

**Explanation of Relevant Service Information**

The FAA has reviewed and approved the service information listed in the following table:

Service information	Procedures described
Boeing Service Bulletin 747-36-2111, dated February 20, 1992.	Inspection to detect chafing of the fuel line and measure the clearance between the fuel line and the pneumatic duct insulation blanket; and follow-on and corrective actions (including rework of the fuel line by blending nicks and scratches, determining the maximum thickness of the damaged area, and performing a penetrant inspection to detect cracking of the damaged area; remeasuring the clearance between the fuel line and the insulation blanket; adjusting the duct and fuel line positions; and performing repetitive inspections for chafing).
Boeing Service Bulletin 747-28-2162, dated July 30, 1992.	Replacement of the number 4 strut fuel tube with a new part if sufficient clearance between the fuel line and the insulation blanket cannot be achieved by incorporation of Service Bulletin 747-36-2111.
Boeing Service Bulletin 747-28-2230, dated September 30, 1999.	Fuel pressure leak check of the fuel line in the strut area, a strut drain test for the aft strut drain tubes to detect blockage, and corrective action for any discrepancy.
Boeing Service Letter 747-SL-28-052-B, dated August 30, 1998.	Repetitive replacement of the outboard strut fuel line coupling O-rings and retaining rings with new parts.
Boeing Service Bulletin 747-36-2118, dated January 28, 1993.	Replacement of the pneumatic duct boot with a new part.
Boeing Service Bulletin 747-54-2137, dated February 6, 1992.	Installation of a flame arrestor in each aft condensate drain hole of the engine struts.
Boeing Service Bulletin 747-54-2122, Revision 4, dated August 29, 1991.	Installation of a drain line entry screen at each drain tube entry.

The FAA has reviewed Notice of Status Change 747-54-2122 NSC 2, dated May 14, 1992, which revises Boeing Service Bulletin 747-54-2122, Revision 4, and was issued to notify certain operators of part number changes. The FAA has also reviewed Information Notice 747-54-2122 IN 03, dated August 19, 1999, which was

issued to notify operators of errors in certain Figures in Boeing Service Bulletin 747-54-2122, Revision 4.

Accomplishment of the actions specified in the service information is intended to adequately address the identified unsafe condition.

Boeing Service Bulletins 747-28-2230 and 747-36-2122 recommend accomplishment of certain actions

specified by other service bulletins; however, those additional actions are not included in this proposed AD because they are required by existing ADs or are not necessary to address the identified unsafe condition of this proposed AD. Those other service bulletins are described in the following table:

The actions specified in Boeing Service Bulletin—	Are included in—	Which applies to Model 747 series airplanes equipped with—	To require—	Within—
747-28-2155, Revision 3, dated September 28, 1984.	Telegraphic (emergency) AD 86-01-51 R1, amendment 39-5269 (51 FR 10820, March 31, 1986).	GE CF6 engines .....	Clearing of the engine strut drains.	72 hours after the effective date of April 18, 1986.
747-28-2160, dated July 23, 1992, or Revision 1, dated December 16, 1993.	AD 95-02-07, amendment 39-9126 (60 FR 8292, February 14, 1995).	Certain GE or Pratt & Whitney T9D series engines.	Installation of a seal on the wing front spar at each engine strut.	18 months after the effective date of March 16, 1995.
747-54A2117, Revision 1, dated November 8, 1985.	AD 86-08-03, amendment 39-5289 (51 FR 12836, April 16, 1986).	Certain General Electric and Pratt & Whitney engines.	An inspection for cracking in the brace and application of sealant in the strut lower aft bulkhead.	200/400 landings after the effective date of May 27, 1986.

In addition, Boeing Service Bulletin 747-54-2122 recommends the prior or concurrent accomplishment of the actions specified in Boeing Service Bulletin 747-54-2083, which addresses hydraulic fluid leak problems; however, those actions would not be required by this proposed AD because there has

been no evidence of a recent hydraulic fluid leak problem.

**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 accomplishment of the actions specified in the service information described previously, except as discussed below.

**Differences Between Proposed AD and Relevant Service Information**

Although Boeing Service Bulletin 747-28-2230 recommends