

Proposed Rules

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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. 94-NM-224-AD]

Airworthiness Directives; Boeing Model 747 Series Airplanes Equipped With General Electric Model CF6-80C2 Series Engines or Pratt & Whitney Model PW4000 Series Engines

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 certain Boeing Model 747 series airplanes. This proposal would require modification of the nacelle strut and wing structure, inspections and checks to detect discrepancies, and correction of discrepancies. This proposal is prompted by the development of a modification of the strut and wing structure that improves the fail-safe capability and durability of the strut-to-wing attachments, and reduces reliance on inspections of those attachments. The actions specified by the proposed AD are intended to prevent failure of the strut and subsequent loss of the engine.

DATES: Comments must be received by March 3, 1995.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 94-NM-224-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: Tim Backman, Aerospace Engineer, Airframe Branch, ANM-121S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2776; 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 94-NM-224-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. 94-NM-224-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received numerous reports of fatigue cracking and/or corrosion in the strut-to-wing

attachments on Boeing Model 747 series airplanes. In two cases, cracking resulted in the failure of a strut load path and the subsequent loss of the number 3 engine and strut. In both cases, catastrophic accidents occurred when the number 3 engine and strut separated from the wing of the airplane and struck the number 4 engine, causing it to separate from the airplane. Investigation into the cause of these accidents and other reported incidents has revealed that fatigue cracks and corrosion in the strut-to-wing attachments, if not detected and corrected in a timely manner, can result in failure of the strut and subsequent separation of the engine from the airplane. Investigation also has revealed that the structural fail-safe capability of the strut-to-wing attachment is inadequate on these airplanes.

The FAA has previously issued 3 airworthiness directives (AD's) that address various problems associated with the strut attachment assembly on Model 747 series airplanes equipped with General Electric Model CF6-80C2 series engines or Pratt & Whitney Model PW4000 series engines. These AD's have required, among other things, inspection of the strut, midspar fittings, diagonal brace, and midspar fuse pins.

Explanation of Service Information

Boeing recently has developed a modification of the strut-to-wing attachment structure installed on certain Model 747 series airplanes equipped with General Electric Model CF6-80C2 series engines or Pratt & Whitney Model PW4000 series engines that significantly improves the load-carrying capability and durability of the strut-to-wing attachments. Such improvement also will substantially reduce the possibility of fatigue cracking and corrosion developing in the attachment assembly.

The FAA has reviewed and approved Boeing Alert Service Bulletin 747-54A2156, dated December 15, 1994, which describes procedures for modification of the nacelle strut and wing structure. This modification entails the following:

1. Providing a new fail-safe load path by installing a new dual side load fitting to the strut and the underwing structure and the associated wing back-up fitting, front spar post, and side links;

2. Installing a new titanium dual side load fitting to the strut aft bulkhead and