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# DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-314-AD; Amendment 39-12370; AD 2001-16-02] RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, -200B, -200F, -200C, -100B, -300, -100B SUD, -400, -400D, -400F, and 747SR Series Airplanes

,20.02

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, that requires repetitive inspections to find cracking of the frame web, strap, inner chords, and inner chord angle of the forward edge frame of the number 5 main entry door cutout, and repair, if necessary. These actions are necessary to find and fix such cracking, which could result in severing of the frame, inability of the edge frame to react door stop loads, and consequent rapid depressurization of the airplane. This action is intended to address the identified unsafe condition.

AA

DATES: Effective September 12, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 12, 2001.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes was published in the Federal Register on March 20, 2001 (66 FR 15662). That action proposed to require repetitive inspections to find cracking of the frame web, strap, inner chords, and inner chord angle of the forward edge frame of the number 5 main entry door cutout; and repair, if necessary.

### Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Two commenters have no objection to the proposed rule.

#### **Limit Applicability**

One commenter, the manufacturer, states that, subsequent to issuance of Revision 2 of the referenced service bulletin, it committed to a production revision at line number 1305. Production Revision Request 85415, which eliminates the need for the inspections in the proposed rule for airplanes with and after that line number. The commenter recommends that the applicability in the proposed rule be limited to Model 747 series airplanes, line numbers 1 through 1304, except Model 747SP.

The FAA partially agrees. We will change the applicability section in the final rule to specify all affected models in the subject line of the final rule; it will not include the 747SP series airplane. However, because the Production Revision Request has not yet been incorporated, we cannot limit the line number applicability.

# **Clarification of Compliance Time--Paragraph (a)**

One commenter asks that paragraph (a) of the proposed rule be changed. The commenter states that paragraph (a)(1) of the proposed rule does not actually state a compliance time or refer to the referenced service bulletin as a means of compliance. The commenter adds that paragraph (a)(2) of the proposed rule calls for the inspection to be done within 3,000 flight cycles after the first inspection in the bulletin. Therefore, the inspection may never be done if operators decide not to do the bulletin, but the commenter presumes this statement has been added for those operators that did the inspection before the release of the AD, per the bulletin. The commenter notes paragraph (a)(2) is redundant because repeat inspections will already have been carried out per the bulletin. The commenter states that the specified compliance times are very difficult to understand and suggests the following wording for the compliance times be used in the proposed rule:

- At the times specified in the logic diagram of the referenced service bulletin, except substituting `receipt of service bulletin" for ``effective date of this AD." Or
- Within 3,000 flight cycles from the effective date of the AD, whichever is later. The commenter's interpretation of paragraph (a)(2) of the proposed rule is that the commenter would have until 3,000 flight cycles after the inspection at 16,000 flight cycles to inspect its oldest airplane.

The FAA partially concurs. (The paragraph numbering in the final rule has been revised.) Paragraph (b) of the final rule has been changed for clarification, to specifically cite accomplishment of the inspection at the applicable time specified in the logic diagram in Figure 1 of the service bulletin. However, we do not concur that paragraph (c) of the final rule should be revised to within 3,000 flight cycles from the effective date of the AD. Paragraph (c) addresses those operators who have already accomplished the inspections per previous revisions of the service bulletin. The 3,000flight-cycle threshold allows operators to transition from the old revisions to the revision of the service bulletin specified in this final rule.

Additionally, we do not concur that the commenter would have until 3,000 flight cycles after the inspection at 16,000 flight cycles to accomplish the initial inspection on its airplanes. The commenter has not accomplished the inspections on its airplanes per the old revisions to the service bulletin, so paragraph (c) does not apply, and the commenter must accomplish the initial inspection at the 16,000-

flight-cycle threshold as mandated by paragraph (b) of the final rule. **Conclusion** 

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

#### **Interim Action**

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will positively address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

# **Cost Impact**

There are approximately 1,314 airplanes of the affected design in the worldwide fleet. The FAA estimates that 258 airplanes of U.S. registry will be affected by this AD, that it will take approximately 16 work hours per airplane to accomplish the required inspections, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the inspections required by this AD on U.S. operators is estimated to be \$247,680, or \$960 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

### **Regulatory Impact**

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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) 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

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

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

#### Adoption of the Amendment

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

# **PART 39-- AIRWORTHINESS DIRECTIVES**

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

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

# Sec. 39.13 [Amended]

rective:

# **AIRWORTHINESS DIRECTIVE**



U.S. Department of Transportation

Federal Aviation Administration

Aircraft Certification Service Washington, DC

#### We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR) aut 39, subpart 39, subpart 39.3).

**2001-16-02 Boeing:** Amendment 39-12370. Docket 2000-NM-314-AD.

*Applicability*: All Model 747-100, -200B, -200F, -200C, -100B, -300, -100B SUD, -400, -400D, -400F, and 747SR series airplanes, certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

*Compliance*: Required as indicated, unless accomplished previously.

To find and fix cracking of the frame web, strap, inner chords, and inner chord angle of the forward edge frame of the number 5 main entry door cutout, which could result in severing of the frame, inability of the edge frame to react door stop loads, and consequent rapid depressurization of the airplane, accomplish the following:

#### **Repetitive Inspections (No Terminating Action)**

(a) Inspect the airplane for cracks per Boeing Alert Service Bulletin 747-53A2450, Revision 2, including Appendix A, dated January 4, 2001; at the later of the times specified in either paragraph (b) or (c) of this AD, per Table 1 as follows:

Tuble 1. Inspection Requirements	
Type of inspection	Area to inspect
(1) Detailed Visual	Strap inner chords forward and aft of the web, and
	exposed web adjacent to the inner chords on
	station 2231 frame from stringer 23 through 31 per
	Figure 5 or Figure 6 of the service bulletin, as
	applicable.
(2) Surface High Frequency Eddy Current	Station 2231 inner chord angles at lower main sill
(HFEC)	interface per Figure 5 or Figure 6 of the service
	bulletin, as applicable.
(3) Open Hole HFEC	Station 2231 frame fastener locations per Figures 4 and 7, and either Figure 5 or 6 of the service bulletin, as applicable.

**Table 1.--Inspection Requirements** 

Type of inspection	Area to inspect
(4) Surface HFEC	Around fastener locations on station 2231 inner chords from stringer 23 through 31 per Figure 5 or Figure 6 of the service bulletin, as applicable.
(5) Low Frequency Eddy Current	Station 2231 frame strap in areas covered by the reveal per Figure 5 or Figure 6 of the service bulletin, as applicable.

(b) Do the inspections per Table 1 at the applicable time specified in the logic diagram in Figure 1 of Boeing Alert Service Bulletin 747-53A2450, Revision 2, including Appendix A, dated tanuary 4, 2001. Where the compliance time in the logic diagram specifies a compliance time beginning, ``from receipt of this service bulletin," this AD requires that the compliance time begin ``after the effective date of this AD." Repeat the inspections after that at intervals not to exceed 3,000 flight cycles.

(c) Within 3,000 flight cycles after accomplishment of the inspections specified in Figure 1 of Boeing Alert Service Bulletin 747-53A2450, dated May 4, 2000; or Revision 1, dated July 6, 2000; repeat the inspections after that at intervals not to exceed 3,000 flight cycles.

**Note 2:** There is no terminating action currently available for the inspections required by paragraph (a) of this AD.

**Note 3:** Where there are differences between the AD and the alert service bulletin, the AD prevails.

# Repair

(d) If any cracking is found during any inspection required by paragraph (a) of this AD, before further flight, repair per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

# Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

**Note 4:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

#### **Special Flight Permits**

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

# **Incorporation by Reference**

(g) The inspections shall be done in accordance with Boeing Alert Service Bulletin 747-53A2450, Revision 2, including Appendix A, dated January 4, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

# **Effective Date**

In September 12, 2001. In Kenton, Washington, on July 26, 2001. Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service. [FR Doc. 01-19245 Filed 8-7-01; 8:45 am] BILLING CODE 4910-13-P