

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 action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NM-66-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-114, Attention: Rules Docket No. 2002-NM-66-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

On February 21, 1997, the FAA issued AD 97-05-08, amendment 39-9952 (62 FR 9359, March 3, 1997), applicable to all Boeing Model 727 series airplanes, to require repetitive pre-modification inspections to detect cracks in the forward support fitting of the number 1 and number 3 engines; and repair, if necessary. That AD also provides for an optional high frequency eddy current inspection, and, if possible, modification of the fastener holes; and various follow-on actions. Accomplishment of those optional actions would terminate the repetitive pre-modification inspections. That action was prompted by reports indicating that fatigue cracks were found in the forward support fitting of the number 1 and number 3 engines. The requirements of that AD are intended to detect and correct such fatigue cracking, which could result in failure of the support fitting and consequent separation of the engine from the airplane.

Actions Since Issuance of Previous AD

Since that AD was issued, the FAA has received reports of additional cracking found on the forward support fitting of the number 1 and number 3 engines on Boeing Model 727 series airplanes. Those cracks were found at new locations (not identified in AD 97-05-08) on airplanes that had accumulated between 18,200 and 44,200 total flight cycles. The cracking has been attributed to fatigue due to corrosion-pitting damage on the surface of fastener holes in the support fittings.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 727-54A0010, Revision 6, dated August 23, 2001, including an Evaluation Form. Revision 4 of the service bulletin was cited as the appropriate source of service information for accomplishment of the actions required by AD 97-05-08. Revision 5 was issued to divide the airplane effectivity into two groups, add more locations to be inspected, add inspections until the terminating action is accomplished, revise the instructions for the modification, and add post-modification repetitive inspections. Revision 6 was issued to change part numbers for certain fasteners and revise the repetitive intervals for inspection of the upper outboard flange. Accomplishment of the actions specified in Revision 6 is intended to adequately address the identified unsafe condition.

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 supersede AD 97-05-08 to continue to require repetitive inspections to detect cracking in the forward support fitting of the number 1 and number 3 engines. This proposed AD also would expand

the area to be inspected; require accomplishment of the previously optional (and subsequently revised) modification, which would terminate certain repetitive inspections; and add repetitive post-modification inspections to detect cracking of the fastener holes, and corrective action if necessary. The actions would be required to be accomplished in accordance with Revision 6 of the service bulletin described previously.

Differences Between Proposed AD and Service Information

Although the service bulletin specifies that Boeing may be contacted for disposition of certain repair conditions, this proposal would require the repair of those conditions to be accomplished in accordance with a method approved by the FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

Although the service bulletin recommends that operators submit a completed Evaluation Form and a report of damage that exceeds certain limits, this proposed AD would not require such reports.

Explanation of Proposed Change to Existing Requirements

The FAA has changed all references to a "detailed visual inspection" in the existing AD to "detailed inspection" in this proposed AD. Note 2 has been added to this proposed AD to define this type of inspection.

Cost Impact

There are approximately 1,382 airplanes of the affected design in the worldwide fleet. The FAA estimates that 915 airplanes of U.S. registry would be affected by this proposed AD.

The FAA provides the following cost estimates for this proposed AD:

Action	Work hours	Average hourly labor rate	Parts cost	Cost per airplane	Number of U.S. airplanes	U.S. fleet cost
AD 97-05-08 inspections, per inspection cycle .....	2	\$60	\$0	\$120	915	None.
Inspections before structural rework, per inspection cycle .....	14	60	0	840	915	768,600
Structural rework .....	7	60	7,875	8,295	915	7,589,925
Inspections after structural rework, per inspection cycle .....	12	60	0	720	915	658,800

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 proposed 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,