DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39
RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2007–16–19, which applies to certain The Boeing Company Model 747–200B, 747–300, and 747–400 series airplanes. AD 2007–16–19 requires repetitive detailed inspections for cracking of the aft tension tie channels from body station (BS) 1120 to BS 1220 and from BS 880 to BS 1100, and corrective actions if necessary, and optional terminating action. Since we issued that AD, analysis has indicated the need to mandate the previously optional modification. This proposed AD would retain the existing requirements, limit the area of the detailed inspection, add repetitive surface high-frequency eddy current inspections, and mandate the previously optional terminating action. We are proposing this AD to prevent fatigue cracking of the tension ties, which could result in reduced structural integrity of the airplane and rapid depressurization of the airplane.

DATES: We must receive comments on this proposed AD by September 26, 2013.

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

- Fax: 202–493–2251
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- For service information identified in this proposed 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 review copies of the 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; 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 proposed 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.


SUPPLEMENTARY INFORMATION:

Comments Invited
We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2013–0686; Directorate Identifier 2013–NM–006–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed 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 proposed AD.

Discussion
On August 2, 2007, we issued AD 2007–16–19, Amendment 39–15158 (72 FR 45151, August 13, 2007), for certain The Boeing Company Model 747–200B, 747–300, and 747–400 series airplanes. AD 2007–16–19 requires repetitive detailed inspections for cracking of the aft tension tie channels from body station (BS) 1120 to BS 1220 and from BS 880 to BS 1100, and corrective actions if necessary. AD 2007–16–19 was prompted by cracks found in the aft tension tie channels at four station locations on a Model 747–200B series airplane that had been modified to a special freighter. We issued AD 2007–16–19 to detect and correct cracking of the aft tension tie channels; failure of more than one tension tie could result in rapid depressurization of the airplane.

WFD (Widespread Fatigue Damage) Program

Structural fatigue damage is progressive. It begins as minute cracks, and those cracks grow under the action of repeated stresses. This can happen because of normal operational conditions and design attributes, or because of isolated situations or incidents such as material defects, poor fabrication quality, or corrosion pits, dings, or scratches. Fatigue damage can occur locally, in small areas or structural design details, or globally. Global fatigue damage is general degradation of large areas of structure with similar structural details and stress levels. Multiple-site damage is global damage that occurs in a large structural element such as a single rivet line of a lap splice joining two large skin panels. Global damage can also occur in multiple elements such as adjacent frames or stringers. Multiple-site damage and multiple-element damage cracks are typically too small initially to be reliably detected with normal inspection methods. Without intervention, these cracks will grow, and eventually compromise the structural integrity of the airplane, in a condition known as widespread fatigue damage (WFD). As an airplane ages, WFD will likely occur, and will certainly occur if the airplane is operated long enough without any intervention.

The FAA’s WFD final rule (75 FR 69746, November 15, 2010) became effective on January 14, 2011. The WFD rule requires certain actions to prevent structural failure due to WFD throughout the operational life of certain existing transport category airplanes and all of these airplanes that will be certificated in the future. For existing and future airplanes subject to the WFD rule, the rule requires that design approval holders establish a limit of validity (LOV) of the engineering data that support the structural maintenance program. Operators affected by the WFD rule may not fly an airplane beyond its LOV, unless an extended LOV is approved.
Section 106, describes the authority of rules on aviation safety. Subtitle I, specifies the FAA's authority to issue a bolt hole during the detailed inspection for this condition is $2,292. AD. The cost for parts (oversized inspection specified in this proposed AD would limit the area of the existing detailed inspection required by AD 2007–16–19, add repetitive surface high-frequency eddy current inspections, and mandate the previously optional terminating action. The phrase “related investigative actions” is used in this proposed AD. “Related investigative actions” are follow-on actions that (1) are related to the primary actions, and (2) further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

In addition, the phrase “corrective actions” is used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Difference Between Proposed AD and Service Information

Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 1 airplane of U.S. registry. We estimate the following costs to comply with this proposed AD:

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained detailed inspection (retained actions).</td>
<td>4 work-hours × $85 per hour = $340 per inspection cycle.</td>
<td>$0</td>
<td>$340 per inspection cycle.</td>
<td>$340 per inspection cycle.</td>
</tr>
<tr>
<td>New proposed surface high-frequency eddy current inspection.</td>
<td>4 work-hours × $85 per hour = $340 per inspection cycle.</td>
<td>0</td>
<td>$340 per inspection cycle.</td>
<td>$340 per inspection cycle.</td>
</tr>
<tr>
<td>New proposed modification</td>
<td>64 work-hours × $85 per hour = $5,440.</td>
<td>14,948</td>
<td>$20,388</td>
<td>$20,388.</td>
</tr>
</tbody>
</table>

We have received no definitive data that would enable us to provide work-hour estimates for repair of cracks found in a bolt hole during the detailed inspection specified in this proposed AD. The cost for parts (oversized fastener kit) for this condition is $2,292.

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

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the
Air Transport Association (ATA) of America

2012.

747–53A2610, Revision 1, dated December 4, 2012, certificated in any category, of this AD.

August 8, 2012), affect certain requirements 15–13, Amendment 39–17142 (77 FR 47267, August 8, 2012), is acceptable for compliance with the requirements of paragraph (b) of this AD for that tension tie location only.

(f) Compliance

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

(g) Repetitive Inspections

At the applicable time specified in paragraph I.E., “Compliance,” of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, except as specified in paragraph (i) of this AD: Do detailed and surface high-frequency eddy current inspections for cracks in the tension ties at body stations (STAs) 880 to 1100, 1120, 1160, 1200, and 1220, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, except as required by paragraph (i)(3) of this AD. Do all applicable corrective actions before further flight. Repeat the inspections thereafter at the applicable time specified in paragraph I.E., “Compliance,” of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, until the tension ties have been modified as required by paragraph (h) of this AD. Repair or modification of a tension tie at any location in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, terminates the repetitive inspection requirements of this AD for that tension tie location only.

(h) Tension Tie Modification

At the applicable time specified in paragraph I.E., “Compliance,” of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, except as specified in paragraph (i) of this AD: Modify the tension ties from STA 880 to 1100, and do all applicable related investigative and corrective actions, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, except as required by paragraph (i)(3) of this AD. Do all applicable related investigative and corrective actions before further flight. Modification of all tension ties at the body stations specified in Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, terminates the repetitive inspection requirements of this AD. Modification of a tension tie at STA 1120 to 1220, as required by paragraph (p) of AD 2012–15–13, Amendment 39–17142 (77 FR 47267, August 8, 2012), is acceptable for compliance with the requirements of paragraph (b) of this AD for that tension tie location only.

(i) Service Information Clarification and Exceptions


(2) Where Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, specifies a compliance time “after the Revision 1 date of this service bulletin,” this AD requires compliance within the specified time after the effective date of this AD.

(3) Where Boeing Alert Service Bulletin 747–53A2610, Revision 1, dated December 4, 2012, specifies to contact Boeing for certain repair instructions; Repair before further flight using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(j) Credit for Previous Actions

This paragraph provides credit for the detailed inspections, repairs, and modification specified in paragraphs (g) and (h) of this AD, for that affected tension tie location only, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747–53A2610, dated May 10, 2007 (which is not incorporated by reference in this AD).

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously in accordance with AD 2007–16–19, Amendment 39–15158 (72 FR 45151, August 13, 2007), are approved as AMOCs for the corresponding provisions of this AD.

(l) Related Information

(1) For more information about this AD, contact Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM–1208, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057–
The Proposal

This action proposes to amend Title 14, Code of Federal Regulations (14 CFR), Part 71 by establishing Class E airspace extending upward from 700 feet above the surface within a 7.6-mile radius to accommodate new standard instrument approach procedures at Curtis Municipal Airport, Curtis, NE. Controlled airspace is needed for the safety and management of IFR operations at the airport.

Class E airspace areas are published in Paragraph 6005 of FAA Order 7400.9W, dated August 8, 2012 and effective September 15, 2012, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designation listed in this document would be published subsequently in the Order.

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (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); and (3) does not warrant preparation of a Regulatory Evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA’s authority to issue rules regarding aviation safety is found in Title 49 of the U.S. Code. Subtitle 1, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This proposed regulation is within the scope of that authority as it would establish controlled airspace at Curtis Municipal Airport, Curtis, NE.

Environmental Review

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1E, “Environmental Impacts: Policies and