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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 series airplanes was published in the **Federal Register** on September 25, 2002 (67 FR 60189). That action proposed to require an initial inspection to identify all H-11 steel bolts on the outer chord of the body station (BS) 2360 aft pressure bulkhead between stringers 12L and 12R, follow-on repetitive inspections to identify all remaining H-11 steel bolts on the entire outer chord of the BS 2360 aft pressure bulkhead, and follow-on and corrective actions if necessary. That action also proposed to require eventual replacement of all H-11 steel bolts with Inconel bolts.

Comments

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

Request to Revise Statement of Unsafe Condition

One commenter requests that the FAA revise the unsafe condition in the proposed AD, which states that the consequences of not finding broken H-11 steel bolts is progressive failure of the remaining bolts and consequent structural damage and rapid depressurization of the airplane. The commenter notes that, while these are effects of progressive bolt failure, it is more significant that such failure could result in loss of control of the airplane. We concur and have revised the statement of unsafe condition throughout this final rule.

Request to Clarify Subject of Repetitive Inspections

One commenter requests that we revise paragraph (c) of the proposed AD to clarify that the repeat inspections in that paragraph apply only to the remaining H-11 steel bolts (that is, the H-11 steel bolts that have not been replaced with Inconel bolts). We concur that the repetitive ultrasonic inspections and torque checks for cracked or broken bolts are necessary only for the remaining H-11 steel bolts. We have

clarified paragraph (c) of this final rule accordingly.

Request to Revise Instructions in Paragraph (d) of Proposed AD

One commenter requests that we revise the instructions in paragraph (d) of the proposed AD to remove the instruction to coat the Inconel bolt with corrosion-inhibiting compound after installation. The commenter states that the instructions for applying corrosion protection on the replacement Inconel bolt that are stated in paragraph (d) of the proposed AD are incomplete and suggests alternative instructions. The commenter recommends that paragraph (d) refer to Figure 4 of the service bulletin.

We do not agree that any change is necessary. Paragraph (d) of this AD requires replacing all subject H-11 steel bolts per Boeing Alert Service Bulletin 747-53A2474, dated October 25, 2001. When we refer to a service bulletin in this way in an AD, operators are required to follow all procedures in the service bulletin, including the instructions for corrosion prevention that are specified in Figure 4 of the service bulletin. (We note that the Accomplishment Instructions of the service bulletin refer to Figure 4 of the service bulletin for replacement procedures.) No change to the final rule is needed in this regard.

Request to Require Inspection or Replacement of Adjacent H-11 Steel Bolts

One commenter requests that we consider requiring operators to inspect or replace an H-11 steel bolt (including reworking the bolt hole) found on either side of a cracked H-11 steel bolt during the initial inspection. The commenter states that such a requirement should not add significant downtime and will better ensure safety.

We do not agree that any change is necessary. This AD requires inspecting all H-11 steel bolts in the subject area, which would include H-11 bolts adjacent to cracked or broken bolts. While an operator has the option of immediately replacing any H-11 steel bolt that is adjacent to a cracked or broken bolt, we find that performing repetitive inspections of remaining H-11 steel bolts will provide an acceptable level of safety until all H-11 steel bolts are replaced as required by paragraph (d) of this AD. (Such replacement is required within 6 years after the effective date of the AD.) No change to the final rule is needed in this regard.

Clarification of Applicability

We have revised the applicability statement of this AD to clarify that Boeing Model 747-400, -400D, and -400F series airplanes are not affected by this AD. The airplanes with line numbers 1 through 644 inclusive are Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-200C, 747-300, 747SR, and 747SP series airplanes.

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 changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 487 airplanes of the affected design in the worldwide fleet. The FAA estimates that 165 airplanes of U.S. registry will be affected by this AD.

It will take approximately 9 work hours per airplane to accomplish the required initial inspection, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the initial inspection on U.S. operators is estimated to be \$89,100, or \$540 per airplane.

It will take approximately 35 work hours per airplane to accomplish the required follow-on inspection to identify all remaining H-11 steel bolts on the entire outer chord, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the follow-on inspection on U.S. operators is estimated to be \$346,500, or \$2,100 per airplane, per inspection cycle.

Should an operator be required to replace the H-11 steel bolts, it will take approximately 108 work hours per airplane to accomplish the replacement, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$3,233 per airplane. Based on these figures, the cost impact is estimated to be \$9,713 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