

# **FEDERAL AVIATION ADMINISTRATION AIRWORTHINESS DIRECTIVES**

## **LARGE AIRCRAFT BIWEEKLY 2013-02**

*1/14/2013 - 1/27/2013*



Federal Aviation Administration  
Engineering Procedures Office, AIR-110  
P.O. Box 25082  
Oklahoma City, OK 73125-0460

Email: [rgl@faa.gov](mailto:rgl@faa.gov)

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## LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
Information Key: E - Emergency; COR - Correction; S - Supersedes			
<b>Biweekly 2013-01</b>			
2012-25-09		Rolls-Royce plc	RB211-524G2-19; RB211-524G2-T-19; RB211-524G3-19; RB211-524G3-T-19; RB211-524H2-19; RB211-524H2-T-19; RB211-524H-36; RB211-524H-T-36; RB211-535E4-37; RB211-535E4-B-37; RB211-535E4-B-75; and RB211-535E4-C-37 turbofan engines
2012-26-01		Saab AB, Saab Aerosystems	SAAB 2000
2012-26-02	S 2005-13-27	Boeing	737-300, -400, and -500 series
2012-26-03		Airbus	A330-202, -203, -223, -243, -302, -323, -342, -343, and A340-313
2012-26-05		Airbus	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, A330-343, A340-211, A340-212, A340-213, A340-311, A340-312, and A340-313
2012-26-08		Pratt & Whitney Canada Corp	PW118, PW118A, PW118B, PW119B, PW119C, PW120, PW120A, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW123AF, PW124B, PW125B, PW126A, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines
2012-26-14		Rolls-Royce Deutschland Ltd & Co KG	BR700-715A1-30, BR700-715B1-30, and BR700-715C1-30 turbofan engines
2012-26-15		Honeywell International Inc	See AD
2012-26-51		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
2012-27-01		Rolls-Royce Deutschland Ltd & Co KG	Tay 620-15 turbofan engines
<b>Biweekly 2013-02</b>			
2012-25-13		The Boeing Company	747-100, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400F, and 747SR series
2012-26-04	S 2008-05-10	The Boeing Company	757-200, -200PF, and -200CB series
2013-01-02	S 2009-22-08	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; and Model 757-200, -200PF, and -300 series
2013-01-03		The Boeing Company	737-300, -400, and -500; and Model 757-200 series
2013-02-03		Rolls-Royce plc	RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines
2013-02-51		The Boeing Company	787-8



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**2012-25-13 The Boeing Company:** Amendment 39-17295; Docket No. FAA-2012-0299; Directorate Identifier 2011-NM-029-AD.

**(a) Effective Date**

This AD is effective February 22, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-100, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400F, and 747SR series airplanes; certificated in any category; as identified in Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 52, Doors.

**(e) Unsafe Condition**

This AD was prompted by reports of broken and damaged latch pin retention bolts and subsequent migration of the latch pins of the main deck side cargo door (MDSCD). We are issuing this AD to prevent loss of the cargo door and rapid depressurization of the airplane.

**(f) Compliance**

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

**(g) Inspection and Corrective Action**

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD, whichever occurs later: Do a detailed inspection of the ten MDSCD latch pin fittings to detect loose, broken, damaged, or missing retention bolts and nuts; measure the latch pin diameter; and do all applicable related investigative and corrective actions, except as required by paragraph (j)(1) of this AD; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011. Do all applicable related investigative and corrective actions before further flight. Repeat the inspection thereafter, except as required by paragraph (j)(3) of this AD, at intervals not to exceed those specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011.

- (1) Within 6 months after the effective date of this AD.
- (2) Within 6 months after the installation of an MDSCD installed in Boeing production or by a Boeing-approved modification.

**(h) Modification of Latch Pin Fittings and Replacement of Latch Pins and Latch Pin Retention Fasteners**

At the time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011, except as provided by paragraph (j)(2) of this AD: Modify the 10 MDSCD latch pin fittings, replace the latch pins with new latch pins, and replace the latch pin retention fasteners with new latch pin retention fasteners, except as required by paragraph (j)(1) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011. Accomplishment of the actions specified in paragraph (h) of this AD terminates the inspection required in paragraph (g) of this AD.

**(i) Post-Modification Inspection and Corrective Action**

At the applicable compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011, except as provided by paragraph (j)(2) of this AD: Do a detailed inspection of the 10 MDSCD latch pin fittings to detect loose, broken, damaged, or missing retention bolts and nuts; measure the latch pin diameter; and do all applicable related investigative and corrective actions, except as required by paragraph (j)(1) of this AD; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011. Do the applicable related investigative and corrective actions before further flight. Repeat the inspection thereafter, except as required by paragraph (j)(3) of this AD, at intervals not to exceed those specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011.

**(j) Exceptions to Service Bulletin Specifications**

(1) If any damage is found during any inspection required by this AD, and Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011, specifies to contact Boeing for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(2) Where Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011, specifies a compliance time relative to the issue date of that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(3) The repetitive inspections required by paragraphs (g) and (i) of this AD are not applicable to a deactivated MDSCD. However, the initial inspection required by paragraph (g) of this AD and modifications and replacements required by paragraph (h) of this AD are still applicable to a deactivated MDSCD. When the MDSCD is reactivated, the repetitive inspections required by paragraphs (g) and (i) of this AD are applicable and must be done thereafter at intervals not to exceed those specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, as revised by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011.

**(k) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-52A2294, dated July 8, 2010, which is not incorporated by reference in this AD; or Boeing Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011, before its revision by Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011.

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

(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be 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, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

**(m) Related Information**

(1) For more information about this AD, contact Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6432; fax: 425-917-6590; email: Bill.Ashforth@faa.gov.

(2) 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; phone: 206-544-5000, extension 1; fax: 206-766-5680; Internet: <https://www.myboeingfleet.com>.

**(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 Alert Service Bulletin 747-52A2294, Revision 1, dated August 16, 2011.

(ii) Boeing Alert Service Bulletin 747-52A2294, Revision 2, dated December 12, 2011.

(3) For The Boeing Company 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; phone: 206-544-5000, extension 1; fax: 206-766-5680; Internet: <https://www.myboeingfleet.com>.

(4) You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, the FAA, 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 December 12, 2012.  
Ali Bahrami,  
Manager, Transport Airplane Directorate, Aircraft Certification Service.



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**2012-26-04 The Boeing Company:** Amendment 39-17299; Docket No. FAA-2011-0724; Directorate Identifier 2010-NM-181-AD.

**(a) Effective Date**

This airworthiness directive (AD) is effective February 22, 2013.

**(b) Affected ADs**

This AD supersedes AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008).

**(c) Applicability**

This AD applies to The Boeing Company Model 757-200, -200PF, and -200CB series airplanes; certificated in any category; line numbers 1 through 1048 inclusive; powered by Rolls-Royce engines.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 54, Nacelles/Pylons.

**(e) Unsafe Condition**

This AD was prompted by reports of loose fasteners and cracks at the joint common to the aft torque bulkhead and strut-to-diagonal brace fitting, and one report of such damage occurring less than 3,000 flight cycles after the last inspection. We are issuing this AD to detect and correct cracks, loose and broken bolts, and shim migration in the joint between the aft torque bulkhead and the strut-to-diagonal brace fitting, which could result in damage to the strut and consequent separation of the strut and engine from the airplane.

**(f) Compliance**

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

**(g) Retained One-Time Inspection and Repair With Optional Inspection Method**

This paragraph restates the one-time inspection and repair required by paragraph (g) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), with optional inspection method and revised service information. For airplanes identified in paragraphs (g)(1) and (g)(2) of this AD: Within 90 days after August 24, 2007 (the effective date of AD 2007-16-13, Amendment 39-15152 (72 FR 44753, August 9, 2007)), do a high frequency eddy current (HFEC) inspection for cracking of the four critical fastener holes in the horizontal flange and, before further flight, do all applicable repairs, in accordance with Part IV of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007; Boeing Alert Service Bulletin 757-

54A0047, Revision 4, dated June 24, 2010; or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011; except as required by paragraph (i)(3) of this AD. As of the effective date of this AD, only Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, may be used to accomplish the actions required by this paragraph. Doing an ultrasonic inspection for cracking of the fasteners, in accordance with Part IV of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 4, dated June 24, 2010; or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011; is an acceptable method of compliance with the HFEC inspection requirement of this paragraph.

(1) Airplanes on which findings on the horizontal or vertical fasteners or the shims led to a rejection of any fastener during the actions specified in Boeing Alert Service Bulletin 757-54A0047, dated November 13, 2003; or Boeing Service Bulletin 757-54A0047, Revision 1, dated March 24, 2005.

(2) Airplanes that had equivalent findings prior to the actions specified in Boeing Alert Service Bulletin 757-54A0047, dated November 13, 2003, except for findings on airplanes identified as Group 1, Configuration 2, in Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, that were prior to the incorporation of Boeing Service Bulletin 757-54-0035.

### **(h) Retained Repetitive Inspection and Repair With Reduced Interval**

This paragraph restates the repetitive inspections and repair required by paragraph (h) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), with reduced repetitive intervals and revised service information. At the applicable initial times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, except as required by paragraphs (i)(1) and (i)(2) of this AD: Do the inspections specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, and, before further flight, do all the applicable related investigative actions and repairs, by doing all the actions specified in Parts I and II of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007; or by doing all the actions specified in Part I, and in Step 2 of Part II, of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047 Revision 4, dated June 24, 2010, or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, except as required by paragraph (i)(3) of this AD. As of the effective date of this AD, only Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, may be used to accomplish the actions required by this paragraph. Repeat the inspections required by this paragraph at the times specified in paragraph (h)(4) of this AD.

(1) Do detailed inspections of the shim installations between the vertical flange and bulkhead to determine if there are signs of movement.

(2) Do detailed inspections of the four fasteners in the vertical flange to determine if there are signs of movement or if there are gaps under the head or collar.

(3) Do detailed inspections of the fasteners that hold the strut to the horizontal flange of the strut-to-diagonal brace fitting to determine if there are signs of movement or if there are gaps under the head or collar.

(4) Repeat the inspections required by paragraph (h) of this AD at the earlier of the times specified in paragraphs (h)(4)(i) and (h)(4)(ii) of this AD. Thereafter, repeat the inspections at intervals not to exceed the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011.

(i) At intervals not to exceed the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007.

(ii) At intervals not to exceed the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, or within 90 days after the effective date of this AD, whichever occurs later.

**(i) Retained Exceptions To Alert Service Bulletin Procedures**

This paragraph restates the exceptions to alert service bulletin procedures specified in paragraphs (i), (j), and (k) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), with revised service information.

(1) Where Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, specifies a compliance time relative to "the date on this service bulletin," this AD requires compliance within the corresponding specified time relative to the effective date of AD 2007-16-13, Amendment 39-15152 (72 FR 44753, August 9, 2007).

(2) Where Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, specifies a compliance time relative to the "date of issuance of airworthiness certificate," this AD requires compliance within the corresponding time relative to the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(3) If any crack is found during any inspection required by this AD, and Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007; Boeing Alert Service Bulletin 757-54A0047, Revision 4, dated June 24, 2010; or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011; specifies to contact Boeing for appropriate action: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

**(j) Retained Inspection/Repair for Airplanes for Which There Are No Conclusive Inspection Records**

This paragraph restates the inspection and repair requirements for airplanes for which there are no conclusive inspection records, as required by paragraph (l) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), with revised service information. For airplanes for which there are no conclusive records showing no loose or missing fasteners during previous inspections done in accordance with the requirements of AD 2007-16-13, Amendment 39-15152 (72 FR 44753, August 9, 2007); or AD 2005-12-04, Amendment 39-14120 (70 FR 34313 June 14, 2005): Do the actions specified in paragraphs (j)(1) and (j)(2) of this AD, at the times specified in those paragraphs, as applicable.

(1) Within 90 days after March 18, 2008 (the effective date of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008)), do the actions specified in paragraph (g) of this AD, except as required by paragraph (i)(3) of this AD.

(2) At the applicable initial times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, do the actions specified in paragraph (h) of this AD, except as required by paragraphs (i)(2) and (k) of this AD. And, before further flight, do all applicable related investigative actions and repairs, by doing all the actions specified in Parts I and II of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007; or in Part 1 and in Step 2 of Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 4, dated June 24, 2010, or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011; except as required by paragraph (i)(3) of this AD. As of the effective date of this AD, only Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, may be used to accomplish the actions required by this paragraph. Repeat the actions specified in paragraph (h) of this AD at the times specified in paragraph (h)(4) of this AD.

**(k) Retained Additional Exception To Alert Service Bulletin Procedures**

This paragraph restates the exception to alert service bulletin procedures required by paragraph (m) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008). Where Boeing Alert

Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007, specifies a compliance time relative to "the date on this service bulletin," this AD requires compliance within the corresponding specified time relative to March 18, 2008 (the effective date of AD 2008-05-10).

**(l) Retained Acceptable Method of Compliance with Certain Requirements of AD 2004-12-07, Amendment 39-13666 (69 FR 33561 June 16, 2004)**

This paragraph restates an acceptable method of compliance with certain requirements of AD 2004-12-07, Amendment 39-13666 (69 FR 33561 June 16, 2004), specified by paragraph (p) of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008). Accomplishing the actions specified in paragraphs (g) and (h) of this AD terminates the requirements specified in paragraphs (b) and (d) of AD 2004-12-07.

**(m) New Repetitive Inspections and Repair**

At the applicable initial compliance times specified in paragraph (n) of this AD: Do the applicable actions specified in paragraph (m)(1) or (m)(2) of this AD, in accordance with Step 3 of Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 4, dated June 24, 2010; or Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011. If no cracking is found, repeat the inspections thereafter at intervals not to exceed the applicable intervals specified in paragraph 1.E., "Compliance," of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011. If any crack is found during any inspection required by this paragraph, before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

(1) For Group 1, Configuration 1 airplanes identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011: Do the actions specified in paragraph (m)(1)(i) or (m)(1)(ii) of this AD.

(i) Do a detailed inspection for cracking of the bulkhead in the area around the access door cutout and around the critical fasteners in the horizontal flange.

(ii) Do a detailed inspection for cracking of the bulkhead in the area around the access door cutout and around the critical fasteners in the horizontal flange, and do an ultrasonic inspection for cracking of the bulkhead around the fasteners in the horizontal flange. Doing the actions in this paragraph extends the repetitive intervals of the inspections required by paragraph (n) of this AD.

(2) For Group 1, Configuration 2 airplanes; and Group 2 airplanes; identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011: Do a detailed inspection for cracking of the bulkhead in the area around the access door cutout and around the critical fasteners in the horizontal flange.

**(n) New Compliance Times for Paragraph (m) of This AD**

At the applicable times specified in paragraphs (n)(1) and (n)(2) of this AD, do the actions required by paragraph (m) of this AD.

(1) For Group 1, Configuration 1 airplanes identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011: At the later of the times specified in paragraph (n)(1)(i) or (n)(1)(ii) of this AD.

(i) Within 1,800 flight cycles after accomplishing the most recent inspection required by paragraph (h) or (j) of this AD.

(ii) Within 90 days after the effective date of this AD.

(2) For Group 1, Configuration 2 airplanes; and Group 2 airplanes; identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011: At the later of the times specified in paragraph (n)(2)(i) or (n)(2)(ii) of this AD.

(i) Within 3,000 flight cycles after accomplishing the most recent inspection required by paragraph (h) or (j) of this AD.

(ii) Within 90 days after the effective date of this AD.

**(o) New Terminating Action for Certain Airplanes: Fastener Replacement**

For Group 1, Configuration 2 airplanes; and Group 2 airplanes; as identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011: Within 9,000 flight cycles or 54 months after the effective date of this AD, whichever occurs first, replace the horizontal and vertical flange fasteners in the strut-to-diagonal brace fitting on the number 1 and number 2 struts with new fasteners, and do all related investigative and applicable corrective actions, in accordance with PART V of the Accomplishment Instructions of Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, except where Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011, specifies to contact Boeing for repair instructions, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (q) of this AD. Do all related investigative and corrective actions before further flight. Accomplishment of the actions required in paragraph (o) of this AD terminates the inspection requirements of paragraphs (g), (h), (j), and (m) of this AD for Group 1, Configuration 2 airplanes; and Group 2 airplanes; as identified in Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011.

**(p) Credit for Previous Actions**

(1) Except for the actions specified in paragraphs (j), (m), and (o) of this AD, this paragraph provides credit for the actions required by paragraphs (g) and (h) of this AD, if those actions were performed before March 18, 2008 (the effective date of AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), using Boeing Service Bulletin 757-54A0047, Revision 1, dated March 24, 2005; or Boeing Alert Service Bulletin 757-54A0047, Revision 2, dated January 31, 2007 (which are not incorporated by reference in this AD).

(2) This paragraph provides credit for the initial inspection required by paragraph (h) of this AD, if that inspection was performed before June 29, 2005 (the effective date of AD 2005-12-04, Amendment 39-14120 (70 FR 34313, June 14, 2005)), using the actions required by paragraph (b) or (d), as applicable, of AD 2004-12-07, Amendment 39-13666 (69 FR 33561, June 16, 2004).

**(q) 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 the Related Information section 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, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) AMOCs approved previously in accordance with AD 2004-12-07, Amendment 39-13666 (69 FR 33561, June 16, 2004), are approved as AMOCs for the corresponding provisions of this AD.

(5) AMOCs approved previously in accordance with AD 2005-12-04, Amendment 39-14120 (70 FR 34313, June 14, 2005), are approved as AMOCs for the corresponding provisions of this AD.

(6) AMOCs approved previously in accordance with AD 2007-16-13, Amendment 39-15152 (72 FR 44753, August 9, 2007), are approved as AMOCs for the corresponding provisions of this AD.

(7) AMOCs approved previously in accordance with AD 2008-05-10, Amendment 39-15404 (73 FR 11347, March 3, 2008), are approved as AMOCs for the corresponding provisions of this AD.

#### **(r) Related Information**

(1) For more information about this AD, Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6440; fax: 425-917-6590; email: Nancy.Marsh@faa.gov.

(2) 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; phone: 206-544-5000, extension 1; fax: 206-766-5680; Internet: <https://www.myboeingfleet.com>.

#### **(s) 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 February 22, 2013.

(i) Boeing Alert Service Bulletin 757-54A0047, Revision 4, dated June 24, 2010.

(ii) Boeing Alert Service Bulletin 757-54A0047, Revision 5, dated June 9, 2011.

(4) The following service information was approved for IBR on August 24, 2007, (72 FR 44753, August 9, 2007).

(i) Boeing Alert Service Bulletin 757-54A0047, Revision 3, dated June 27, 2007.

(ii) Reserved.

(5) 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; phone: 206-544-5000, extension 1; fax: 206-766-5680; Internet: <https://www.myboeingfleet.com>.

(6) 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.

(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 17, 2012.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.



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**2013-01-02 The Boeing Company:** Amendment 39-17316; Docket No. FAA-2012-0804; Directorate Identifier 2012-NM-094-AD.

**(a) Effective Date**

This airworthiness directive (AD) is effective February 22, 2013.

**(b) Affected ADs**

This AD supersedes AD 2009-22-08, Amendment 39-16059 (74 FR 55763, October 29, 2009).

**(c) Applicability**

This AD applies to The Boeing Company Model 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 airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010; and Model 757-200, -200PF, and -300 series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 757-52-0090, dated September 21, 2007.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 52, Doors.

**(e) Unsafe Condition**

This AD was prompted by reports of problems associated with the uncommanded operation of cargo doors. We are issuing this AD to prevent injuries to persons and damage to the airplane and equipment.

**(f) Compliance**

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

**(g) Retained Replacement**

This paragraph restates the requirements of paragraph (f) of AD 2009-22-08, Amendment 39-16059 (74 FR 55763, October 29, 2009), with revised compliance times and service information. Replace the control switches, as specified in paragraph (g)(1) or (g)(2) of this AD, as applicable. Repeat the replacements thereafter at intervals not to exceed 72 months.

(1) For Groups 1 and 2 Model 747 airplanes identified in Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010: Within 24 months after December 3, 2009 (the effective date of AD 2009-22-08, Amendment 39-16059 (74 FR 55763, October 29, 2009)), or within 72 months from the date of issuance of the original certificate of airworthiness or the original

export certificate of airworthiness, whichever occurs later, replace the control switches of the forward, aft, and nose cargo doors, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-52-2286, dated September 28, 2007; or Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010. As of the effective date of this AD, use only Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010, to do the actions specified in this paragraph.

(2) For Model 757 series airplanes: Within 24 months after December 3, 2009 (the effective date of AD 2009-22-08, Amendment 39-16059 (74 FR 55763, October 29, 2009)), replace the control switches of cargo doors 1 and 2, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-52-0090, dated September 21, 2007.

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

For Group 3 airplanes identified in Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010: Within 72 months from the date of issuance of the original certificate of airworthiness or the original export certificate of airworthiness, or within 12 months after the effective date of this AD, whichever occurs later, replace the control switches of the forward, aft, and nose cargo doors, as applicable, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010. Repeat the replacements thereafter at intervals not to exceed 72 months.

#### **(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 the Related Information section 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, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously in accordance with AD 2009-22-08, Amendment 39-16059 (74 FR 55763, October 29, 2009), are approved as AMOCs for the corresponding provisions of this AD.

#### **(j) Related Information**

For more information about this AD, contact Francis Smith, Aerospace Engineer, Cabin Safety & Environmental Systems Branch, 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.

#### **(k) 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 February 22, 2013.

(i) Boeing Special Attention Service Bulletin 747-52-2286, Revision 1, dated October 28, 2010.

(ii) Reserved.

(4) The following service information was approved for IBR on December 3, 2009 (74 FR 55763, October 29, 2009).

(i) Boeing Special Attention Service Bulletin 747-52-2286, dated September 28, 2007.

(ii) Boeing Special Attention Service Bulletin 757-52-0090, dated September 21, 2007.

(5) 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>.

(6) You may view this service information at FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356. 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 January 4, 2013.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.



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**2013-01-03 The Boeing Company:** Amendment 39-17317; Docket No. FAA-2012-0987; Directorate Identifier 2012-NM-130-AD.

**(a) Effective Date**

This AD is effective February 22, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 737-300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 737-23-1302, dated August 24, 2009; and Model 757-200 series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 757-23-0107, Revision 1, dated May 16, 2012.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 23, Communications.

**(e) Unsafe Condition**

This AD was prompted by a report of damage caused by electrical arcing to the wires that connect seat electronics boxes. We are issuing this AD to prevent power from being supplied to passenger seats when the entertainment control switch is in the OFF position, which could cause an electrical shock hazard resulting in serious or fatal injury to maintenance personnel.

**(f) Compliance**

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

**(g) Installation of New Relay and Wiring Bundle Change**

Within 24 months after the effective date of this AD: Change the wire bundle route, and install a new relay and applicable wiring of the entertainment control switch, in accordance with the Accomplishment Instructions of the service information specified in paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Model 737-300, -400, and -500 series airplanes: Use Boeing Special Attention Service Bulletin 737-23-1302, dated August 24, 2009.

(2) For Model 757-200 series airplanes: Use Boeing Special Attention Service Bulletin 757-23-0107, Revision 1, dated May 16, 2012.

**(h) 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 the Related Information section 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.

**(i) Related Information**

For more information about this AD, contact Binh Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6485; fax: 425-917-6590; email: binh.tran@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) Boeing Special Attention Service Bulletin 737-23-1302, dated August 24, 2009.

(ii) Boeing Special Attention Service Bulletin 757-23-0107, Revision 1, dated May 16, 2012.

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

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

(5) You may 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 January 4, 2013.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.



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**2013-02-03 Rolls-Royce plc:** Amendment 39-17324; Docket No. FAA-2012-1334; Directorate Identifier 2012-NE-49-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective January 24, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Rolls-Royce plc RB211-Trent 970-84, 970B-84, 972-84, 972B-84, 977-84, 977B-84, and 980-84 turbofan engines with a fuel oil heat exchanger (FOHE), part number 47111-1241, installed.

**(d) Reason**

This AD was prompted by a report of an in-flight increase of N2 intermediate pressure rotor vibrations resulting in an engine surge and pilot shut down of the engine. We are issuing this AD to prevent rotor bearing oil starvation, uncontained engine failure, and damage to the airplane.

**(e) Actions and Compliance**

Unless already done, do the following actions.

(1) For engines installed on the effective date of this AD, replace the FOHE within 500 engine hours (EHs) from the effective date of this AD, or before exceeding 5,000 EHs time since new (TSN) or time since overhaul (TSO), whichever occurs later.

(2) For engines in the shop on the effective date of this AD, do not approve the engine for return to service if the FOHE has 5,000 or more EHs TSN or TSO.

(3) After the effective date of this AD, do not install a FOHE on any engine, or any engine on any airplane, unless the FOHE has fewer than 5,000 EHs TSN or TSO.

**(f) 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.

**(g) Related Information**

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238 7754; fax: 781-238-7199; email: [robert.green@faa.gov](mailto:robert.green@faa.gov).

(2) Refer to European Aviation Safety Agency Airworthiness Directive 2012-0260, dated December 11, 2012, and Rolls-Royce plc Alert Non-Modification Service Bulletin RB.211-79-AH031, dated October 25, 2012, for related information.

(3) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE248BJ, United Kingdom; phone: 44 (0) 1332 242424; fax: 44 (0) 1332 249936; or email: [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp).

(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.

**(h) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on January 14, 2013.  
Thomas Boudreau,  
Acting Manager, Engine & Propeller Directorate, Aircraft Certification Service.



**FAA**  
**Aviation Safety**

# **EMERGENCY**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)

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**DATE:** January 16, 2013

**AD #:** 2013-02-51

Emergency airworthiness directive (AD) 2013-02-51 is sent to owners and operators of The Boeing Company Model 787-8 airplanes.

### **Background**

This emergency AD was prompted by recent incidents involving lithium ion battery failures that resulted in release of flammable electrolytes, heat damage, and smoke on two Model 787-8 airplanes. The cause of these failures is currently under investigation. These conditions, if not corrected, could result in damage to critical systems and structures, and the potential for fire in the electrical compartment.

### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires modification of the battery system, or other actions, in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA.

### **Interim Action**

We consider this AD interim action. As the investigation progresses, we might determine that additional action is necessary.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices,

methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

**Presentation of the Actual AD**

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

**2013-02-51 The Boeing Company:** Directorate Identifier 2013-NM-016-AD.

**(a) Effective Date**

This Emergency AD is effective upon receipt.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 787-8 airplanes, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 24, Electrical power.

**(e) Unsafe Condition**

This AD was prompted by recent incidents involving lithium ion battery failures that resulted in release of flammable electrolytes, heat damage, and smoke on two Model 787-8 airplanes. The cause of these failures is currently under investigation. We are issuing this AD to prevent damage to critical systems and structures, and the potential for fire in the electrical compartment.

**(f) Compliance**

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

**(g) Modification or Other Action**

Before further flight, modify the battery system, or take other actions, in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA.

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

(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your

request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto: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.

**(i) Related Information**

For further information about this AD, contact: Robert Duffer, Manager, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6493; fax: 425-917-6590; email: [Robert.Duffer@faa.gov](mailto:Robert.Duffer@faa.gov).

Issued in Renton, Washington, on January 16, 2013.

Original signed by:

Ali Bahrami,

Manager, Transport Airplane Directorate,  
Aircraft Certification Service.