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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-5816; Directorate Identifier 2015-NM-029-AD; Amendment 39-18731; AD 2016-25-05]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all 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. This AD was prompted by reports of cracking found in the splice plates, hinge fittings, terminal fittings, the upper skin of the outboard and center sections, upper chord, and rear spar webs before reaching the inspection interval specified in AD 2006-10-16. Cracked and fractured Maraging steel fasteners were also found. This AD requires repetitive inspections for cracking, an inspection to determine whether fasteners are magnetic, repetitive ultrasonic inspections for cracking and fractures of affected fasteners, and related investigative and corrective actions if necessary. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 25, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 25, 2017.

ADDRESSES: For service information identified in this final rule, 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. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-5816.

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-2015-5816; 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: Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2006-10-16, Amendment 39-14600 (71 FR 28570, May 17, 2006) ("AD 2006-10-16"). AD 2006-10-16 applies to all 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. The NPRM published in the Federal Register on November 27, 2015 (80 FR 74052) ("the NPRM"). The NPRM was prompted by reports of cracking found in the splice plates, hinge fittings, terminal fittings, the upper skin of the outboard and center sections, upper chord, and rear spar webs before reaching the inspection interval specified in AD 2006-10-16. Cracked and fractured Maraging steel fasteners were also found. The NPRM proposed to reduce the compliance time for certain inspections and add repetitive inspections for cracking of the splice plates, hinge fittings, terminal fittings, upper skin of the outboard and center sections, and rear spar webs in Zone B. The NPRM also proposed to require an inspection to determine whether fasteners are magnetic in Zone C, repetitive ultrasonic inspections for cracking and fractures of affected fasteners, and related investigative and corrective actions if necessary. The NPRM also added an optional modification, which would terminate certain repetitive inspections, provided post-modification inspections and corrective action are done if necessary. We are issuing this AD to detect and correct this cracking, which could lead to reduced structural capability of the outboard and center sections of the horizontal stabilizer and could result in loss of control of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Clarify Inspections

Atlas Airlines, United Airlines, and The Boeing Company requested that we clarify the inspection required by the proposed AD. Atlas Airlines stated that the "Proposed AD Requirements" paragraph of the NPRM states that the proposed AD would retain all the requirements of AD 2006-10-16. Atlas Airlines also stated that paragraph (f) of AD 2006-10-16 is not included in the proposed AD and noted that paragraph (g)(3) of the proposed AD identifies only Groups 7 through 9 as the applicable groups for the Zone A inspections. Atlas Airlines asked for clarification of the Zone A inspections.

Boeing noted that AD 2006-10-16 includes Zone C inspections as specified in Part 5 of Boeing Service Bulletin 747-55A2050, Revision 1, dated May 1, 2003, and included Zone A inspections for Groups 1 through 6. Boeing noted that these inspections have not been removed by Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015. Boeing also requested that we revise the proposed AD to address the Zone C inspections in Part 5 of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, and the Zone A inspections for Groups 1 through 6.

United Airlines disagreed with not restating the requirements of AD 2006-10-16. United Airlines stated that operators might miss that Zone A inspections and Zone C, Part 5, inspections required by AD 2006-10-16 are intended to be mandated. United Airlines noted that although the preamble of the NPRM stated that all inspections of AD 2006-10-16 are retained, paragraph (g) of the proposed AD only specifies new requirements and does not include certain Zone A inspections and Zone C, Part 5, inspections.

We agree that clarification is necessary. As stated in the preamble to the NPRM, we intended to retain all requirements of AD 2006-10-16. However, the actions specified in the proposed AD do not include the inspections referred to by the commenters. We have determined that instead of including those actions in this final rule, we will issue this action as a stand-alone AD. Thus, AD 2006-10-16 is not superseded, making it clear that all actions in AD 2006-10-16 continue to be required. In addition, we have revised this AD to specify when accomplishing certain actions in this AD terminates actions specified in AD 2006-10-16. We have made the following changes:

- Revised paragraph (g)(1) of this AD to specify that accomplishing a Zone B inspection required by paragraph (g)(1) of this AD terminates the inspections required by paragraph (g) of AD 2006-10-16 for the inspected area only.
- Revised paragraph (g)(2) of this AD to specify that accomplishing a Zone B inspection required by paragraph (g)(2) of this AD terminates the inspections required by paragraph (i) of AD 2006-10-16 for the inspected area only.
- Revised paragraph (g)(3) of this AD to specify that accomplishing Zone A and Zone B inspections required by paragraph (g)(3) of this AD terminates the inspections required by paragraphs (f), (i), and (l) of AD 2006-10-16 for the inspected area only.
- Added paragraph (i)(1)(iii) to this AD to clarify that accomplishing the actions specified in paragraph (i)(1) of this AD terminates inspections required by paragraph (g) of AD 2006-10-16 for Zone B, as specified in Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, for the modified area only.
- Added paragraph (i)(1)(iv) to this AD to clarify that accomplishing the actions specified in paragraph (i) of this AD terminates inspections required by paragraph (k) of AD 2006-10-16 for Zone C, as specified in Part 5 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, for the modified area only.
- Added paragraph (i)(2)(ii) of this AD to clarify that accomplishing the actions specified in paragraph (i)(2) of this AD terminates the repetitive inspections required by paragraph (k) of AD 2006-10-16 for Zone C, as specified in Part 5 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, for the inspected area only.
- Added paragraph (i)(3)(ii) of this AD to clarify that accomplishing the actions specified in paragraph (i)(3) of this AD terminates the repetitive inspections required by paragraph (i) of AD 2006-10-16 for Zone B, as specified in Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, for the modified area only.

Request To Update Terminating Action Language for Zone C Inspections

Boeing requested that we revise paragraph (i)(2) of the proposed AD to clarify which Zone C inspections are terminated. Boeing noted that paragraph (i)(2) of the proposed AD specifies that the

actions terminate Zone C inspections specified in Part 6 of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, and noted that Zone C inspections in Part 5 of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, are also terminated.

We agree to clarify the terminating action for the Zone C inspections, and have revised paragraph (i)(2) of this AD accordingly.

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 change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.
 We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015. The service information describes procedures for accomplishing Zone A, Zone B, and Zone C inspections for cracking of the upper skin and upper rear spar chord of the outboard and center sections of the horizontal stabilizer, and related investigative and corrective actions if necessary. The service information also describes procedures for a magnetic inspection to determine the type of fasteners, ultrasonic inspections for cracking and fractures of affected fasteners, and related investigative and corrective actions if necessary. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 116 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs-Required Actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators		
Zone A Inspections (required by AD 2006-10-16)	8 work-hours × \$85 per hour = \$680	\$0	\$680	Up to \$78,880.		
Zone B Open-hole nondestructive testing (NDT) Inspection (required by AD 2006-10-16 for Groups 3, 4, and 5 airplanes; and for Groups 1, 2, and 3 airplanes, if done)	30 work-hours × \$85 per hour = \$2,550	0	2,550	Up to \$295,800.		
Zone C Maraging or H-11 Steel Fastener Inspection (required by AD 2006-10-16 for Groups 1, 2, and 3 airplanes)	8 work-hours × \$85 per hour = \$680	0	680	Up to \$78,880.		

New Zone B Inspections	248 work- hours × \$85 per hour = \$21,080	0	21,080	\$2,445,280.
New Zone C Inspection	26 work-hours × \$85 per hour = \$2,210	0	2,210	\$256,360.

Estimated Costs-Optional Actions

Action	Labor cost	Parts cost	Cost per product
Open-hole NDT Inspections (high frequency eddy current inspections)	Up to 298 work-hours × \$85 per hour = up to \$25,330	\$0	Up to \$25,330.
Zone B Modification	Up to 313 work-hours × \$85 per hour = up to \$26,605	Up to \$3,486	Up to \$30,091.
Post-Modification Inspections	Up to 298 work-hours × \$85 per hour = up to \$25,330	\$0	Up to \$25,330.

We have received no definitive data that would enable us to provide a cost estimate for the oncondition 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 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):

FAA Aviation Safety

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/ www.gpoaccess.gov/fr/advanced.html

2016-25-05 The Boeing Company: Amendment 39-18731; Docket No. FAA-2015-5816; Directorate Identifier 2015-NM-029-AD.

(a) Effective Date

This AD is effective January 25, 2017.

(b) Affected ADs

This AD affects AD 2006-10-16, Amendment 39-14600 (71 FR 28570, May 17, 2006) ("AD 2006-10-16").

(c) Applicability

This AD applies to all 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.

(d) Subject

Air Transport Association (ATA) of America Code 55, Stabilizers.

(e) Unsafe Condition

This AD was prompted by reports of cracking found in the splice plates, hinge fittings, terminal fittings, the upper skin of the outboard and center sections, upper chord, and rear spar webs before reaching the inspection interval specified in AD 2006-10-16. Cracked and fractured Maraging steel fasteners were also found. We are issuing this AD to detect and correct this cracking, which could lead to reduced structural capability of the outboard and center sections of the horizontal stabilizer and could result in loss of control of the airplane.

(f) Compliance

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

(g) Repetitive Inspections/Investigative and Corrective Actions

At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, except as required by paragraphs (h)(1) and (h)(2) of this AD: Do the applicable actions specified in paragraphs (g)(1), (g)(2), (g)(3), and (g)(4) of this AD, and all applicable related investigative and corrective actions, in accordance with the applicable part of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, except as required by paragraph (h)(3) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the applicable inspections specified in paragraphs (g)(1), (g)(2), (g)(3), and (g)(4) of this AD at the applicable times specified in

paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.

- (1) For Group 1 through 3 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Do non-destructive test (NDT) inspections (ultrasonic, high frequency eddy current, and low frequency eddy current inspections) or open-hole NDT inspections (high frequency eddy current inspections) of Zone B for cracking, in accordance with Part 3 or Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, as applicable. Accomplishing a Zone B inspection required by this paragraph terminates the inspections required by paragraph (g) of AD 2006-10-16 for the inspected area only.
- (2) For Group 4 through 6 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Do open-hole NDT inspections (high frequency eddy current inspections) of Zone B for cracking, in accordance with Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015. Accomplishing a Zone B inspection required by this paragraph terminates the inspections required by paragraph (i) of AD 2006-10-16 for the inspected area only.
- (3) For Group 7 through 9 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Do inspections of Zone A (detailed or high frequency eddy current inspections) and Zone B (open-hole high frequency eddy current inspections) for cracking, in accordance with Part 1, Part 2, or Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, as applicable. Accomplishing Zone A and Zone B inspections required by this paragraph terminates the inspections required by paragraphs (f), (i), and (l) of AD 2006-10-16 for the inspected area only.
- (4) For Group 1 through 3 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Do an inspection of Zone C Maraging or H-11 steel fasteners to determine whether fasteners are magnetic, in accordance with Part 6 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.

(h) Exceptions to Service Bulletin Specifications

- (1) Where Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, specifies a compliance time "after the Revision 2 date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.
- (2) The Condition column of Table 1 of paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, refers to airplanes with certain total flight cycles and total flight hours. This AD, however, applies to the airplanes with the specified total flight cycles and total flight hours as of the effective date of this AD.
- (3) Where Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, specifies to contact Boeing for repair instructions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (1) of this AD.

(i) Optional Terminating Action

- (1) For Group 1 through 3 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Accomplishing the Zone B modification, including all applicable related investigative and corrective actions, specified in Part 7 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, except as required by paragraph (h)(3) of this AD, terminates the repetitive inspections specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this AD for the modified area only.
- (i) Inspections required by paragraph (g)(1) of this AD for Zone B, as specified in Part 3 and Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.

- (ii) Inspections required by paragraph (g)(4) of this AD for Zone C, as specified in Part 6 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (iii) Inspections required by paragraph (g) of AD 2006-10-16 for Zone B, as specified in Part 3 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (iv) Inspections required by paragraph (k) of AD 2006-10-16 for Zone C, as specified in Part 5 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (2) For Group 1 through 3 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Accomplishing the Zone B open-hole NDT inspection, repairing any cracking as applicable, and replacing fasteners as specified in Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, terminates the actions specified in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD for the inspected area only.
- (i) The inspections required by paragraph (g)(4) of this AD for Zone C, as specified in Part 6 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (ii) The repetitive inspections required by paragraph (k) of AD 2006-10-16 for Zone C, as specified in Part 5 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (3) For Group 4 through 9 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Accomplishing the Zone B modification, including all applicable related investigative and corrective actions, specified in Part 7 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, except as required by paragraph (h)(3) of this AD, terminates the actions specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this AD for the modified area only.
- (i) The repetitive inspections required by paragraph (g)(2) or (g)(3) of this AD, as applicable, only for Zone B, as specified in Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
- (ii) The repetitive inspections required by paragraph (i) of AD 2006-10-16 for Zone B, as specified in Part 4 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.

(j) Repetitive Post-Modification Inspections and Corrective Actions

At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015: Do the applicable inspections specified in paragraphs (j)(1) and (j)(2) of this AD, and all applicable corrective actions, in accordance with Part 8 of the Accomplishment Instructions of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, except as required by paragraph (h)(3) of this AD. Do all applicable corrective actions before further flight. Repeat the applicable inspections at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.

- (1) For Group 1 through 3 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, on which the Zone B modification specified in paragraph (i)(1) of this AD is done: Do non-destructive test (NDT) inspections (ultrasonic, high frequency eddy current, and low frequency eddy current inspections) or open-hole NDT inspections (high frequency eddy current inspections) of Zone B for cracking.
- (2) For Group 4 through 9 airplanes identified in Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, on which the Zone B modification specified in paragraph (i)(3) of this AD is done: Do open-hole NDT inspections (high frequency eddy current inspections) of Zone B for cracking.

(k) Parts Installation Prohibition

As of the effective date of this AD, no person may install any Maraging or H-11 steel fasteners in the locations specified in this AD. Where Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015, specifies to install H-11 bolts (kept fasteners), this AD requires installation of Inconel bolts.

(l) 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 (m) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.
- (2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.
- (3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, 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 for AD 2006-10-16, are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD, except for approved AMOCs that allow installation of Maraging or H-11 steel fasteners.

(m) Related Information

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.

(n) Material Incorporated by Reference

- (1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.
- (2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.
 - (i) Boeing Service Bulletin 747-55A2050, Revision 2, dated January 23, 2015.
 - (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 the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.
- (5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Renton, Washington, on November 25, 2016. John P. Piccola, Jr., Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.