

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

**Airworthiness Directive**

**90-21-17 BOEING:** Amendment 39-6768. Docket No. 90-NM-109-AD.

Applicability: Model 747 series airplanes, line number 001 through 628, certificated in any category.

Compliance: Required as indicated, unless previously accomplished.

To prevent a failure of the fuselage skin lap splice between body station (BS) 400 and BS 520 at stringer S-6L and S-6R, accomplish the following:

A. Conduct close visual and high frequency eddy current (HFEC) inspection of the fuselage skin lap splice between BS 400 and BS 520, at stringers S-6L and S-6R for cracking, in accordance with Boeing Alert Service Bulletin 747-53A2303, dated June 2, 1988, or Revision 1, dated March 29, 1990, at the following thresholds:

1. Within the next 100 landings after March 31, 1989 (the effective date of Amendment 39-6146, AD 89-05-03), for airplanes that have accumulated 16,000 or more landings as of March 31, 1989, unless previously accomplished within the last 4,900 landings.
2. Within the next 1,000 landings after March 31, 1989, or prior to the accumulation of 16,100 landings, whichever occurs first, for airplanes that have accumulated between 12,000 and 16,000 landings, as of March 31, 1989, unless previously accomplished within the last 4,000 landings.
3. Prior to the accumulation of 13,000 landings for airplanes that have accumulated 12,000 or fewer landings as of March 31, 1989, unless previously accomplished within the last 5,000 landings.

Adequate lighting must be used for this inspection. The eddy current inspections may be conducted without removal of the paint, provided the paint does not interfere with the inspections. Paint must be removed, using an approved chemical stripper, in any situation where the inspector determines that the paint is interfering with the proper functioning of the inspection instrument.

B. On airplanes which have been modified to the stretched-upper-deck configuration, as identified in Boeing Alert Service Bulletin 747-53A2303, dated June 2, 1988, or Revision 1, dated March 29, 1990, the accumulated landing threshold for compliance with paragraph A. of this AD is measured from the time of the stretched-upper-deck modification.

C. If no cracking is detected, repeat the close visual and HFEC inspections required by paragraph A. of this AD, at intervals not to exceed 5,000 landings.

D. If cracks are detected, accomplish the repair or preventive modification of the affected lap splice in accordance with Boeing Alert Service Bulletin 747-53A2303, dated June 2, 1988, or Revision 1, dated March 29, 1990, prior to further pressurized flight. If cracks are repaired in local areas without accomplishing preventive modification of the entire affected lap area, continue inspections of the unmodified and unrepaired areas of the affected lap splice in accordance with paragraph C. of this AD.

E. For airplanes incorporating the preventative modification, as described in Boeing Alert Service Bulletin 747-53A2303, dated June 2, 1988, or Revision 1, dated March 29, 1990, accomplish the inspections required by paragraph A. of this AD, prior to the accumulation of 10,000 landings after the modification and thereafter at intervals not to exceed 5,000 landings. If cracks are found, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office, FAA, Northwest Mountain Region, prior to further pressurized flight.

F. For 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 1.5 psi.

G. 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 (ACO), FAA, Northwest Mountain Region.

NOTE: The request should be submitted directly to the Manager, Seattle ACO, and a copy sent to the cognizant FAA Principal Inspector (PI). The PI will then forward comments or concurrence to the Seattle ACO.

H. Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate airplanes to a base in order to comply with the requirements of 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 Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124. These documents may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 1601 Lind Avenue S.W., Renton, Washington.

Airworthiness Directive 90-21-17 supersedes AD 89-05-03, Amendment 39-6146.

This amendment (39-6768, AD 90-21-17) becomes effective on November 16, 1990.