DOCKET NO. SA-516

EXHIBIT NO. 11L

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

NPRM 96-NM-57-AD

(PAGES L-1 THRU L-3)

Proposed Rules

Federal Register
Vol. 61, No. 158
Wednesday, August 14, 1996

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 96-NM-57-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 and 757 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to all Boeing Model 747 and 757 series airplanes. This proposal would require repetitive visual inspections to detect discrepancies of the wire terminal assembly, electrical connector, and wire insulation on the fuel pump; and replacement of the fuel pump with a new fuel pump, if necessary. The proposed AD also would require repetitive insulation resistance tests of the fuel pump wiring. This proposal is prompted by reports of fuel leaks at the fuel boost and override/jettison pumps due to corrosion. The actions specified by the proposed AD are intended to prevent such a fuel leakage, which could result in a fire at the location of the affected fuel pump.

DATES: Comments must be received by September 16, 1996.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 96-NM-57-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: C. Michael Collins, Aerospace Engineer, Seattle Aircraft Certification Office, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2589; fax (206) 227-1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 96-NM-57-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 96-NM-57-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received several reports of fuel leaks at the fuel boost and override/jettison pumps on Boeing Model 747 series airplanes. As a result of these incidents, the fuel pumps were removed from these airplanes. These pumps had accumulated between 34,000 to 67,000 total hours since new or since overhaul.

Analyses of the removed pumps revealed that moisture ingression around the potting of the wire terminal assembly can cause corrosion in the wire terminal assembly. (Variation in the manufacturing of the connectors and exposure of an airplane to different operational environments can affect the time required to form the corrosion.) Such corrosion can lead to electrical arcing between the power pins and the pump case. The arcing could then cause deterioration of the terminal pins and thermal expansion of the material inside the cap. Thermal expansion can cause failure of the cap attachment flange or attaching screws, and, consequently lead to a fuel leak. A high current during arcing also could melt a hole through the end case and connector of the fuel pump, which also could result in a fuel leak.

Fuel leakage at the fuel boost and override/jettison pumps, if not detected and corrected, could result in a fire at the location of the affected fuel pump.

The fuel boost and override/jettison pumps of Model 747 series airplanes are similar in design to those of Model 757 series airplanes. Therefore, the FAA has determined that Model 757 series airplanes may be subject to the same fuel leakage problem.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 747-28A2194, Revision 1, dated January 18, 1996 (for Model 747 series airplanes), and Boeing Service Bulletin 757-28A0043, Revision 1, dated January 18, 1996 (for Model 757 series airplanes). These service bulletins describe procedures for repetitive visual inspections to detect discrepancies (i.e., fuel leak, heat discoloration, and damage) of the wire terminal assembly, electrical connector, and wire insulation on the fuel pump; and replacement of the fuel pump with a new fuel pump, if necessary. These service bulletins also describe procedures for repetitive insulation resistance tests of the fuel pump wiring.

L-1

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require a visual inspection to detect discrepancies of the wire terminal assembly, electrical connector, and wire insulation on the fuel pump; and replacement of the fuel pump with a new fuel pump, if necessary. The proposed AD also would require repetitive insulation resistance tests of the fuel pump wiring. The actions would be required to be accomplished in accordance with the service bulletins described previously.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Cost Impact

There are approximately 1,084 Model 747 series airplanes and 716 Model 757 series airplanes of the affected design in the worldwide fleet. Of these airplanes, 242 Model 747 series airplanes and 462 Model 757 series airplanes are of U.S. registry and would be affected by this proposed AD.

For 242 Model 747 series airplanes, it would take approximately 18 work hours per airplane to accomplish the proposed actions, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the proposed AD on U.S. operators of Model 747 series airplanes is estimated to be $261,360, or $1,080 per airplane.

For the 462 Model 757 series airplanes, it would take approximately 12 work hours per airplane to accomplish the proposed actions, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the proposed AD on U.S. operators of Model 757 series airplanes is estimated to be $332,640, or $720 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Regulatory Impact

The regulations proposed herein would not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, 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 copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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:

Boeing: Docket 96–NM–37–AD.

Applicability: All Model 747 and 757 series airplanes, 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 (c) 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 fuel leakage at the fuel boost and override/jettison pumps, which could result in a fire at the location of the affected fuel pump, accomplish the following:

(a) Within 120 days after the effective date of this AD, perform a visual inspection to detect discrepancies (i.e., fuel leak, heat discoloration, and damage) of the wire terminal assembly, electrical connector, and wire insulation on the fuel pump, in accordance with Boeing Service Bulletin 747–28A2194, Revision 1, dated January 18, 1996 (for Model 747 series airplanes), or Boeing Service Bulletin 757–28A0043, Revision 1, dated January 18, 1996 (for Model 757 series airplanes), as applicable.

(1) If no discrepancy is detected, prior to further flight, perform an insulation resistance test of the fuel pump wiring, in accordance with the Accomplishment Instructions of the applicable service bulletin.

(i) If any resistance measurement is less than or equal to 1 megohms, prior to further flight, replace the fuel pump with a new fuel pump, in accordance with the applicable service bulletin. Prior to further flight following accomplishment of the replacement, repeat the insulation resistance test.

(ii) If any resistance measurement is greater than 1 megohms but less than 5 megohms: Repeat the visual inspection and insulation resistance test within 500 hours, or replace the fuel pump with a new fuel pump. Prior to further flight following accomplishment of the replacement, repeat the insulation resistance test.

(iii) If any resistance measurement is greater than or equal to 5 megohms, repeat the visual inspection and insulation resistance test within 5,000 hours or 18 months, whichever occur first.

(2) If any discrepancy is detected, prior to further flight, replace the fuel pump with a new fuel pump, in accordance with the applicable service bulletin. Prior to further flight following accomplishment of the replacement, perform an insulation resistance test of the fuel pump wiring, in accordance with the Accomplishment Instructions of the applicable service bulletin.

(i) If any resistance measurement is less than or equal to 1 megohms, prior to further flight, replace the fuel pump with a new fuel pump, in accordance with the applicable service bulletin. Prior to further flight following accomplishment of the replacement, repeat the insulation resistance test.

(ii) If any resistance measurement is greater than 1 megohms but less than 5 megohms: Repeat the visual inspection and insulation resistance test within 500 hours, or replace the fuel pump with a new fuel pump. Prior to further flight following accomplishment of the replacement, repeat the insulation resistance test.

(iii) If any resistance measurement is greater than or equal to 5 megohms, repeat the visual inspection and insulation resistance test within 5,000 hours or 18 months, whichever occur first.

(b) Within 10 days after accomplishing the initial visual inspection required by paragraph (a) of this AD, submit a report of the inspection results (both positive and

L-2

negative findings) to the Manager, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2680; fax (206) 227-1181. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3507 et seq.) and have been assigned OMB Control Number 2120-0056.

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

(d) 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.

Issued in Renton, Washington, on August 7, 1996.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 96-20871 Filed 8-13-96; 12:33 pm]

L-3