at same location, or z-bar deformation and retainer gap in window corner), is found, except for the conditions specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, before further pressurized flight or within 10 days after the inspection, whichever occurs first, replace the affected window(s) using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA) (or its delegated agent, or the Design Approval Holder (DAH) with EASA design organization approval). For a replacement method to be approved, the repair must specifically refer to this AD.

Note 1 to paragraph (i) of this AD: Guidance for unpressurized flight conditions and limitations can be found in ATR Master Minimum Equipment List (MMEL) item 21-30-1 and Dispatch Deviation Guide (DDG) item 21-30-1.(4).

Note 2 to paragraph (i) of this AD: Guidance for the replacement required by paragraph (i) of this AD can be found in ATR42/72 Job Instruction Card airplane maintenance manual (AMM) JIC 56-12-00 RAI 10000.

#### **(j) Reporting Requirement**

Submit a report of the findings of the inspection required by paragraph (g) of this AD to ATR techdesk, 1 ALLEE PIERRE NADOT, 31712 BLAGNAC CEDEX, France, phone: +33 (0)5 62 21 62 21; fax: +33 (0)5 62 21 67 18; email: techdesk@atr.fr; and PPG Aerospace, ATTN: Andrew Troller, P.O. Box 2200, Huntsville, AL 35811 USA, phone: 1-256-859-2500 ext. 2544; fax 1-256-859-8155; email: atroller@ppg.com; at the applicable time specified in paragraph (j)(1) or (j)(2) of this AD. The report must include the information specified in PPG Aerospace Service Bulletin NP-158862-001, Revision 1, dated January 10, 2013.

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

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

### **(k) Window Replacement Provisions**

Replacing only the affected window, as required by paragraph (i) of this AD, with a cockpit forward side window having P/N NP158862-1 left-hand (LH) or P/N NP158862-2 right-hand (RH), as applicable, is not terminating action for the repetitive inspections required by this AD.

### **(l) Terminating Action**

Within 72 months after the effective date of this AD, replace each PPG Aerospace P/N NP-158862-1 LH and P/N NP-158862-2 RH cockpit forward side window with an approved cockpit forward side window. Replacing both PPG Aerospace P/N NP158862-1 LH and P/N NP158862-2 RH cockpit forward side windows with approved windows is a terminating action for the repetitive inspections required by this AD. Replacement windows and procedures for their installation must be approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the EASA (or its delegated agent, by the DAH with EASA design organization approval).

### **(m) Parts Installation Prohibition**

As of 72 months after the effective date of this AD, no person may install any PPG Aerospace cockpit forward side window having P/N NP158862-1 LH or P/N NP158862-2 RH on any airplane.

### **(n) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1137; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions,

completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2013-0087, dated April 9, 2013, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0975-0002>.

(2) For ATR service information identified in this AD that is not incorporated by reference in this AD, contact ATR-GIE Avions de Transport Régional, 1, Allée Pierre Nadot, 31712 Blagnac Cedex, France; telephone +33 (0) 5 62 21 62 21; fax +33 (0) 5 62 21 67 18; email [continued.airworthiness@atr.fr](mailto:continued.airworthiness@atr.fr); Internet <http://www.aerochain.com>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**(p) Material Incorporated by Reference**

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

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

(i) PPG Aerospace Component Service Bulletin NP-158862-001 Revision 1, dated January 10, 2013.

(ii) Reserved.

(3) For service information identified in this AD, contact PPG Aerospace, 12780 San Fernando Road, Sylmar, CA 91342; phone: 818 362 6711; fax: 818 362 0603; Internet: <http://corporateportal.ppg.com/na/aerospace>.

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

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 14, 2014.

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



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**2014-06-10 Airbus:** Amendment 39-17814. Docket No. FAA-2013-0829; Directorate Identifier 2013-NM-085-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 8, 2014.

**(b) Affected ADs**

This AD supersedes AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010).

**(c) Applicability**

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

(1) Model A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes; all manufacturer serial numbers.

(2) Model A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, and A340-642 airplanes; all manufacturer serial numbers.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by reports that the Angle of Attack (AoA) sensors on certain airplanes were modified and re-identified without performing the inspection to determine the part number; therefore, the affected probes were not replaced with serviceable probes. We are issuing this AD to prevent erroneous AoA information and consequent delayed activation or non-activation of the AoA protection systems, which, in combination with flight at a high angle of attack, could result in reduced controllability of the airplane.

**(f) Compliance**

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

**(g) Retained Inspection of AoA Probes**

This paragraph restates the requirements of paragraph (g) of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010). For airplanes on which an AoA sensor having part number (P/N) C16291AA is installed, except as provided by paragraph (l) of this AD: Within 3 months after December 14, 2010 (the effective date of AD 2010-23-12), perform a detailed inspection of the

Thales Avionics AoA probes having P/N C16291AA for a serial number identification, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the AoA probe can be conclusively determined from that review. If no AoA probe having P/N C16291AA and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009, is identified during the inspection required by this paragraph of this AD, no further action is required by this AD, except as provided by paragraph (l) of this AD.

(1) Airbus Mandatory Service Bulletin A330-34-3232, dated January 20, 2010 (for Model A330-200 and A330-300 series airplanes).

(2) Airbus Mandatory Service Bulletin A340-34-4239, dated January 20, 2010 (for Model A340-200 and A340-300 series airplanes).

(3) Airbus Mandatory Service Bulletin A340-34-5072, dated January 20, 2010 (for Model A340-500, and A340-600 series airplanes).

#### **(h) Retained Replacement of Identified AoA Probes**

This paragraph restates the requirements of paragraph (h) of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010), with clarified procedures. If the serial number of the AoA probe identified during the inspection required by paragraph (g) of this AD corresponds to a suspect AoA probe specified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009: At the applicable time specified in paragraph (h)(1) or (h)(2) of this AD, replace the affected AoA probe with a serviceable AoA probe, in accordance with one of the four options and associated Accomplishment Instructions specified in the applicable service bulletin identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD.

(1) For airplanes on which Airbus Modification 53368 (back-up speed scale) has been embodied in production or Airbus Service Bulletin A330-34-3213, Airbus Service Bulletin A340-34-4213, or Airbus Service Bulletin A340-34-5060, as applicable, has been embodied in service: Within 3 months after December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)).

(2) For airplanes on which Airbus Modification 53368 (back-up speed scale) has not been embodied in production and Airbus Service Bulletin A330-34-3213, Airbus Service Bulletin A340-34-4213, or Airbus Service Bulletin A340-34-5060, as applicable, has not been embodied in service: Within 15 months after December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)).

#### **(i) New Replacement of AoA Probes**

For airplanes on which an AoA probe having P/N C16291AA or C16291AB, with a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, is installed, except as provided by paragraph (l) of this AD: Within 6 months after the effective date of this AD, replace any AoA probe having P/N C16291AA or C16291AB with a serviceable AoA probe, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraph (i)(1), (i)(2), or (i)(3) of this AD. A review of airplane maintenance records is acceptable for compliance with the requirements of this paragraph if the records clearly demonstrate that the affected AoA probe has passed the inspection specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(1) Airbus Mandatory Service Bulletin A330-34-3232, Revision 01, dated September 17, 2013.

(2) Airbus Mandatory Service Bulletin A340-34-4239, Revision 01, dated September 17, 2013.

(3) Airbus Mandatory Service Bulletin A340-34-5072, Revision 01, dated September 17, 2013.

**(j) Exception to AD Requirements**

Airplanes on which Airbus Modification 58555 (installation of AoA sensors with P/N C16291AB) or Airbus Modification 46921 (installation of AoA sensors with P/N 0861ED) has been embodied in production are not affected by the requirements in paragraphs (g), (h) and (i) of this AD, provided that no AoA sensor has been replaced since first flight.

**(k) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraph (k)(1), (k)(2), or (k)(3) of this AD, as applicable, which is not incorporated by reference in this AD.

(1) Airbus Mandatory Service Bulletin A330-34-3232, dated January 20, 2010 (for Model A330-200 and A330-300 series airplanes).

(2) Airbus Mandatory Service Bulletin A340-34-4239, dated January 20, 2010 (for Model A340-200 and A340-300 series airplanes).

(3) Airbus Mandatory Service Bulletin A340-34-5072, dated January 20, 2010 (for Model A340-500, and A340-600 series airplanes).

**(l) Parts Installation Limitations**

(1) For airplanes on which an AoA sensor having part number (P/N) C16291AA is installed: As of December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)) and until the effective date of this AD, no person may install, on any airplane, a Thales Avionics AoA probe having P/N C16291AA and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009, unless the AoA is fitted with an inspection label stating that Thales Service Bulletin C16291A-34-007, has been accomplished.

(2) As of the effective date of this AD, no person may install, on any airplane, a Thales Avionics AoA probe having P/N C16291AA or P/N C16291AB and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, unless the AoA is fitted with an inspection label stating that Thales Service Bulletin C16291A-34-007, has been accomplished.

**(m) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(n) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information Airworthiness Directive 2013-0068, dated March 15, 2013, for related information. You may examine the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0829-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the address specified in paragraphs (o)(5) and (o)(7) of this AD.

**(o) Material Incorporated by Reference**

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

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

(3) The following service information was approved for IBR on May 8, 2014.

(i) Airbus Mandatory Service Bulletin A330-34-3232, Revision 01, dated September 17, 2013.

(ii) Airbus Mandatory Service Bulletin A340-34-4239, Revision 01, dated September 17, 2013.

(iii) Airbus Mandatory Service Bulletin A340-34-5072, Revision 01, dated September 17, 2013.

(iv) Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(4) The following service information was approved for IBR on December 14, 2010 (75 FR 68698, November 9, 2010).

(i) Airbus Mandatory Service Bulletin A330-34-3232, excluding Appendix 01, dated January 20, 2010.

(ii) Airbus Mandatory Service Bulletin A340-34-4239, excluding Appendix 01, dated January 20, 2010.

(iii) Airbus Mandatory Service Bulletin A340-34-5072, excluding Appendix 01, dated January 20, 2010.

(iv) Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009.

(5) For Airbus service information identified in this AD, contact Airbus SAS—Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>.

(6) For Thales Avionics service information identified in this AD, contact Thales—Aerospace Division, 105, avenue du General Eisenhower—BP 63647, 31036 Toulouse Cedex 1, France; telephone +33 (0)5 61 19 65 00; fax +33 (0)5 61 19 66 00; Internet <http://www.thalesgroup.com/aerospace>.

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

(8) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 17, 2014.

Dionne Palermo,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.



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**2014-07-02 Rolls-Royce Deutschland Ltd & Co KG (Type Certificate previously held by Rolls-Royce Deutschland GmbH and BMW Rolls-Royce Aero Engines):** Amendment 39-17816;  
Docket No. FAA-2012-1202; Directorate Identifier 2012-NE-38-AD.

**(a) Effective Date**

This AD is effective May 8, 2014.

**(b) Affected ADs**

This AD supersedes AD 2012-26-14, Amendment 39-17309 (78 FR 2195, January 10, 2013).

**(c) Applicability**

This AD applies to all Rolls-Royce Deutschland Ltd & Co KG (RRD) BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines with high-pressure (HP) compressor stages 1 to 6 rotor disc assemblies that were ever installed using nuts, part number (P/N) AS44862 or P/N AS64367.

**(d) Unsafe Condition**

This AD was prompted by a report of silver chloride-induced stress corrosion cracking of the HP compressor stages 1 to 6 rotor disc assembly. We are issuing this AD to prevent failure of the HP compressor stages 1 to 6 rotor disc assembly, which could lead to an uncontained engine failure and damage to the airplane.

**(e) Compliance**

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

(1) For BR700-715A1-30 turbofan engines operated under the Hawaiian Flight Mission only, remove the HP compressor stages 1 to 6 rotor disc assembly from service before exceeding 16,000 flight cycles since new (CSN) or before further flight after the effective date of this AD, whichever occurs later.

(2) For BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines (all flight missions except Hawaiian Flight Mission), remove the HP compressor stages 1 to 6 rotor disc assembly from service before exceeding 14,000 flight CSN or before further flight after the effective date of this AD, whichever occurs later.

**(f) Prohibition Statement**

After the effective date of this AD, do not install an HP compressor stages 1 to 6 rotor disk assembly into an engine, or an engine with an HP compressor stage 1 to 6 rotor disk assembly onto an aircraft, if the HP compressor stages 1 to 6 rotor disk assembly has ever been operated with nuts, P/N AS44862 or P/N AS64367, and has more CSN than specified in the applicable portion of the compliance section of this AD.

**(g) Definition**

For the purpose of this AD, flight cycles are defined as the total flight CSN on the HP compressor stages 1 to 6 rotor disc assembly, without any pro-rated calculations applied for different flight missions.

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

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

**(i) Related Information**

(1) For more information about this AD, contact Robert Morlath, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238-7154; fax: (781) 238-7199; email: robert.c.morlath@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2012-0230, Initial Issue, dated October 30, 2012, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-1202-0005>.

**(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on March 27, 2014.  
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