[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 82901 12/29/2000]

[Docket No. 2000-NM-217-AD; Amendment 39-12054; AD 2000-26-04]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747, 757, 767 and 777 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747, 757, 767 and 777 series airplanes, that requires modification of certain drip shields located on the flight deck, and follow-on actions. This action is necessary to prevent potential ignition of the moisture barrier cover of the drip shield, which could propagate a small fire that results from an otherwise harmless electrical arc, leading to a larger fire. This action is intended to address the identified unsafe condition.

DATES: Effective February 2, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 2, 2001.

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: James Cashdollar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2785; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747, 757, 767 and 777 series airplanes was published in the **Federal Register** on August 10, 2000 (65 FR 48950). That action proposed to require modification of certain drip shields located on the flight deck, and follow-on actions.

**Comments Received**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

**Support for the Proposal**

One commenter supports the proposed rule.

**Requests to Revise Compliance Time**

Several commenters request an extension of the proposed compliance time. Generally, the commenters claim that the proposed five-year compliance time will result in a need to accomplish the proposed requirements on some airplanes before the next scheduled heavy maintenance visit, which would cause significant airplane down time, and would impose a substantial cost penalty. Individual comments are presented below.

One of the commenters suggests a compliance time of six years for Model 747, 757, and 767 series airplanes, and seven years for Model 777 series airplanes. The commenter states that such an extension will not compromise safety. Another commenter requests that the compliance time be stated as follows:

" … within five years after the effective date of the AD, or at the next scheduled heavy maintenance visit, whichever occurs later, not to exceed eight years after the effective date." This commenter performs segmented "C" checks approximately every two years, and it takes four such checks to reach all areas of the airplane. Therefore, under that commenter's maintenance program, access to the specific areas affected may not occur for eight years.

The Air Transport Association (ATA) of America, on behalf of its members, states that the compliance time should be stated as follows: " … within five years after the effective date of this AD, or at the next scheduled heavy maintenance visit, whichever occurs later, not to exceed six years after the effective date." The ATA contends that its suggested compliance time "would preclude the press associated with significant, unscheduled maintenance visits"; in practical terms, this would affect the installation time of less than 20 percent of the applicable airplanes. The ATA believes that its suggested compliance time would achieve a level of safety equivalent to that intended by the proposed AD.

Another commenter states that it participated in a Boeing-hosted meeting on the subject drip shield flammability concerns and asked Boeing to recommend to the FAA that the actions be required during a heavy maintenance visit. The commenter notes that Boeing did indeed make this recommendation to the FAA in the referenced FAA-approved service bulletins. The commenter says that six years would facilitate making use of the first heavy maintenance visit under current maintenance programs. The commenter adds that compliance periods that intend to make use of scheduled down time per an approved maintenance program should reflect an interval taking into account such approved maintenance programs.

The FAA concurs that the compliance time can be extended somewhat. The FAA has closely reviewed the rationale presented by the commenters. In addition, the FAA has examined related comments to two AD's that require replacement of metallized Mylar insulation blankets with new blankets made of more flame-resistant material on certain McDonnell Douglas airplanes [AD 2000-11-01, amendment 39-11749 (65 FR 34321, May 26, 2000), and AD 2000-11-02, amendment 39-11750 (65 FR 34341, May 26, 2000)]. In those AD's, the compliance time was extended from four to five years in the final rules.

The FAA acknowledges that a compliance time of six years will more closely align with heavy maintenance visits. Paragraph (a) of the final rule has been revised accordingly. For any operator that performs segmented "C" checks every two years, the revised compliance time should allow enough time to schedule the drip shield rework during one of the next three such checks. The extension of the compliance time also will minimize the amount of unscheduled work and associated down time. The FAA considers that this extension of the compliance time will not adversely affect safety.

**Request for Sampling Program**

One commenter requests that a sampling program be incorporated for all fleet types affected to establish the requirements to replace the drip shields. (The proposed rule allows sampling of Model 747 and 767 fleets to establish if individual airplanes have unsafe adhesives.) The commenter states that neither Boeing nor the FAA has provided concrete evidence that BAC 5010, Type 97 adhesive was used in the assembly of all the drip shields. The commenter adds that the applicable service bulletins and proposed rule are based purely on conjecture. The commenter suggests that a sampling program would offer terminating action for the proposed rule.

The FAA does not concur. The FAA finds that there is a significant amount of evidence pointing to widespread use of unsafe adhesives (that is, material and adhesive combinations that are easily ignited and consequently able to propagate a small fire) on Model 747, 757, 767, and 777 series airplanes. This evidence is supported by the fact that unsafe adhesives were stocked in the manufacturing facilities where the drip shields were constructed. The FAA concludes that there is a high probability that unsafe adhesives were used in the construction of all drip shields on Model 757 and 777 series airplanes, as well as in the construction of the drip shields on certain Model 747 and 767 series airplanes. These conclusions are based on information provided by Boeing, interviews conducted with manufacturing personnel, and the materials (i.e., adhesives) that were and were not available in the manufacturing facilities.

The FAA did not propose sampling for Model 757 and 777 series airplanes because all Model 757 and 777 series airplanes are subject to the unsafe condition. In contrast, not all Model 747 and 767 series airplanes are subject to the unsafe condition because the unsafe adhesives were not always available in the manufacturing facilities that constructed the drip shields used on those airplanes.

No change to the final rule is necessary in this regard. However, an operator may request approval of an alternative method of compliance in accordance with the provisions of paragraph (d) of this final rule, provided that evidence is submitted to show that no unsafe adhesive was used in the construction of the drip shields on the airplanes in its fleet.

**Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

**Cost Impact**

There are approximately 3,137 airplanes of the affected design in the worldwide fleet. The FAA estimates that 999 airplanes of U.S. registry will be affected by this AD. The following table shows the estimated cost impact for airplanes affected by this AD. The average labor rate is $60 per work hour. The estimated maximum cost impact of the AD on U.S. operators of all airplanes affected by this AD is $3,695,460. Table 1 is as follows:

**Table 1. Cost Impact**

| Model | U.S.-Registered Airplanes | Work Hours (estimated) | Labor Cost (estimated) | Parts Cost (estimated) | Maximum Fleet Cost (estimated) |
|---|---|---|---|---|---|
| 747 | 194 | 39 | $2,340 | $2,300 to $3,500 | $ 1,132,960 |
| 757 | 491 | 26 | $1,560 | $1,700 | $ 1,600,660 |
| 767 | 258 | 17 | $1,020 | $2,300 | $ 856,560 |
| 777 | 56 | 3 | $180 | $1,700 | $ 105,280 |

For Model 747 and 767 series airplanes listed in Group 1 in the applicable service bulletin, in lieu of accomplishment of the modification of the drip shields, this AD provides an option to take samples of the drip shields to determine if the modification is necessary. Therefore, the cost impact of this AD as presented above may be reduced if some airplanes do not need the modification. For airplanes that accomplish the sampling, it will take approximately 18 work hours, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the sampling on affected U.S. operators is estimated to be $1,080 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.

The manufacturer has advised the FAA that warranty remedies may be available for parts and labor costs associated with accomplishing the actions that are required by this AD. Therefore, the future economic cost impact of this AD on U.S. operators may be less than the cost impact figures indicated above.

**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 adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

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

***We post ADs on the internet at "av-info.faa.gov"***

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).

**2000-26-04 BOEING:** Amendment 39-12054. Docket 2000-NM-217-AD.

Applicability: Model 747, 757, 767, and 777 series airplanes having the line numbers listed below; certificated in any category.

| Model | Affected Line Numbers (L/N) | Except L/N |
|---|---|---|
| 747 | 1 through 1234 inclusive | 1174, 1216 |
| 757 | 2 through 895 inclusive | 870, 886, 894 |
| 767 | 1 through 768 inclusive | 758 |
| 777 | 2 through 254 inclusive | 120, 219, 230, 235, 242, 245, 249 |

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 (d) 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 prevent potential ignition of the moisture barrier cover of the drip shield, which could propagate a small fire that results from an otherwise harmless electrical arc, leading to a larger fire, accomplish the following:

**Modification**

(a) Within 6 years after the effective date of this AD, accomplish paragraphs (a)(1), (a)(2), and (a)(3) of this AD; in accordance with Boeing Service Bulletin 747-25-3253, 767-25-0290, or 777-25-0164; all including Appendices A, B, and C; all dated June 29, 2000; or 757-25-0226 or 757-25-0228; both including Appendices A, B, and C; both dated July 3, 2000; as applicable; except as provided by paragraph (b) of this AD.

(1) Modify drip shields located on the flight deck by installing fire blocks.

(2) Prior to further flight following accomplishment of paragraph (a)(1) of this AD, perform a functional test of any system disturbed by the modification, in accordance with the applicable service bulletin or the Airplane Maintenance Manual (AMM), as applicable. If any functional test fails, prior to further flight, isolate the fault, correct the discrepancy in accordance with the applicable AMM, and repeat the failed test until it is successfully accomplished.

(3) Prior to further flight following the accomplishment of paragraphs (a)(1) and (a)(2) of this AD, install placards on all modified drip shields.

(b) If any wires or equipment are installed on the outboard surface of the drip shield (that is, between the drip shield and the airplane structure), modify that area in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA.

**Optional Sampling (Certain Model 747 and 767 Series Airplanes)**

(c) For Model 747 and 767 series airplanes listed in Group 1 in Boeing Service Bulletins 747-25-3253 and 767-25-0290: In lieu of accomplishment of paragraph (a) of this AD, within 6 years after the effective date of this AD, collect samples of the insulation and adhesive of the drip shields, and submit the samples to the manufacturer for testing, in accordance with Boeing Service Bulletin 747-25-3253 or 767-25-0290; both including Appendices A, B, and C; both dated June 29, 2000; as applicable.

(1) If the test on all samples is positive, no further action is required by this AD.

(2) If the test on any sample is negative, accomplish paragraph (a) of this AD before the compliance time specified in that paragraph.

**Alternative Methods of Compliance**

(d) 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.

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**

(e) 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**

(f) Except as provided by paragraph (b) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-25-3253, including Appendices A, B, and C, dated June 29, 2000; Boeing Service Bulletin 767-25-0290, including Appendices A, B, and C, dated June 29, 2000; Boeing Service Bulletin 777-25-0164, including Appendices A, B, and C, dated June 29, 2000; Boeing Service Bulletin 757-25-0226, including Appendices A, B, and C, dated July 3, 2000; or Boeing Service Bulletin 757-25-0228, including Appendices A, B, and C, dated July 3, 2000; as applicable. 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.

**Effective Date**

(g) This amendment becomes effective on February 2, 2001.

FOR FURTHER INFORMATION CONTACT: James Cashdollar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2785; fax (425) 227-1181.

Issued in Renton, Washington, on December 20, 2000.
John J. Hickey, Manager, Transport Airplane Directorate, Aircraft Certification Service.