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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2014-0432; Directorate Identifier 2014-NM-099-AD; Amendment 39-17898; AD 2014-14-03]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are superseding Airworthiness Directive (AD) 2014-07-01, for certain The Boeing Company Model 747 airplanes. AD 2014-07-01 required repetitive inspections for cracking in certain bulkhead structure; inspections of certain fasteners and support frame modifications on certain airplanes; related investigative and corrective actions, if necessary; and an interim modification that would terminate certain repetitive inspections. This AD clarifies certain paragraph references and revises a compliance time. This AD was prompted by a determination that certain paragraph references are in error. We are issuing this AD to detect and correct fatigue cracking of the BS 2598 bulkhead structure, which could adversely affect the structural integrity of the bulkhead and the horizontal stabilizer support structure, and result in loss of controllability of the airplane.

**DATES:** This AD is effective July 15, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 3, 2014 (79 FR 23893, April 29, 2014).

We must receive any comments on this AD by August 29, 2014.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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>. 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.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0432; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: [nathan.p.weigand@faa.gov](mailto:nathan.p.weigand@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On March 17, 2014, we issued AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), for certain The Boeing Company Model 747 airplanes. AD 2014-07-01 required repetitive inspections, including post-repair and post-modification inspections, for cracking in the bulkhead structure at body station (BS) 2598; certain one-time inspections of certain fasteners and support frame modifications on certain airplanes; related investigative and corrective actions, if necessary; and an interim modification that would terminate certain repetitive inspections.

AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), resulted from reports of cracking in the forward and aft inner chord of the BS 2598 bulkhead near the upper corners of the cutout for the horizontal stabilizer rear spar, and cracking in the bulkhead upper and lower web panels near the inner chord to shear deck connection. We issued AD 2014-07-01 to detect and correct fatigue cracking of the BS 2598 bulkhead structure, which could adversely affect the structural integrity of the bulkhead and the horizontal stabilizer support structure, and result in loss of controllability of the airplane.

### **Actions Since AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), Was Issued**

Paragraph (o)(1) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), terminated the actions in certain paragraphs of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010). AD 2014-07-01, however, incorrectly terminated "paragraphs (k) and (l)," which should have been "paragraph (k)(1)." Paragraph (o)(1) of this AD corrects that reference to "paragraph (k)(1)." All provisions of AD 2010-14-07 that are not specifically referenced in paragraph (o)(1) of this AD remain fully applicable and must be complied with, including paragraph (k)(2) of AD 2010-14-07.

We also found an additional incorrect paragraph reference. The first sentence of paragraph (p) of AD 2014-07-01 provides credit for the actions required by paragraphs (g), (h), (i), and (n)(2) of that

AD. Paragraph (n)(2) of AD 2014-07-01 does not exist. The text of paragraph (p) of this AD has been revised to refer to paragraphs (g), (h), and (i) of this AD.

We have also clarified that the airplanes affected by paragraph (i) of this AD include airplanes on which an interim modification, aft inner chord repair, or upper web repair has been previously accomplished as specified in Boeing Alert Service Bulletin 747-53A2427.

### **Compliance Time Change for Airplanes in Groups 4 and 5**

We have moved the compliance time specified in paragraph (j) of 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), into new paragraphs (j)(1) and (j)(2) of this AD. Paragraph (j)(1) of this AD restates the compliance times for airplanes in Groups 1, 2, and 3. Paragraph (j)(2) of this AD provides a new compliance time for airplanes in Groups 4 and 5. We have added a compliance time (grace period) of "18 months after the effective date of this AD" for airplanes in Groups 4 and 5. We have determined that this new grace period will provide an acceptable level of safety.

### **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 repetitive inspections, including post-repair and post-modification inspections, for cracking in the bulkhead structure at BS 2598; certain one-time inspections of certain fasteners and support frame modifications on certain airplanes; related investigative and corrective actions, if necessary; and an interim modification that would terminate certain repetitive inspections. This AD provides clarification of certain paragraph references and revises a compliance time.

### **FAA's Justification and Determination of the Effective Date**

Since this AD merely corrects incorrect paragraph references and includes a relieving grace period for certain airplanes, notice and opportunity for public comment before issuing this AD are unnecessary.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2014-0432; Directorate Identifier 2014-NM-099-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

### **Costs of Compliance**

We estimate that this AD affects 184 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

**Estimated Costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Bulkhead (support frame) inspection	49 work-hours × \$85 per hour = \$4,165 per inspection cycle	\$0	\$4,165 per inspection cycle	\$766,360 per inspection cycle.
Support frame modification	315 work-hours × \$85 per hour = \$26,775	0	\$26,775	Up to \$4,926,600.
Support frame upper corner fastener inspection	16 work-hours × \$85 per hour = \$1,360	0	\$1,360	Up to \$250,240.
Support frame post-modification/post repair inspection	200 work hours × \$85 per hour = \$17,000	0	\$17,000	\$3,128,000.

We estimate the following costs to do any necessary interim modification that would be required based on the results of the inspections of the bulkhead specified in paragraph (g) of this AD. We have no way of determining the number of aircraft that might need this interim modification:

**On-Condition Costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Interim modification	4 work-hours × \$85 per hour = \$340	\$0	\$340

We have received no definitive data that would enable us to provide a cost estimate for the corrective actions specified in this AD.

**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.

**Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014) and adding the following new AD:



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**2014-14-03 The Boeing Company:** Amendment 39-17898; Docket No. FAA-2014-0432; Directorate Identifier 2014-NM-099-AD.

**(a) Effective Date**

This AD is effective July 15, 2014.

**(b) Affected ADs**

This AD supersedes AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014).

**(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 Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of cracking in particular areas of the bulkhead structure at body station (BS) 2598. We are issuing this AD to detect and correct fatigue cracking of the BS 2598 bulkhead structure, which could adversely affect the structural integrity of the bulkhead and the horizontal stabilizer support structure, and result in loss of controllability of the airplane.

**(f) Compliance**

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

**(g) Retained Inspections of the Bulkhead (Support Frame) With No Changes**

This paragraph restates the actions required by paragraph (g) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes. For airplanes on which the bulkhead (support frame) modification specified in Boeing Service Bulletin 747-53A2473 or Boeing Alert Service Bulletin 747-53A2837 has not been done, and on which an interim modification or aft inner chord repair specified in Boeing Alert Service Bulletin 747-53A2427 has not been done: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, except as provided by paragraph (m)(1), (m)(2), or (m)(3) of this AD, as applicable, do an open-hole and surface high frequency eddy current (HFEC) inspection for cracking in the bulkhead (support frame), which includes the bulkhead splice fitting, frame supports, forward and aft inner chords, floor supports, and upper and lower web panels; do a

surface HFEC inspection for cracking in the bulkhead upper web assembly; do an open-hole and surface HFEC inspection for cracking in the bulkhead lower web assembly; and do all applicable corrective actions; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, except as required by paragraphs (h), (m)(4), (m)(5), and (m)(6) of this AD. Do all applicable corrective actions before further flight. Repeat the applicable inspections, thereafter, at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013. Doing the modification required by paragraph (j) of this AD terminates the repetitive inspections required by this paragraph.

**(h) Retained Interim Modification With No Changes**

This paragraph restates the actions required by paragraph (h) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes. For airplanes in Groups 1 and 2, as identified in Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, on which no cracking was found during any inspection required by paragraph (g) of this AD: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, except as provided by paragraph (m)(2) of this AD, do the interim modification, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013. Doing the interim modification terminates the repetitive inspections required by paragraph (g) of this AD in the area of the modification only. The repetitive inspections of the bulkhead lower web, as specified in paragraph (g) of this AD, must be done. If the aft inner chord repair or upper web repair specified in Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, has been accomplished, an interim modification on the side of the airplane that has the repair is not required by this paragraph.

**(i) Retained Post-Repair Inspection or Post-Interim Modification Inspection With a Clarification**

This paragraph restates the actions required by paragraph (i) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with a clarification of the affected airplanes. For airplanes on which an interim modification, aft inner chord repair, or upper web repair has been done as specified in paragraph (g) or (h) of this AD, or has been previously accomplished as specified in Boeing Alert Service Bulletin 747-53A2427: At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, except as specified in paragraph (m)(1), (m)(2), or (m)(3) of this AD, as applicable, do the actions specified in paragraphs (i)(1) and (i)(2) of this AD, and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, except as required by paragraph (m)(4) of this AD. Do all applicable corrective actions before further flight. Repeat the inspections thereafter at the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013. Doing the modification required by paragraph (j) of this AD terminates the repetitive inspections required by this paragraph.

(1) Do forward side surface HFEC inspections for cracking of the bulkhead forward inner chord, splice fitting, and frame support.

(2) Do surface and open-hole HFEC inspections for cracking in the repaired and modified areas of the bulkhead, as applicable.

## **(j) Retained Bulkhead (Support Frame) Modification and Inspections With a Revised Compliance Time**

This paragraph restates the actions required by paragraph (j) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with a revised compliance time. For airplanes on which the bulkhead (support frame) modification, as specified in Boeing Service Bulletin 747-53A2473 has not been done as of June 3, 2014 (the effective date of AD 2014-07-01): At the applicable time specified in paragraph (j)(1) or (j)(2) of this AD, do the bulkhead (support frame) modification and inspections, and all applicable related investigative and corrective actions; in accordance with steps 3.B.3., 3.B.4., and 3.B.5. of the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, except as required by paragraph (m)(4) of this AD. Do all applicable related investigative and corrective actions before further flight. Doing the modification in this paragraph terminates the inspections required by paragraphs (g) and (i) of this AD.

(1) For Groups 1, 2, and 3 airplanes identified in Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011: At the time specified in table 2 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

(2) For Groups 4 and 5 airplanes identified in Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011: At the earlier of the times specified in paragraphs (j)(2)(i) and (j)(2)(ii) of this AD,

(i) Before the accumulation of 20,000 total flight cycles or within 18 months after August 5, 2010 (the effective date of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010), whichever occurs later.

(ii) Before the accumulation of 12,000 total flight cycles or within 18 months after the effective date of this AD, whichever occurs later.

## **(k) Retained Post-Modification Inspections With No Changes**

This paragraph restates the actions required by paragraph (k) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes.

(1) For airplanes on which the bulkhead (support frame) modification, as specified in Boeing Service Bulletin 747-53A2473 has been done: Except as provided by paragraphs (m)(7) and (m)(8) of this AD, at the applicable time specified in tables 6, 7, 8, and 9 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, do support frame post-modification inspections, and open-hole HFEC inspections for cracking in the hinge support, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, except as required by paragraph (m)(4) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections thereafter at the applicable times specified in tables 6, 7, 8, and 9 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

(2) For airplanes on which the support frame modification, as specified in Boeing Service Bulletin 747-53A2473, Revision 1, dated February 20, 2007 (which is not incorporated by reference in this AD), has been done : Except as specified in paragraphs (m)(7) and (m)(8) of this AD, at the applicable time specified in tables 4 and 5 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, do a one-time general visual inspection of the frame web and upper shear deck (floor support) chord aft side for fasteners that were installed as part of an inner chord repair removal; and a one-time general visual inspection of the upper forward inner chord, frame support fitting, and splice fitting for the installation of certain fasteners; and do all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, except as required by paragraph (m)(4) of this AD. Do all applicable related investigative

and corrective actions at the applicable times specified in tables 4 and 5 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

(3) For airplanes on which the support frame modification, as specified in Boeing Service Bulletin 747-53A2473, dated March 24, 2005 (which was incorporated by reference in AD 2006-05-06, Amendment 39-14503 (71 FR 12125, March 9, 2006)), has been done: Except as specified in paragraphs (m)(7) and (m)(8) of this AD, at the applicable time specified in tables 5 and 10 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, do a one-time general visual inspection of the upper forward inner chord, frame support fitting, and splice fitting for the installation of certain fasteners; a one-time general visual inspection for any repair installed on the left and right side of the aft inner chord; and do all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, except as required by paragraph (m)(4) of this AD. Do all applicable related investigative and corrective actions at the applicable times specified in tables 5 and 10 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

(4) For airplanes on which a post-modification inspection was done using paragraph 3.B.8. of Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 3, dated July 14, 2011 (which is not incorporated by reference in this AD): Except as required by paragraphs (m)(7) and (m)(8) of this AD, at the applicable time in table 11 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, do a one-time surface HFEC inspection of the support frame outer chord for cracking, in accordance with Part 1 of the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011. If any cracking is found, repair before further flight, using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

#### **(l) Retained Post-Modification and Post-Repair Inspections With No Changes**

This paragraph restates the actions required by paragraph (l) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes. For airplanes on which cracking was found during a post-modification inspection and was repaired by doing the installation of an upper or lower corner post-modification web crack repair, as specified in Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011: At the applicable times specified in tables 6 and 8 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, do a bulkhead (support frame) post-repair inspection, and do all applicable corrective actions, in accordance with paragraph a., b., or c. of Part 4 of paragraph 3.B.8 of the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, as applicable, except as required by paragraph (m)(4) of this AD. Repeat the inspection, thereafter, at the applicable times specified in tables 6 and 8 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

#### **(m) Retained Exceptions to Service Information With No Changes**

This paragraph restates the exceptions specified in paragraph (m) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes.

(1) Where Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, specifies a compliance time after "the date on Revision 2 of this service bulletin," this AD requires compliance within the specified compliance time after August 28, 2001 (the effective date of AD 2001-15-03, Amendment 39-12337 (66 FR 38365, July 24, 2001)).

(2) Where Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, specifies a compliance time after "the date on Revision 4 of this service bulletin," this AD requires compliance within the specified compliance time after August 5, 2010 (the effective date of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010)).

(3) Where Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, specifies a compliance time "after the date on the respective service bulletin revision" this AD requires compliance within the specified compliance time after June 3, 2014 (the effective date of AD 2014-07-01 Amendment 39-17815 (79 FR 23893, April 29, 2014)).

(4) If any cracking is found during any inspection required by this AD, and Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013; or Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 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.

(5) If, during any inspection required by paragraph (g) of this AD, any cracking is found in the bonded web doubler, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (q) of this AD.

(6) Where Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, specifies accomplishing inspections for cracking in the forward and aft inner chords, splice fittings, floor supports, and upper and lower web panels, this AD also requires doing an open-hole HFEC inspection of the bonded web doubler if present.

(7) Where Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, specifies a compliance time "after the date on Revision 2 of this service bulletin," this AD requires compliance within the specified compliance time as of August 5, 2010 (the effective date of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010)).

(8) Where Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, specifies a compliance time "after the date on Revision 3 of this service bulletin," or "after the date on Revision 4 of this service bulletin," this AD requires compliance within the specified compliance time after June 3, 2014 (the effective date of AD 2010-14-07, Amendment 39-17815 (79 FR 23893, April 29, 2014)).

#### **(n) Retained Optional Terminating Modification With No Changes**

This paragraph restates the actions required by paragraph (n) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with no changes. Accomplishing the modification of the bulkhead at BS 2598 in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2837, dated July 13, 2012, terminates the requirements of paragraphs (g), (h), (i), (j), (k), and (l) of this AD, except where Boeing Alert Service Bulletin 747-53A2837, dated July 13, 2012, 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.

#### **(o) Retained Terminating Action for Certain Requirements of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010), With Revised Terminating Action**

This paragraph restates the terminating actions specified in paragraph (o) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with revised terminating action within paragraph (o)(1) of this AD.

(1) Accomplishing the inspections, repairs, and modification in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, is an acceptable terminating action for the corresponding inspections, repairs, and modification at the BS 2598 support frame required by paragraphs (i), (j), (k)(1), (m), (n), (o), (p), (q), (r), (s), (t), (u), and (v) of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010). Where Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011, specifies to contact Boeing for repair instructions, the repair instructions must be approved in accordance with the procedures specified in paragraph (q) of this AD. All provisions of AD 2010-14-07 that are not specifically referenced in this paragraph remain fully applicable and must be complied with, including paragraph (k)(2) of AD 2010-14-07.

(2) Accomplishing the inspections, repairs, and interim modification in accordance with Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, is an acceptable terminating action for the corresponding inspections, repairs and interim modification at the BS 2598 bulkhead required by paragraphs (i), (j), (o), (s), (t), (u), and (v) of AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010). Where Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, specifies to contact Boeing for repair data, the repair data must be approved in accordance with the procedures specified in paragraph (q) of this AD. All provisions of AD 2010-14-07 that are not specifically referenced in this paragraph remain fully applicable and must be complied with.

**(p) Retained Credit for Previous Actions With Change to Paragraph Reference**

This paragraph restates the credit specified in paragraph (p) of AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), with a change to a paragraph reference. This paragraph provides credit for the actions required by paragraphs (g), (h), and (i) of this AD, if those actions were performed before June 3, 2014 (the effective date of AD 2014-07-01) using Boeing Alert Service Bulletin 747-53A2427, Revision 6, dated July 14, 2011, provided that the additional actions added in Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013, are done within the applicable compliance times specified in paragraphs (g), (h), and (i) of this AD. Boeing Alert Service Bulletin 747-53A2427, Revision 6, dated July 14, 2011, is not incorporated by reference in this AD.

**(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 paragraph (r)(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.

(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) Related portions or applicable paragraphs of AMOCs approved previously for AD 2010-14-07, Amendment 39-16352 (75 FR 38001, July 1, 2010), are approved as AMOCs for the corresponding provisions of paragraphs (g), (h), (i), (j), (k), and (l) of this AD. All new actions specified in paragraphs (g), (h), (i), (j), (k), and (l) of this AD that are not identified in a previously approved AMOC must still be done.

(5) AMOCs approved for AD 2014-07-01, Amendment 39-17815 (79 FR 23893, April 29, 2014), are approved as AMOCs for the corresponding provisions of this AD.

**(r) Related Information**

(1) For more information about this AD, contact Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@faa.gov.

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

**(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 June 3, 2014 (79 FR 23893).

(i) Boeing Alert Service Bulletin 747-53A2427, Revision 7, dated July 19, 2013.

(ii) Boeing Service Bulletin 747-53A2473, Revision 4, dated December 1, 2011.

(iii) Boeing Alert Service Bulletin 747-53A2837, dated July 13, 2012.

(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, WA. 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 July 3, 2014.

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