Airworthiness Directive

Federal Register Information

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

Docket No. 91-NM-274-AD; Amendment 39-8424; AD **92-25-09**

Airworthiness Directives; BOEING Model 737 Series Airplanes

PDF Copy (If Available):

Preamble Information

AGENCY: Federal Aviation Administration, DOT

DATES: Effective January 12, 1993.

Regulatory Information

92-25-09 BOEING: Amendment 39-8424. Docket No. 91-NM-274-AD. Supersedes AD 91- 09-10, Amendment 39-6978.

Applicability: Model 737 series airplanes, listed in Boeing Service Bulletin 737-53-1076, Revision 4, dated September 26, 1991; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent decompression of the airplane, accomplish the following:

(a) Within 1,000 flight cycles or 3 months after May 28, 1991 (the effective date of AD 91-09-10, amendment 39-6798), whichever occurs first, unless accomplished within the last 12 months, perform an external close visual inspection for corrosion or evidence of delamination in all circumferential skin butt splices from body station (BS) 259.5 to BS 1016, and in the areas of the bonded internal doublers around the major skin cutouts for entry, cargo, nose landing gear, overwing exit doors, and in the area from BS 360 to BS 420 between stringer (S)-15L and S-25L, in accordance with Boeing Service Bulletin 737-53-1076, Revision 2, dated February 8, 1990.

(b) Within 1,000 flight cycles or 3 months after the effective date of this AD, whichever occurs first, unless accomplished within the last 12 months, perform an external close visual inspection for corrosion or evidence of delamination, in the areas of bonded internal doublers around the skin cutouts for the galley door, electrical/electronic door, and airstair in accordance with Boeing Service Bulletin 737-53-1076, Revision 4, dated September 26, 1991 (hereinafter referred to as "the Service Bulletin").

(c) As a result of the inspections required by paragraphs (a) and (b) of this AD, accomplish one of the following:

(1) If no corrosion or evidence of delamination is found, repeat the external close visual inspection at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first.

(2) If corrosion is found, prior to further flight, repair in accordance with paragraph (f) of this AD. Following repair, continue to repeat the external close visual inspection at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first.

(3) If delamination is found, prior to further flight, repair in accordance with paragraph (g) of this AD. Following repair, continue to repeat the external close visual inspection at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first.

(d) Within 500 flight cycles after the effective date of this AD; or prior to the accumulation of 40,000 flight cycles for Group 1 airplanes and 60,000 flight cycles for Group 2 airplanes; whichever occurs later, unless accomplished within the last 4,000 flight cycles; accomplish the following:

(1) Perform the following external inspections:

(i) High frequency eddy current (HFEC) inspection for cracks in the skin common to the forward-most and aft-most row of fasteners in the circumferential skin splice over the crown from BS 259.5 to the forward side of BS 1016 between S-10L and S-10R, in accordance with the Service Bulletin.

(ii) Close visual inspection for skin cracks, and loose or missing fasteners in all circumferential skin butt splices from BS 259.9 to BS 1016, in accordance with the

Service Bulletin.

(iii) Close visual inspection for skin cracks in the area of the bonded internal doublers around the skin cutouts for entry, galley, cargo, nose landing gear, airstairs, electrical/electronic door, overwing exit doors, and in the area from BS 360 to BS 420 between S-15L and S-25L, in accordance with the Service Bulletin.

(2) As a result of the inspections required by paragraph (d)(1) of this AD, accomplish the requirements of either paragraph (d)(2)(i) or (d)(2)(ii) of this AD, as applicable:

(i) If no cracks are found, repeat the inspections required by paragraph (d)(1) of this AD at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first; or accomplish the terminating action in accordance with the Service Bulletin.

(ii) If cracks are found, prior to further flight, repair in accordance with paragraph (g) of this AD. Following repair, continue to inspect in accordance with paragraph (d)(1) of this AD, at intervals not to exceed 4,500 flight cycles or 15 months, whichever occurs first.

(3) Replacement of all fasteners in the forward-most and aft-most row of fasteners with standard oversize protruding head solid fasteners at all circumferential fuselage splices, in accordance with the Service Bulletin, constitutes terminating action for the circumferential skin butt splice fatigue inspections required by this AD for the modified areas only. Corrosion and delamination inspections must be continued.

(e) For Group 1 airplanes: Within the next 4,500 flight cycles or 15 months after the effective date of this AD, whichever occurs first; or prior to the accumulation of 40,000 flight cycles, whichever occurs later; unless previously accomplished within the last 7,500 flight cycles; accomplish the following:

(1) Perform the following internal inspections:

(i) Close visual inspection for cracks, corrosion, and delamination, of the bonded doublers around all major skin cutouts for entry, galley, cargo, nose landing gear, airstairs, electrical/electronic door, overwing exit doors, and in the area from BS 360 to BS 420 between S-15L and S-25L, and at each circumferential butt splice from BS 277 through BS 1016, in accordance with the Service Bulletin.

(ii) Ultrasonic inspection for corrosion and delamination of all non- mechanically fastened areas of the bonded doublers around all major skin cutouts for entry, galley, cargo, nose landing gear, airstairs, electrical/electronic door, and overwing exit doors, in accordance with the Service Bulletin.

(2) As a result of the inspections required by paragraph (e)(1) of this AD, accomplish the requirements of either paragraph (e)(2)(i) or (e)(2)(ii) or (e)(2)(iii) of this AD, as applicable:

(i) If no cracks, corrosion, or delamination is found, repeat the inspections required by paragraph (e)(1) of this AD at intervals not to exceed 12,000 flight cycles, or 4 years, whichever occurs first.

(ii) If corrosion is found, prior to further flight, repair in accordance with paragraph (f) of this AD. Following repair, continue to inspect in accordance with paragraph (e)(1) of this AD at intervals not to exceed 12,000 flight cycles, or 4 years, whichever occurs first.

(iii) If cracking or delamination is found, prior to further flight, repair in accordance with paragraph (g) of this AD. Following repair, continue to inspect in accordance with paragraph (e)(1) of this AD at intervals not to exceed 12,000 flight cycles, or 4 years, whichever occurs first.

(f) In areas where corrosion is found, but evidence of cracking is not found, as a result of the inspections required by paragraphs (a), (b), (d), and (e) of this AD, prior to further flight, perform a low frequency eddy current (LFEC) inspection to determine the amount of material loss.

(1) If material loss is less than 10 percent of the skin or doubler thickness, prior to further flight, accomplish either paragraph (f)(1)(i) or (f)(1)(ii) of this AD:

(i) Accomplish the repair in accordance with the Service Bulletin; or

(ii) Conduct repetitive LFEC inspections thereafter at intervals not to exceed 2,250 flight cycles, or 6 months, whichever occurs first, until the repair is accomplished.

(2) If material loss is equal to or greater than 10 percent of the skin or doubler thickness, prior to further flight, repair in accordance with the Service Bulletin.

(g) In areas where cracks or delamination are found as a result of the inspections required by paragraphs (a), (b), (d), and (e) of this AD, prior to further flight, repair in accordance with the Service Bulletin.

(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 May 28, 1991, must be inspected for loose or missing fasteners within 1,000 flight cycles after May 28, 1991, 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.

(3) If any loose or missing blind fasteners are found, prior to further flight, replace with solid type fasteners in accordance with the Service Bulletin.

(h) Solid belly skins, if installed in accordance with Boeing Service Bulletin 737-53A1042, Revision 9, dated July 25, 1991, or Revision 8, dated July 19, 1990, or Revision 7, dated October 19, 1989, or Revision 6, dated August 10, 1989, or Revision 5, dated October 5, 1984; or Boeing Alert Service Bulletin 737-53A1042, Revision 4, dated November 5, 1982, or Revision 3, dated December 4, 1981; or Boeing Service Bulletin 737-53- 1042, Revision 2, dated March 31, 1978, or Revision 1, dated February 4, 1977; or if installed during production; constitute terminating action for the corrosion and fatigue inspections required by paragraphs (a), (b), (c), (d), (e), and (f) of this AD in the area of the solid belly skin.

(i) 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 Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. 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: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(j) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(k) The inspection, replacement, repair, and installation shall be done in accordance with the following Boeing service bulletins, as applicable, which contain the specified effective pages:

Service Bulletin Referenced and Date	**Page Number**	**Revision Level Shown on Page**	**Date Shown on Page**
737-53-1076, Revision 2, February 8, 1990	1 - 32	2	February 8, 1990
737-53-1076, Revision 4, September 26, 1991	1 - 29	4	September 26, 1991
737-53-1042, Revision 1, February 4, 1977	1, 11-45 2-10	1 (deleted)	February 4, 1977
737-53-1042, Revision 2, March 31, 1978	1 - 43	2	March 31, 1978

737-53A1042, Revision 3, December 4, 1981	1 - 41	3	December 4, 1981
737-53A1042, Revision 4, November 5, 1982	1 - 38	4	November 5, 1982
737-53A1042, Revision 5, October 5, 1984	1 - 40	5	October 5, 1984
737-53A1042, Revision 6, August 10, 1989	1 - 40	6	August 10, 1989
737-53A1042, Revision 7, October 19, 1989	1-10, 13 11-12, 14-40	7 6	October 19, 1989 August 10, 1989
737-53A1042, Revision 8, July 19, 1990	1 - 42	8	July 19, 1990
737-53A1042, Revision 9, July 25, 1991	1 - 38	9	July 25, 1991

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. 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.

This AD **92-25-09**, Amendment 39-8424 supersedes AD 91-09-10, Amendment 39-6978, which superseded AD 88-22-12, Amendment 39-6060.

(l) This amendment becomes effective on January 12, 1993.

Footer Information

Comments