

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

Airworthiness Directive

96-23-05 BOEING: Amendment 39-9810. Docket 94-NM-221-AD.

Applicability: Model 747 series airplanes; line numbers 1 through 868 inclusive, excluding freighters and special freighters; certificated in any category.

NOTE 1: The requirements of this AD are not applicable to doors where an escape slide or slide/raft is not installed or is not used for passenger egress (such as a deactivated door 3, at doors 4 and/or 5 of an airplane being operated in the "combi" configuration, or any door not used for passenger egress on a convertible). The requirements of this rule become applicable at the time when an escape slide or slide/raft is installed on such doors, or when such doors are activated and/or converted for passenger use. The requirements also become applicable at the time an airplane operating in an all-cargo configuration is converted to a passenger or passenger/cargo configuration.

NOTE 2: 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 (n) 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 detect and correct corrosion on girt bar support fittings, which could result in separation of the escape slide from the lower door sill during deployment, and subsequently prevent operation of the escape slides at the main entry doors during an emergency, accomplish the following:

(a) **For airplanes equipped with Main Entry Door (MED) 1:** Prior to the accumulation of 16 years of service since date of manufacture of the airplane, or within 18 months after the effective date of this AD, whichever occurs later, perform a detailed visual inspection to detect cracking and/or corrosion of the girt bar support fitting at the left and right MED 1, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(b) If **no cracking or corrosion** is found during the inspection required by paragraph (a) of this AD, prior to further flight, accomplish either paragraph (b)(1) or (b)(2) of this AD, in accordance with the applicable instructions specified in Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by paragraph (b) of this AD. Or

(2) Reinstall the threshold assembly with corrosion-resistant fasteners, in accordance with the service bulletin. Thereafter, repeat the inspection required by paragraph (a) of this AD at intervals not to exceed 6 years.

(c) If any **cracking** is found during the inspection required by paragraph (a) or (b)(2) of this AD, prior to further flight, install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with Boeing Service

Bulletin 747-53A2378, Revision 1, dated March 10, 1994. After these actions are accomplished, no further action is required by this paragraph.

(d) If any **corrosion** is found during the inspection required by paragraph (a) or (b)(2) of this AD, prior to further flight, accomplish either paragraph (d)(1) or (d)(2) of this AD, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(2) Blend out corrosion in accordance with the service bulletin.

(i) If blend out of corrosion is beyond 10 percent of original thickness or any crack is found during accomplishment of the blend out procedures, install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph.

(ii) If blend out of corrosion does not exceed 10 percent of original material thickness, accomplish either paragraph (d)(2)(ii)(A) or (d)(2)(ii)(B) of this AD:

(A) Install a new fitting with new fasteners, and reinstall threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(B) Install the repaired fitting with new fasteners and reinstall the threshold assembly with corrosion-resistant fasteners, in accordance with the service bulletin. Thereafter, repeat the inspection, and corrective actions as necessary, required by paragraph (a) of this AD at intervals not to exceed 6 years.

(e) **For airplanes equipped with Main Entry Doors (MED) 2, 4, and/or 5 (MED 2, 3, and/or 4 on Model 747SP series airplanes):** Prior to the accumulation of 10 years of service since date of manufacture of the airplane, or within 18 months after the effective date of this AD, whichever occurs later, perform a detailed visual inspection to detect cracking and/or corrosion of the girt bar support fitting at the left and right MED 2, 4, and 5 (MED 2, 3, and 4 on Model 747SP series airplanes), in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(f) If **no cracking or corrosion** is found during the inspection required by paragraph (e) of this AD, prior to further flight, accomplish either paragraph (f)(1) or (f)(2) of this AD, in accordance with the applicable instructions in Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Remove the inspected fitting and reinstall it with a new coat of primer and new fasteners; and reinstall the threshold assembly with new corrosion-resistant fasteners; in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(2) Reinstall the serrated plate assembly and the girt bar floor fitting with corrosion-resistant fasteners, in accordance with the service bulletin. Thereafter, repeat the inspection required by paragraph (e) of this AD at intervals not to exceed 6 years.

(g) If any **cracking** is found during the inspection required by paragraph (e) or (f)(2) of this AD, prior to further flight, install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994. After these actions are accomplished, no further action is required by this paragraph.

(h) If any **corrosion** is found during the inspection required by paragraph (e) or (f)(2) of this AD, prior to further flight, accomplish either paragraph (h)(1) or (h)(2) of this AD, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(2) Blend out corrosion in accordance with the service bulletin.

(i) If blend out of corrosion is beyond 10 percent of original thickness or any crack is found during accomplishment of the blend out procedures, install a new fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph.

(ii) If blend out of corrosion does not exceed 10 percent of original material thickness, install the repaired fitting with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph.

(i) **For airplanes equipped with Main Entry Door (MED) 3 (this paragraph does not apply to Model 747SP series airplanes):** Prior to the accumulation of 16 years of service since date of manufacture of the airplane, or within 18 months after the effective date of this AD, whichever occurs later, perform a detailed visual inspection to detect cracking and/or corrosion of the girt bar support angles at the left and right MED 3, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(j) If **no cracking or corrosion** is found during the inspection required by paragraph (i) of this AD, prior to further flight, accomplish either paragraph (j)(1) or (j)(2) of this AD in accordance with the applicable instructions in Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Remove inspected angle and reinstall it with a new coat of primer and new fasteners; and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(2) Reinstall the corner scuff plate and the threshold apron with corrosion-resistant fasteners, in accordance with the service bulletin. Thereafter, repeat the inspection required by paragraph (i) of this AD at intervals not to exceed 6 years.

(k) If any **crack** common to the support angles is found during the inspection required by paragraph (i) or (j)(2) of this AD, prior to further flight, accomplish the actions specified in paragraph (k)(1) or (k)(2), as applicable, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994:

(1) Install the new angles with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners. After these actions are accomplished, no further action is required by this paragraph of this AD.

(2) For any cracking found only in the corner casting as specified in the service bulletin, accomplish either paragraph (k)(2)(i) or (k)(2)(ii) prior to further flight:

(i) Replace the corner casting in accordance with the service bulletin. Or

(ii) Repair the cracked part in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Refer to paragraph (n) of this AD for the appropriate procedure for seeking such an approval. (This option is provided in order to give operators time to obtain a replacement corner casing without grounding an airplane.) This repair is considered temporary action only; replacement of the corner casting eventually must be accomplished in accordance with a schedule prescribed by the Manager, Seattle ACO.

(l) If any **corrosion** is found during the inspection required by paragraph (i) of this AD, prior to further flight, accomplish either paragraph (l)(1) or (l)(2) of this AD, in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994.

(1) Install the new angles with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph. Or

(2) Blend out corrosion in accordance with the service bulletin.

(i) If blend out of corrosion is beyond 10 percent of original thickness, or if any crack common to the support angles is found during accomplishment of the blend out procedures, install the new angles with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph.

(ii) If blend out of corrosion does not exceed 10 percent of original material thickness, install the repaired angles with new fasteners, and reinstall the threshold assembly with new corrosion-resistant fasteners, in accordance with the service bulletin. After these actions are accomplished, no further action is required by this paragraph.

(m) Installation of a girt bar support fitting in accordance with Boeing Service Bulletin 747-25A2831, dated August 29, 1991, is considered acceptable for compliance with the requirements of this AD for each affected fitting location.

(n) 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 request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(o) 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.

(p) The actions shall be done in accordance with Boeing Service Bulletin 747-53A2378, Revision 1, dated March 10, 1994. 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.

(q) This amendment becomes effective on December 16, 1996.