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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-24-AD; Amendment 39-12965; AD 2002-23-21]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, that currently requires inspection of the flap tracks of the wing trailing edge flaps for adequate cadmium plating and for corrosion of certain bolt holes of the fail-safe bar, and plating of such holes, if necessary. This amendment also requires post-modification inspections of certain bolt holes of the fail-safe bar of the flap tracks of the wing trailing edge flaps for discrepancies, and corrective actions, if necessary. This amendment is prompted by reports of corrosion and cracks found in certain bolt holes reworked according to the existing AD. The actions specified by this AD are intended to find and fix discrepancies of the bolt holes, which could result in fracture of the flap track, separation of the flap, and consequent loss of control of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective January 6, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 6, 2003.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 91-03-17, amendment 39-6884 (56 FR 4534, February 5, 1991), which is applicable to certain Boeing Model 747 series airplanes, was published in the Federal Register on July 1, 2002 (67 FR 44116). The action proposed to continue to require inspection of the flap tracks of the wing trailing edge flaps for adequate cadmium plating and for corrosion of certain bolt holes of the fail-safe bar, and plating of such holes, if necessary. That action also proposed to require post-modification inspections of certain bolt holes of the fail-safe bar of the flap tracks of the wing trailing edge flaps for discrepancies, and corrective actions, if necessary.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

There are approximately 553 airplanes of the affected design in the worldwide fleet. The FAA estimates that 169 airplanes of U.S. registry will be affected by this AD.

The actions that are currently required by AD 91-03-17 take approximately 50 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the currently required actions is estimated to \$3,000 per airplane.

The borescope inspection required by this AD action will take approximately 32 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the borescope inspection required by this AD on U.S. operators is estimated to be \$324,480, or \$1,920 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Should an operator be required to accomplish the eddy current inspection, it takes approximately 40 work hours per airplane to accomplish the inspection, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of this inspection is estimated to be \$2,400 per airplane.

Should an operator be required to accomplish the modification of the bolt holes, it takes approximately 256 work hours per airplane to accomplish the modification, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the modification is estimated to be \$15,360 per airplane.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-6884 (56 FR 4534, February 5, 1991), and by adding a new airworthiness directive (AD), amendment 39-12965, to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-23-21 Boeing: Amendment 39-12965. Docket 2002-NM-24-AD. Supersedes AD 91-03-17, Amendment 39-6884.

Applicability: Model 747 series airplanes, as listed in Boeing Service Bulletin 747-57-2256, Revision 3, dated June 21, 2001; certificated in any category.

Note 1: 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 (f)(1) 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 find and fix discrepancies of certain bolt holes of the fail-safe bar of the flap tracks of the wing trailing edge flaps, which could result in separation of the flap and consequent loss of control of the airplane, accomplish the following:

Restatement of Certain Requirements of AD 91-03-17

Inspections

(a) Prior to the accumulation of 30,000 total flight hours, or 8 years time-in-service on current production flap tracks, whichever is first; or within 2,000 flight cycles after March 11, 1991 (the effective date of AD 91-03-17, amendment 39-6884); whichever is later: Perform a borescope inspection of the forward four bolt holes on each side of the affected trailing edge flap tracks for corrosion and adequate cadmium plating, in accordance with the procedures specified in Boeing Service Bulletin 747-57-2256, dated March 8, 1990; Revision 1, dated November 15, 1990; Revision 2, dated March 5, 1992; or Revision 3, dated June 21, 2001. If the cadmium plating is adequate, as specified in the service bulletin, and no corrosion or cracks are found, no further action is required for this paragraph. If the cadmium plating is not adequate, or if corrosion exists in any bolt hole, prior to further flight, conduct an eddy current inspection of the bolt hole for cracks, in accordance with the service bulletin. After the effective date of this AD only Revision 3 of the service bulletin may be used.

Corrective Actions

(b) If the cadmium plating is not adequate and no corrosion or cracks are found during the inspection required by paragraph (a) of this AD: Within 1,000 flight cycles after accomplishment of the inspection required by paragraph (a) of this AD, cadmium plate the affected bolt holes in accordance with Boeing Service Bulletin 747-57-2256, dated March 8, 1990; Revision 1, dated November 15, 1990; Revision 2, dated March 5, 1992; or Revision 3, dated June 21, 2001; and conduct the inspections of the affected track as specified in paragraphs (b)(1), (b)(2), and (b)(3) of this AD, in accordance with the service bulletin. Restoration of the cadmium plating terminates the inspections required by this paragraph.

Inspections

(1) Within 50 flight cycles after accomplishment of the inspection required by paragraph (a) of this AD: Perform a close visual inspection of each side of the track, at the lower chord, for cracks emanating from the forward four fail-safe bar bolt holes, and repeat the inspection thereafter at intervals not to exceed 50 flight cycles.

(2) Within 250 flight cycles after accomplishment of the inspection required by paragraph (a) of this AD: Perform an eddy current inspection for cracks of the bolt holes, and repeat the inspection thereafter at intervals not to exceed 250 flight cycles.

(3) Prior to each flight on which a fifth engine is to be carried, perform a close visual inspection of each side of the track, at the lower chord, for cracks emanating from the forward four fail-safe bar bolt holes.

New Requirements of this AD

Cadmium Plating Applied During Production

(c) For airplanes on which cadmium plating of the forward four bolt holes was applied during production: No further action is required by this AD. If operator records indicate that during the inspection required by paragraph (a) of this AD cadmium plating was applied during production (not during rework or replating), no further action is required by this AD. (Indications of rework include oversized fasteners and/or fasteners with repair sleeves, and/or flap track dash numbers that have been changed per the service bulletin.)

Compliance Time for Borescope Inspection

(d) For airplanes on which cadmium plating of the forward four bolt holes was not applied during production: Do the action required by paragraph (e) of this AD at the later of the times given in paragraphs (d)(1) and (d)(2) of this AD.

- (1) Within 2 years or 2,000 flight cycles after the effective date of this AD, whichever is first; or
- (2) Within 6 years after doing the initial bolt hole rework per AD 91-03-17.

Borescope Inspection

(e) Do a borescope inspection of the forward four bolt holes on each side of the fail-safe bar of the flap tracks of the trailing edge flaps for discrepancies (corrosion, cracks, damaged cadmium plating), per Part 2 of the Work Instructions of Boeing Service Bulletin 747-57-2256, Revision 3, dated June 21, 2001. Then, do the actions specified in paragraph (e)(1), (e)(2), or (e)(3) of this AD, as

applicable, and repeat the borescope inspection every 8 years or 8,000 flight cycles, whichever is first. Accomplishment of the actions specified in this paragraph terminates the requirements of paragraph (a) of this AD.

Corrective Actions

(1) If the cadmium plating is damaged, but no corrosion or cracking is found: Before further flight, do the eddy current inspection specified in and per Part 2.F. of the Work Instructions of the service bulletin. If no cracking is found, before further flight, cadmium plate the affected bolt holes per Part 2.F. of the Work Instructions of the service bulletin.

(2) If any corrosion is found, before further flight, rework the affected bolt holes as specified in and per Part 2.G. of the Work Instructions of the service bulletin.

(3) If any cracking is found, before further flight, repair per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(f)(1) 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 ACO. 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.

(2) Alternative methods of compliance, approved previously in accordance with AD 91-03-17, amendment 39-6884, are approved as alternative methods of compliance with paragraphs (a) and (b) of this AD.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(g) 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.

Incorporation by Reference

(h) Except as provided by paragraph (e)(3) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-57-2256, dated March 8, 1990; Boeing Service Bulletin 747-57-2256, Revision 1, dated November 15, 1990; Boeing Service Bulletin 747-57-2256, Revision 2, dated March 5, 1992; or Boeing Service Bulletin 747-57-2256, Revision 3, dated June 21, 2001; as applicable. This incorporation by reference is 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.

Effective Date

(i) This amendment becomes effective on January 6, 2003.

Issued in Renton, Washington, on November 19, 2002.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 02-30026 Filed 11-29-02; 8:45 am]

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