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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2013-0366; Directorate Identifier 2011-NM-024-AD; Amendment 39-18038; AD 2014-24-05]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes. This AD was prompted by a report of a cracked reveal made from a casting found within a group of airplanes that should have machined reveals made only from 6061 aluminum. This AD requires an inspection to determine the material of the number 3 main entry door (MED) corner reveal, repetitive inspections of certain reveals for cracking, and corrective action if necessary. This AD also requires repetitive inspections for cracking of 6061 machined aluminum one-piece corner reveals, and replacement with 6061 machined aluminum two-piece corner reveals if necessary, which terminates certain repetitive inspections. We are issuing this AD to detect and correct fatigue cracking of the lower forward corner reveal of the number 3 MEDs, which could lead to the door escape slide departing the airplane when the door is opened and the slide is deployed, and consequent injuries to passengers and crew using the door escape slide during an emergency evacuation.

**DATES:** This AD is effective January 28, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 28, 2015.

**ADDRESSES:** 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-2013-0366; 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 address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6432; fax: 425-917-6590; email: [bill.ashforth@faa.gov](mailto:bill.ashforth@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008). AD 2008-18-07 applies to certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes. The NPRM published in the Federal Register on May 8, 2013 (78 FR 26720). The NPRM was prompted by a report of a cracked reveal made from a casting found within a group of airplanes that should have machined reveals made only from 6061 aluminum. The NPRM proposed to retain all the requirements of AD 2008-18-07. The NPRM also proposed to add, for certain airplanes, an inspection to determine the material of the number 3 MED corner reveal, repetitive inspections for cracking of 6061 machined aluminum one-piece corner reveals, and replacement with 6061 machined aluminum two-piece corner reveals if necessary, which terminates certain repetitive inspections. We are issuing this AD to detect and correct fatigue cracking of the lower forward corner reveal of the number 3 MEDs, which could lead to the door escape slide departing the airplane when the door is opened and the slide is deployed, and consequent injuries to passengers and crew using the door escape slide during an emergency evacuation.

### **Related AD**

AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), requires, for The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes, an inspection to determine the material of a number 3 MED corner reveal, repetitive inspections of certain reveals for cracking, a detailed inspection of certain reveals for a sharp edge and cracking, and corrective action if necessary. AD 2008-18-07 allows reveal replacement as an option to certain inspections. AD 2008-18-07 was prompted by reports of cracking and/or a sharp edge in the lower forward corner reveal of the number 3 MEDs. AD 2008-18-07 refers to Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007, as the appropriate source of service information for the required actions specified in that AD.

### **Explanation of Difference in Requirements Between the NPRM (78 FR 26720, May 8, 2013) and This Final Rule**

In the NPRM (78 FR 26720, May 8, 2013), the FAA proposed to supersede AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), to reflect the changes in airplane groups

specified in revised service information, Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. However, based on the comments received on the NPRM, it became evident that it was difficult to follow the numerous changes between Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007, and Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, as well as in following the corresponding actions specified in the NPRM.

There are only two significant changes in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010: (1) Airplanes having line numbers 1038 through 1270 were moved from Group 2 to Group 4; and (2) for Group 4 airplanes, there are additional actions. Therefore, for clarity, we have determined that a less burdensome approach is to revise this final rule to include only the new actions for Group 4 airplanes. Instead of superseding AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), this final rule is a stand-alone AD, applicable only to Group 4 airplanes as identified in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, except for those airplanes that have been converted to an all-cargo configuration. Airplanes identified in the applicability of AD 2008-18-07 are still required to continue to comply with the requirements of that AD.

Since this AD does not supersede AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), paragraphs (g) through (m), (p), (q), and (v) of the NPRM (78 FR 26720, May 8, 2013) are not included in this AD. Also, the corresponding paragraph identifiers have been redesignated in this final rule, as listed in the following table:

**Redesignated Paragraph Identifiers**

<b>Requirement in the proposed AD (<a href="#">78 FR 26720</a>, May 8, 2013)</b>	<b>Corresponding requirement in this AD</b>
paragraph (t)	paragraph (g).
paragraph (s)	paragraph (h).
paragraph (r)	paragraph (i).
paragraph (u)	paragraph (j).
paragraph (n)	paragraph (k).
paragraph (o)	paragraph (l).
paragraph (w)	paragraph (n).

We have also revised paragraphs (n) and (o) of the proposed AD (78 FR 26720, May 8, 2013) (redesignated as paragraphs (k) and (l) of this AD) that referred to "AD 2008-18-07." In paragraphs (k) and (l) of this AD, we have referred to the current service information, Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, instead of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), for the locations where cast 356 aluminum reveals and machined 6061 aluminum reveals may not be installed. Paragraphs (k) and (l) of this AD state that the parts installation prohibition ends the parts installation prohibitions specified in paragraphs (n) and (o) of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008).

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (78 FR 26720, May 8, 2013) and the FAA's response to each comment.

## **Request To Clarify the Cause of the Unsafe Condition**

Boeing asked that we clarify the cause of the unsafe condition identified in paragraph (e) of the proposed AD (78 FR 26720, May 8, 2013). Boeing stated that the report that prompted the proposed supersedure of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), involved a cracked casting on an airplane that should have machined reveals made from only 6061 aluminum.

We agree that the unsafe condition should be clarified for the reason provided. We have changed the wording for the unsafe condition identified in the SUMMARY section and in paragraph (e) of this final rule to specify that "This new AD was prompted by a report of a cracked reveal made from a casting found within a group of airplanes that should have machined reveals made only from 6061 aluminum." We have also clarified the Discussion section of this final rule to specify that the NPRM (78 FR 26720, May 8, 2013) was prompted by that report.

## **Request To Revise Wording in the NPRM (78 FR 26720, May 8, 2013)**

Boeing requested numerous changes related to the wording in paragraphs (g), (h), (j), (u) and (v) of the NPRM (78 FR 26720, May 8, 2013).

We acknowledge the commenter's concerns for clarity. However, as stated previously, this AD does not supersede AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008). The changes requested by the commenter referred to the "retained" paragraphs of AD 2008-18-07, which are not restated in this AD; therefore, no action is necessary in this regard.

## **Request To Revise Service Information**

Delta Airlines (Delta) requested that Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, be revised prior to the issuance of this final rule. Delta stated that paragraphs (r) and (s) of the proposed AD (78 FR 26720, May 8, 2013) (redesignated as paragraphs (i) and (h) of this AD) are clear and understandable; however, when Delta reviewed the required actions in Table 1 of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, Delta was not able to clearly determine which conditions were linked with which actions. Delta stated that Boeing also agrees that the compliance tables of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, should be clarified for operators' use.

We disagree with delaying this AD to wait for revised service information in light of the urgency of the identified unsafe condition. As Delta stated, the tables contained in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, are complicated and could be misinterpreted; however, we have addressed this concern by specifying the requirements and clarifying the appropriate actions in paragraphs (h) and (i) of this AD. When the service information is revised, we might consider approving it as an alternative method of compliance (AMOC) for these actions. We have not changed this final rule in this regard.

## **Request To Address an Error in Service Information**

Delta stated that, in the last row under the "Action" column of Table 8 of paragraph 1.E., Compliance, of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, there is a reference to "Table 9," which does not exist. Delta stated that the correct paragraph reference is "Paragraph 3.B., Part 2," as confirmed in Delta's correspondence with Boeing. Delta requested that Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, be revised prior to the issuance of this final rule, or that we address this error in this final rule, or, at a minimum, address this error in a global AMOC.

We partially agree. We disagree to wait for revised service information in light of the urgency of the identified unsafe condition. However, we agree that the reference to Table 9 in paragraph 1.E.,

Compliance, of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, is incorrect. To address this error, we have added a new paragraph (m) in this AD to state that, where the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, specify a post-repair detailed inspection in accordance with Table 9, this AD requires a detailed inspection in accordance with paragraph 3.B., Part 2, of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. When revised service information becomes available, we might consider approving it as an AMOC for the actions required by this AD.

#### **Request To Revise the Proposed AD To Include an Inspection for a Sharp Edge for Group 4 Airplanes**

Boeing asked that we revise paragraph (r)(2) of the proposed AD (78 FR 26720, May 8, 2013) (redesignated as paragraph (i)(2) of this AD) to include an inspection for a potential sharp edge common to the reveal. Boeing stated that this inspection might be the first inspection performed and, therefore, it is possible that a sharp edge could be found on a machined reveal.

We do not agree to revise the wording of paragraph (i)(2) of this AD (designated as paragraph (r)(2) of the proposed AD (78 FR 26720, May 8, 2013)). Paragraph (i)(2) of this AD requires, for previously inspected Group 4 airplanes, a material-type inspection to determine if the corner reveal is a casting, and, if a casting is found, continued inspections or replacement of the reveal with a two-piece machined reveal. Castings do not have sharp edges. Group 4 airplanes that were not previously inspected or changed, that have corner reveals found not to be castings, require inspections for a sharp edge in paragraph (g)(2) of this AD. We have not changed this final rule in this regard.

#### **Request for Alternative Corrective Action for Group 4 Airplanes**

Boeing asked that we revise paragraph (t)(1) of the proposed AD (78 FR 26720, May 8, 2013) (redesignated as paragraph (g)(1) of this AD) to allow a weld repair for a cracked reveal made from a casting on Group 4 airplanes. Boeing stated that this would allow operators to repair the casting if they cannot obtain a machined reveal.

We agree that paragraph (g)(1) of this AD should allow a weld repair as an alternative corrective action since this was a permitted action for Group 2 airplanes in AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008). This alternative corrective action for Group 4 airplanes was contained in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, but was inadvertently omitted in the proposed AD (78 FR 26720, May 8, 2013). Paragraph (t) of the NPRM is redesignated as paragraph (g) in this AD and we have revised paragraph (g)(1) by adding new paragraphs (g)(1)(i) and (g)(1)(ii) in order to allow a weld repair as an option to replacing the reveal if any cracking is found. In paragraph (g)(1)(ii) of this AD we specify repairing in accordance with Part 4 of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. The inspection for cracking specified in paragraph (g)(1) of this AD is to be repeated thereafter at intervals not to exceed 3,000 flight cycles until a new two-piece reveal is installed in accordance with the requirements of paragraph (g)(1)(i) of this AD.

#### **Request To Reference Service Bulletin Information Notices or Revise Service Bulletin**

Delta requested that Boeing Service Bulletin Information Notice 747-53-2460 IN 03, dated March 24, 2011, be referenced as an approved deviation from Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Alternatively, Boeing requested that we delay the issuance of this final rule until Boeing revises Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, to incorporate the changes outlined in that information notice.

We partially agree. We agree that Boeing Service Bulletin Information Notice 747-53-2460 IN 03, dated March 24, 2011, contains acceptable information for the inspection and modification mandated in this AD. However, we disagree with delaying issuance of this final rule until revised service information becomes available. We have determined that to delay this final rule would be inappropriate, because the inspections of the number 3 MED reveals and corrective actions are needed to reduce the risk of the identified unsafe condition addressed in this AD. The information that Boeing Service Bulletin Information Notice 747-53-2460 IN 03, dated March 24, 2011, clarifies is for reference only and is not required to address the identified unsafe condition. When revised service information becomes available, we might consider approving it as an AMOC for the actions required by this AD. We have made no change to this AD in this regard.

### **Explanation of Additional Changes Made to This Final Rule**

We redesignated paragraphs (r) and (r)(2) of the NPRM (78 FR 26720, May 8, 2013) as paragraphs (i) and (i)(2) of this final rule and removed the phrase "Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010," from the initial compliance times listed in those paragraphs. In the proposed AD, we stated that the compliance times could be calculated from the most recent work performed in accordance with Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007; or Revision 2, dated December 22, 2010; but this would introduce an error in paragraph (i) of this AD since it would require operators to complete the inspections required by Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, for a second time, if the reference to Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, remained.

Paragraph (i)(1) of this final rule specifies inspections for cracking of any corner reveal found to be a one-piece or two-piece casting. Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, provides inspection procedures for one-piece corner reveals, but not for the two-piece corner reveals. Because the inspection procedures for the two-piece corner reveals were not included in the service information, operators would have been unable to comply with the proposed requirement to inspect a two-piece corner reveal, and in this case would have been required to obtain approval of an alternative method of compliance for this inspection. We have therefore revised paragraph (i)(1) of this AD to provide the appropriate procedures for both scenarios.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 26720, May 8, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 26720, May 8, 2013).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### **Costs of Compliance**

We estimate that this AD affects 166 airplanes of U.S. registry.  
We estimate the following costs to comply with this AD:

### Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Material type inspection and inspection for cracks	14 work-hours × \$85 per hour = \$1,190 per inspection cycle	\$0	\$1,190 per inspection cycle	\$197,540 per inspection cycle.

We estimate the following costs to do any necessary on-condition actions that would be required based on the results of the inspections. We have no way of determining the number of aircraft that might need these actions:

### On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Corner reveal removal and replacement	17 work-hours × \$85 per hour = \$1,445 per inspection cycle	\$9,525	\$10,970 per inspection cycle.

### 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 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 adding the following new airworthiness directive (AD):



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**2014-24-05 The Boeing Company:** Amendment 39-18038; Docket No. FAA-2013-0366; Directorate Identifier 2011-NM-024-AD.

**(a) Effective Date**

This AD is effective January 28, 2015.

**(b) Affected ADs**

Certain requirements of this AD terminate certain requirements of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008).

**(c) Applicability**

This AD applies to The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes, certificated in any category, identified as Group 4 airplanes in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, except airplanes that have been converted to an all-cargo configuration. Also, the requirements of this AD are applicable when a converted airplane operating in an all-cargo configuration is converted back to a passenger or passenger/cargo configuration.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by a report of a cracked reveal made from a casting found within a group of airplanes that should only have machined reveals made from 6061 aluminum. We are issuing this AD to detect and correct fatigue cracking of the lower forward corner reveal of the number 3 main entry doors (MEDs), which could lead to the door escape slide departing the airplane when the door is opened and the slide is deployed, and consequent injuries to passengers and crew using the door escape slide during an emergency evacuation.

**(f) Compliance**

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

**(g) Actions for Group 4 Airplanes: Not Previously Inspected or Changed**

For Group 4 airplanes identified in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, that have not been previously inspected or changed in accordance with Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007: Before the accumulation of 1,500 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever occurs later, do a material type inspection to determine if the

lower forward corner reveal is made from 6061 machined aluminum plate or 356 aluminum casting, in accordance with Part 6 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Doing the inspection specified in this paragraph terminates the inspections required by paragraph (j) of AD 2008-18-07, Amendment 38-15664 (73 FR 56960, October 1, 2008), for that airplane only.

(1) If, during any inspection required by paragraph (g) of this AD, any corner reveal is found to be a casting: Before the accumulation of 7,000 total flight cycles; within 2,000 flight cycles after the effective date of this AD; or within 3,000 flight cycles after the most recent inspection of the number 3 MED corner reveal was done in accordance with Boeing Service Bulletin 747-53A2378, Revision 4, dated June 10, 2010; whichever occurs later; do a detailed inspection for cracking of the corner reveal, in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Repeat the inspection for cracking thereafter at intervals not to exceed 3,000 flight cycles until a new two-piece reveal is installed in accordance with the requirements of paragraph (g)(1)(i) of this AD. If any cracking is found, do the actions specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD.

(i) Replace the cast reveal with a new 6061 machined aluminum two-piece corner reveal, before further flight, in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(ii) Repair all cracking, before further flight, in accordance with Part 4 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(2) If, during any inspection required by paragraph (g) of this AD, a corner reveal is found that is not a casting: Before further flight, do a detailed inspection for a sharp edge, in accordance with Part 1 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010; and do a detailed inspection for cracking of the corner reveal, in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Repeat the inspection for cracking thereafter at intervals not to exceed 6,000 flight cycles until the corner reveal is replaced with a 6061 machined aluminum two-piece corner reveal in accordance with the requirements of paragraph (j) of this AD.

(i) If any sharp edge is found during any inspection required by paragraph (g)(2) of this AD, before further flight, rework the corner reveal, in accordance with Part 1 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(ii) If any cracking is found during any inspection required by paragraph (g)(2) of this AD, before further flight, replace the corner reveal with a 6061 machined aluminum two-piece corner reveal, in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

#### **(h) Actions for Previously Inspected Group 4 Airplanes: Corner Reveal Replaced With One-Piece Reveal**

For Group 4 airplanes identified in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, that have been inspected previously in accordance with Boeing Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007, and on which the corner reveal has been replaced with a one-piece reveal: Within 10,000 flight cycles after the date the reveal was replaced with a one-piece corner reveal, do a detailed inspection for cracking of the corner reveal, in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Repeat the inspection for cracking thereafter at intervals not to exceed 6,000 flight cycles until the corner reveal is replaced with a 6061 machined aluminum two-piece corner reveal, in accordance with the requirements of paragraph (j) of this AD. If any cracking is found during any inspection required by this paragraph, before further

flight, replace the one-piece corner reveal with a 6061 machined aluminum two-piece corner reveal, in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

**(i) Actions for Previously Inspected Group 4 Airplanes: Corner Reveal Not Replaced, or Replaced With Two-Piece Reveal**

For Group 4 airplanes identified in Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, that have been inspected previously in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007; and on which the corner reveal either has not been replaced, or has been replaced with a two-piece reveal that was made by reworking an existing one-piece reveal: Before the accumulation of 7,000 total flight cycles; within 3,000 flight cycles after the most recent inspection or rework done in accordance with Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007; or within 1,000 flight cycles after the effective date of this AD; whichever occurs later; do a material type inspection to determine if the corner reveal is a casting, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Doing the inspection specified in this paragraph terminates the inspections required by paragraph (j) of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), for these airplanes.

(1) If, during any inspection required by paragraph (i) of this AD, any corner reveal is found to be a casting: Before further flight, do a detailed inspection for cracking of the corner reveal. For one-piece reveals, inspect in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010; for two-piece reveals, inspect using a method approved in accordance with the procedures specified in paragraph (n) of this AD. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles until a new two-piece reveal is installed in accordance with the requirements of paragraph (i)(1)(i) of this AD. If any cracking is found, do the actions specified in paragraph (i)(1)(i) or (i)(1)(ii) of this AD.

(i) Replace the cast reveal with a new 6061 machined aluminum two-piece corner reveal, before further flight, in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(ii) Repair all cracking, before further flight, in accordance with Part 4 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(2) If, during any inspection required by paragraph (i) of this AD, any one-piece corner reveal is found to be installed and is not a casting: Before the accumulation of 10,000 total flight cycles; or within 6,000 flight cycles after the most recent inspection done in accordance with Boeing Special Attention Service Bulletin 747-53-2460, Revision 1, dated February 13, 2007; whichever occurs later; do a detailed inspection of the corner reveal for cracking, in accordance with Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. Repeat the inspection for cracking thereafter at intervals not to exceed 6,000 flight cycles until the corner reveal is replaced with a 6061 machined aluminum two-piece corner reveal. If any cracking is found during any inspection required by this paragraph, before further flight, replace the corner reveal with a 6061 machined aluminum two-piece corner reveal, in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

**(j) Terminating Action for Repetitive Inspections**

Installation of a 6061 machined aluminum two-piece corner reveal in accordance with Part 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460,

Revision 2, dated December 22, 2010, terminates the repetitive inspections required by paragraphs (g), (h), and (i) of this AD.

**(k) Parts Installation Prohibition: (Cast 356 Aluminum) Reveals**

As of the effective date of this AD, no person may install a door lower forward corner reveal made of cast 356 aluminum on any airplane at a location specified in the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. This parts installation prohibition ends the parts installation prohibition specified in paragraph (n) of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), for the airplanes identified in paragraph (c) of this AD.

**(l) Parts Installation Limitation: (Machined 6061 Aluminum) Reveals**

As of the effective date of this AD, no person may install a door lower forward corner reveal made of machined 6061 aluminum on any airplane at a location specified in the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, unless it has been confirmed/reworked to be without a sharp edge, in accordance with Part 1 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010. This parts installation prohibition ends the parts installation prohibition specified in paragraph (o) of AD 2008-18-07, Amendment 39-15664 (73 FR 56960, October 1, 2008), for the airplanes identified in paragraph (c) of this AD.

**(m) Exceptions to Service Information Specifications**

Where Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010, specifies a post-repair detailed inspection in accordance with Table 9, this AD requires a detailed inspection in accordance with paragraph 3.B., Part 2, of Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

**(n) 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 (o) 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.

**(o) Related Information**

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

**(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 the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 747-53-2460, Revision 2, dated December 22, 2010.

(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 November 19, 2014.

Suzanne Masterson,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.