

Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

Docket No. 90-NM-179-AD; Amendment 39-6967; AD **91-08-12**

Airworthiness Directives; BOEING Model 737 Series Airplanes
PDF Copy (If Available):

▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT

DATES: Effective May 17, 1991.

▼ Regulatory Information

91-08-12 BOEING: Amendment 39-6967; Docket No. 90-NM-179-AD.

Applicability: Model 737 series airplanes, line numbers 520 through 610, certificated in any category.

Compliance: Required as indicated, unless previously accomplished.

To prevent inability of the airplane to carry fail-safe loads due to disbanded doublers, and to reduce the possibility of rapid decompression, accomplish the following:

A. Within 60 calendar days after the effective date of this AD, perform a one-time external ultrasonic inspection of the bonded doublers not mechanically fastened above stringer (S-) 26 between body station (BS) 259 and BS 1016 in accordance with Boeing Service Bulletin 737-53-1124, dated August 24, 1989.

NOTE: The area inspected in accordance with AD 89-16-05, Amendment 39-6281, does not require reinspection for disbonding.

B. If disbonding is detected, prior to further flight, accomplish the following:

1. Perform a high frequency eddy current (HFEC) inspection for cracks and a visual inspection for corrosion along the upper rivet row of the lower lap splices and both rivet rows of S-17 (if affected), for the entire length of affected panel, in accordance with Boeing Service Bulletin 737-53-1124, dated August 24, 1989. If, during the inspections required by this paragraph, paint inhibits identification of the fastener heads or cracks, the paint must be stripped using an FAA-approved chemical stripper.

a. If no cracking or corrosion is found, repeat the HFEC and visual inspections at intervals not to exceed 4,500 flight cycles until the preventive modification required by paragraph C. of this AD is accomplished.

b. If cracks are found, repair prior to further flight, in accordance with Boeing Service Bulletin 737-53-1124, dated August 24, 1989. Within 3,000 flight cycles following the repair, accomplish the lap splice preventive modification on the affected panel, which includes installation of oversize protruding head solid fasteners in the lap splice upper row and S-17, in accordance with Boeing Service Bulletin 737-53-1124, dated August 24, 1989.

(1) Blind fasteners may be used as a temporary repair only. Repairs using blind fasteners must be repetitively inspected for loose or missing fasteners at intervals not to exceed 3,000 flight cycles following installation, and replaced with protruding head solid fasteners within 10,000 flight cycles following installation.

(2) Repairs previously installed with blind fasteners prior to the effective date of this AD must be inspected for loose or missing fasteners within 1,000 flight cycles after the effective date of this AD and thereafter at intervals not to exceed 3,000 flight cycles. Blind fasteners must be replaced with protruding head solid fasteners within 10,000 flight cycles following installation.

2. Perform a detailed external visual inspection for cracks and corrosion at circumferential splices along the most forward and most aft rivet row of each panel found to contain delamination, in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990. Remove paint with an FAA-approved chemical stripper prior to inspection, or ensure that the fastener head is clearly visible. In addition to the detailed external visual inspection, perform a HFEC inspection for cracks at each

circumferential splice from S-10R to S- 10L in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990, along the most forward and most aft rivet row of each circumferential splice.

a. If no cracks, corrosion, or delamination are found as a result of the detailed external visual inspection, repeat the detailed external visual and HFEC inspections required by this paragraph at intervals not to exceed 4,500 landings or 15 months, whichever occurs first.

b. If any cracking is detected, repair prior to further flight, in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990.

c. Replacement of the most forward and most aft fastener rows with standard protruding head solid fasteners at all circumferential fuselage splices, in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990, constitutes terminating action for the inspections required by this subparagraph, B.2.

3. In areas where corrosion or delamination are found as a result of the inspections required by paragraphs B.1 and B.2. of this AD, prior to further flight, perform a low frequency eddy current (LFEC) inspection using an FAA-approved method:

a. If corrosion depth, does not exceed 10% of the skin's thickness, conduct the repetitive external detailed visual inspections required by paragraphs B.1. and B.2. of this AD, of each panel found to contain corrosion at intervals not to exceed 2,250 flight cycles or 6 months, whichever occurs first.

b. If corrosion depth, exceeds 10% of the skin's thickness, or if cracks or delamination is found as a result of the detailed external visual inspections, repair prior to further flight, in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990. Following such a repair, continue to inspect in accordance with paragraphs B.1. and B.2. of this AD, at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first.

c. Any crack found must be repaired, prior to further flight, in accordance with an FAA-approved method. Blind fasteners may be used as a temporary repair only. They must be repetitively inspected for loose or missing fasteners at intervals not to exceed 3,000 flight cycles following installation and then replaced with protruding head solid fasteners within 10,000 flight cycles following installation.

4. Repair all disbonded tearstraps prior to further flight, in accordance with Boeing Alert Service Bulletin 737-53A1039, Revision 4, dated April 14, 1988, or Revision 5, dated May 25, 1989; or Boeing Service Bulletin 737-53-1089, Revision 1, dated October 13, 1989; or Revision 3, dated November 2, 1989; as appropriate.

C. Within 24 months after detection of disbonding as a result of the inspection required by paragraph A. of this AD, accomplish the lap splice and S-17 preventative modification

of the affected panel, which includes installation of oversize protruding head solid fasteners in the upper rivet row, in accordance with Boeing Service Bulletin 737-53-1124, dated August 24, 1989. Accomplishment of this modification constitutes terminating action for the inspection requirements of paragraph B.1. and B.2 of this AD for the affected panel.

D. An alternative method 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, Transport Airplane Directorate.

NOTE: The request should be forwarded through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Seattle ACO.

E. 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 information from the manufacturer may obtain copies upon request to Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124. This information may be examined at the FAA, Northwest Mountain Region, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

This amendment (39-6967, AD **91-08-12**) supersedes Amendment 39-6281, AD 89-16-05, which became effective on September 5, 1989.

This amendment (39-6967, AD **91-08-12**) becomes effective on May 17, 1991.

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