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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2013-0704; Directorate Identifier 2013-NM-074-AD; Amendment 39-17695; AD 2013-24-18]**

**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 747-200B, -200C, -200F, -300, and 747SR series airplanes. This AD was prompted by reports of cracks of both lower chords and web on certain outboard struts. This AD requires repetitive inspections for cracking of the lower spar chords and web, web lower spar chord modification, which includes inspections for cracking of the lower spar chords, and repetitive post modification inspections for cracking of the lower spar web and chord; and applicable corrective actions. We are issuing this AD to prevent cracked chords and web on certain outboard struts, which, if the chord severs, could result in reduced structural integrity of the diagonal brace load path and of the strut-to-wing attachment, and consequent separation of a strut and engine from the airplane during flight.

**DATES:** This AD is effective January 21, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 21, 2014.

**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, Washington. 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>; 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, 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 by adding an AD that would apply to the specified products. The NPRM published in the Federal Register on August 28, 2013 (78 FR 53078). The NPRM proposed to require repetitive inspections for cracking of the lower spar chords and web, web lower spar chord modification, which includes inspections for cracking of the lower spar chords, and repetitive post modification inspections for cracking of the lower spar web and chord; and applicable corrective actions.

**Comments**

We gave the public the opportunity to participate in developing this AD. We have considered the comment received. Boeing stated that it supports the NPRM (78 FR 53078, August 28, 2013).

**Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 53078, August 28, 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 53078, August 28, 2013).

**Costs of Compliance**

We estimate that this AD affects 25 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>
Inspections	27 work-hours × \$85 per hour = \$2,295 per inspection cycle	\$0	\$2,295 per inspection cycle	\$57,375 per inspection cycle.
Modification	11 work-hours × \$85 per hour = \$935	95	\$1,030	\$25,750.
Post Modification Inspection	27 work-hours × \$85 per hour = \$2,295 per inspection cycle	0	\$2,295 per inspection cycle	\$57,375 per inspection cycle.

We have received no definitive data that would enable us to provide cost estimates for the on-condition 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):



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**2013-24-18 The Boeing Company:** Amendment 39-17695; Docket No. FAA-2013-0704; Directorate Identifier 2013-NM-074-AD.

**(a) Effective Date**

This AD is effective January 21, 2014.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-200B, 747-200C, 747-200F, 747-300, and 747SR series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013.

**(d) Subject**

Air Transport Association (ATA) of America Code 54, Nacelles/Pylons.

**(e) Unsafe Condition**

This AD was prompted by reports of cracks of both lower chords and web on certain outboard struts. We are issuing this AD to prevent cracked chords and web on certain outboard struts, which, if the chord severs, could result in reduced structural integrity of the diagonal brace load path and of the strut-to-wing attachment, and consequent separation of a strut and engine from the airplane during flight.

**(f) Compliance**

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

**(g) Initial and Repetitive Inspections**

Except as required by paragraph (j)(1) of this AD, at the compliance time specified in table 1 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013: Do a detailed inspection for cracking of the lower spar chords and web, a high frequency eddy current (HFEC) inspection for cracking of the lower spar chords, and all applicable repairs and modifications, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, except as required by paragraph (j)(2) of this AD. If no cracking is found, repeat the inspections thereafter at intervals not to exceed 600 flight cycles, until the actions specified in paragraph (h) of this AD have been accomplished. Do all applicable corrective actions before further flight. Accomplishing a repair and modification, including open-hole HFEC inspections for cracking and applicable corrective actions required by this paragraph

terminates the actions required by paragraphs (g) and (h) of this AD for the repaired and modified strut only. The open-hole HFEC inspection for cracking must be done before the modification.

#### **(h) Inspection and Modification**

Except as required by paragraph (j)(1) of this AD, at the compliance time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013: Do a detailed inspection for cracking of the lower spar chords and web, an HFEC inspection for cracking of the lower spar chords, a lower spar chord modification, including open-hole HFEC inspections for cracking in the chord and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, except as required by paragraph (j)(2) of this AD. Do all applicable corrective actions before further flight. Doing the actions specified in this paragraph terminates the requirements of paragraph (g) of this AD for the modified strut only. The open-hole HFEC inspection for cracking must be done before the modification.

#### **(i) Post Modification Repetitive Inspections**

For airplanes on which a modification required by paragraph (g) or (h) of this AD has been done: At the compliance time specified in table 2 of paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, do a detailed inspection for any cracking of the lower spar web and chord, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, except as required by paragraph (j)(2) of this AD. Repeat the inspection thereafter at intervals not to exceed 18 months. Do all applicable corrective actions before further flight.

#### **(j) Exceptions**

(1) Where Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, specifies a compliance time after the original issue date on the service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013, 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 (k) of this AD.

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

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

## **(l) Related Information**

For more information about this AD, 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.

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

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

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

(i) Boeing Alert Service Bulletin 747-54A2237, dated March 14, 2013.

(ii) Reserved.

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

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

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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

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