

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Airworthiness Directive

86-18-01 BOEING: Amendment 39-5390. Applies to Model 747 series airplanes listed in Boeing Alert Service Bulletins 747-53A2259, Revision 1, dated April 18, 1986, and 747-53A2237, Revision 1, dated March 28, 1986, certificated in any category.

To detect cracking of body frame structure in the lower lobe (Sections 42 and 46) of the fuselage, accomplish the following, unless already accomplished:

A. For airplanes listed in Boeing Alert Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986:

1. Perform a detailed visual inspection for frame cracking from fuselage station 540 to 760, and 1820 to 1900, stringers 35 left to 42 left, in accordance with Section III of Boeing Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986, or later FAA-approved revisions, in accordance with the following schedule after the effective date of this AD:

a. Within 300 landings for airplanes that have accumulated more than 12,000 landings on the effective date of this AD.

b. Within 800 landings for airplanes that have accumulated 10,000 to 12,000 landings on the effective date of this AD.

c. Within 800 landings or prior to the accumulation of 10,000 landings, whichever occurs later, for airplanes that have accumulated less than 10,000 landings on the effective date of this AD.

2. If cracking is found, repair in accordance with FAA-approved procedures prior to further flight.

3. Repeat the inspection required by paragraph A.1., above, at intervals not to exceed 3,000 landings until terminating action is performed.

4. Modification of the frames in accordance with Boeing Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986, or later FAA-approved revisions constitutes terminating action for the repetitive inspection requirement of this paragraph.

B. For airplanes listed in Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986:

1. Perform a visual inspection of cargo side guide support brackets from fuselage station 1500 to 1800, right and left hand side, for a proper machined taper in accordance with Section III of Boeing Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986, or later FAA-approved revisions, in accordance with the following schedule after the effective date of this AD:

a. Within 300 landings for airplanes that have accumulated more than 12,000 landings on the effective date of this AD.

b. Within 800 landings for airplanes that have accumulated 10,000 to 12,000 landings on the effective date of this AD.

c. Within 800 landings or prior to the accumulation of 10,000 landings, whichever occurs later, for airplanes that have accumulated less than 10,000 landings on the effective date of AD.

2. If any cargo side guide support bracket is improperly tapered, perform a detailed visual inspection of the frame area adjacent to the untapered bracket for cracking in accordance with Boeing Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986, or later FAA-approved revisions.

3. Repeat the inspections required by paragraph B.2., above, at intervals not to exceed 3,000 landings until terminating action is performed.

4. If cracking is found, repair in accordance with FAA-approved procedures prior to further flight.

5. Installation of a tapered strap adjacent to the affected brackets in accordance with Boeing Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986, or later FAA-approved revisions constitutes terminating action for the repetitive inspection requirements of this paragraph.

C. For Boeing Model 747SR airplanes only, based on continued mixed operation of cabin pressure differentials, the initial inspection thresholds and re-inspection intervals specified in this AD may be multiplied by a 1.2 adjustment factor.

D. For the purposes of complying with this AD, the number of landings may be determined to equal the number of pressurization cycles where the cabin pressure differential was greater than 2.0 psi.

E. An alternate means of compliance or adjustment of the compliance time, which provides an acceptable level of safety, may be used when approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region.

F. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes unpressurized to a base for the accomplishment of inspections and/or modifications required by this AD.

All persons affected by this directive who have not already received the appropriate service documents from the manufacturer may obtain copies upon request to the Boeing Commercial Airplane Company, P.O. Box 3707, Seattle, Washington 98124-2207. These documents may be examined at the FAA, Northwest Mountain Region, 17900 Pacific Highway South, Seattle, Washington, or the Seattle Aircraft Certification Office, 9010 East Marginal Way South, Seattle, Washington.

This amendment becomes effective September 17, 1986.

SUPERSEDED