

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 an APU compartment fire, accomplish the following:

**Restatement of Requirements of AD 91-20-07, Amendment 39-8041**

**Repetitive Inspections**

(a) Within 100 hours time-in-service after October 7, 1991 (the effective date of AD 91-20-07, amendment 39-8041), and thereafter at intervals not to exceed 400 hours time-in-service: Perform a dye penetrant inspection to detect cracks, rupture or fuel leaks at the weld of the fuel feedline adapter, in accordance with Airbus Industrie All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991. If cracks, rupture, or fuel leaks are found, replace the adapter with an improved, non-welded one-piece-body adapter prior to the next APU operation, or placard the APU inoperative until the adapter is replaced with the improved adapter, in accordance with Airbus Industrie Service Bulletin A300-49-0049, A300-49-6009, or A310-49-2012; all dated July 12, 1991; as applicable.

(b) Within 100 hours time-in-service after October 7, 1991, verify the correct torque

values of the starter motor cable terminals and the generator cable terminals in accordance with Airbus Industrie All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991. Correct any torque value discrepancies prior to further flight, in accordance with the AOT.

**New Requirements of This AD**

**Installation**

(c) Within 15 months after the effective date of this AD, install an improved APU fuel feedline adapter in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300-49-0049, Revision 1 (for Model A300 series airplanes); A300-49-6009, Revision 1 (for Model A300-600 series airplanes); or A310-49-2012, Revision 1 (for Model A310 series airplanes); all dated November 28, 1991; as applicable. Such installation constitutes terminating action for the requirements of this AD.

**Note 2:** Although the service bulletins referenced in paragraph (b) of this AD specify installation of an APU fuel feedline adapter having part number P/N A4937021700200, installation of an adapter having P/N A4937021700400 is also acceptable for compliance with the requirements of that paragraph.

**Spares**

(d) As of the effective date of this AD, no person shall install an APU fuel feedline

adapter, P/N A4937021700000 (welded configuration), on any airplane.

**Alternative Methods of Compliance**

(e) 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, International Branch, ANM-116, 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, International Branch, ANM-116.

**Note 3:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

**Special Flight Permits**

(f) Special flight permits may be issued in accordance with §§ 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.

**Incorporation by Reference**

(g) The actions shall be done in accordance with the following Airbus All Operators Telex (AOT) and Airbus service bulletins:

Service information referenced and date	Page No.	Revision level shown on page	Date shown on page
AOT 49-01, Issue 3, April 25, 1991	1-3	3	April 25, 1991.
A300-49-0049, July 12, 1991	1-11	Original	July 12, 1991.
A300-49-0049, Revision 1, November 28, 1991	1-4, 7, 8, 11	1	November 28, 1991.
	5, 6, 9, 10	Original	July 12, 1991.
A300-49-6009, July 12, 1991	1-9	Original	July 12, 1991.
A300-49-6009, Revision 1, November 28, 1991	1-6, 9	1	November 28, 1991.
	7, 8	Original	July 12, 1991.
A310-49-2012, July 12, 1991	1-11	Original	July 12, 1991.
A310-49-2012, Revision 1, November 28, 1991	1-4, 7, 8, 11	1	November 28, 1991.
	5, 6, 9, 10	Original	July 12, 1991.

(1) The incorporation by reference of Airbus Service Bulletin A300-49-0049, Revision 1, dated November 28, 1991; Airbus Service Bulletin A300-49-6009, Revision 1, dated November 28, 1991; and Airbus Service Bulletin A310-49-2012, Revision 1, dated November 28, 1991; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Airbus All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991; Airbus Service Bulletin A300-49-0049, dated July 12, 1991; Airbus Service Bulletin A300-49-6009, dated July 12, 1991; and Airbus Service Bulletin A310-49-2012; dated July 12, 1991; was approved previously by the Director of the Federal Register as of October 7, 1991 (56 FR 47672, September 20, 1991).

(3) Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton,

Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**Note 4:** The subject of this AD is addressed in French airworthiness directive 98-480-269(B), dated December 2, 1998.

(h) This amendment becomes effective on March 13, 2000.

Issued in Renton, Washington, on January 31, 2000.

**Donald L. Riggins,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*  
[FR Doc. 00-2469 Filed 2-4-00; 8:45 am]

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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. 99-NM-88-AD; Amendment 39-11558; AD 2000-03-01]**

**RIN 2120-AA64**

**Airworthiness Directives; Boeing Model 747-100 and -200 Series Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747-100 and -200 series airplanes, that requires repetitive inspections of the

upper and lower chords of the wing front spar for cracks, and corrective action, if necessary. For airplanes on which no cracking is detected, this AD also provides an optional terminating action in lieu of repetitive inspections. This amendment is prompted by reports of cracks in the upper chord of the wing front spar. The actions specified by this AD are intended to detect and correct fatigue cracking of the upper and lower chords of the wing front spar, which could result in reduced structural capability and possible fuel leakage onto an engine and a resultant fire.

**DATES:** Effective March 13, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 13, 2000.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

**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 747-100 and -200 series airplanes was published in the **Federal Register** on August 20, 1999 (64 FR 45481). That action proposed to require repetitive inspections of the upper and lower chords of the wing front spar for cracks, and corrective action, if necessary.

#### Comments

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

#### Request to Allow Alternative Inspection Method

One commenter requests that the FAA revise paragraph (a) of the proposal to allow accomplishment of an open hole high frequency eddy current (HFEC)

inspection in lieu of the ultrasonic inspection that is specified in paragraph (a) of the proposal. The commenter asserts that accomplishment of an HFEC inspection "equals or exceeds the capability of surface ultrasonic inspections" for detecting cracking of the upper and lower chords of the wing front spar. The commenter states that the HFEC inspection should be accomplished in accordance with Figure 6 of Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999 (which was referenced in the proposal as the appropriate source of service information for accomplishment of the proposed actions).

The FAA concurs with the commenter's request to approve the alternative inspection method. However, the FAA finds that, rather than revising paragraph (a) of this AD, it is more appropriate to add a NOTE stating that accomplishment of an HFEC inspection in accordance with Figure 6 of the service bulletin is acceptable for compliance with the requirements of paragraph (a) of this AD. NOTE 2 has been added to this final rule accordingly.

#### Request to Reference Alternative Terminating Action

One commenter requests that the FAA revise paragraph (b) of the proposed rule to reference accomplishment of certain strut and wing modifications or certain other terminating actions as terminating action for the requirements of this AD. The commenter states that accomplishment of certain modifications meets the intent of the terminating action described in the proposed rule, provided that an HFEC inspection of affected fastener holes has been accomplished (in accordance with Boeing 747 Non-Destructive Test Manual D6-7170, Part 6, Subject 51-00-00, Figure 16) prior to oversizing of the holes, and the holes were found to be free of cracks, corrosion, or damage.

The FAA infers that the commenter is referring to the terminating action specified in paragraph (c) of this AD. The FAA concurs with the commenter's request. The FAA finds that the strut and wing modifications and terminating action referenced by the commenter are already required by certain other AD's, which are described below.

- AD 95-10-16, amendment 39-9233 (60 FR 27008, May 22, 1995), applies to certain Boeing Model 747 series airplanes, and requires, among other things, modification of the nacelle strut and wing structure in accordance with Boeing Alert Service Bulletin 747-54A2159, dated November 3, 1994.

- AD 95-13-07, amendment 39-9287 (60 FR 33336, June 28, 1995), applies to certain Boeing Model 747 series airplanes, and requires modification of the nacelle strut and wing structure in accordance with Boeing Alert Service Bulletin 747-54A2158, dated November 30, 1994.

- AD 99-10-09, amendment 39-11162 (64 FR 25194, May 11, 1999), applies to certain Model 747-100, -200, and 747SP series airplanes, and military type E-4B airplanes. That AD provides for replacement of the wing front spar web with a new shot-peened wing front spar web, in accordance with Boeing Service Bulletin 747-57A2303, Revision 1, dated September 25, 1997, as an optional terminating action for the repetitive inspection requirements of that AD.

The FAA has determined that accomplishment of the wing and strut modification specified in AD 95-10-16 or AD 95-13-07, or the optional terminating action specified in AD 99-10-09, constitutes terminating action for the repetitive inspections required by paragraph (a) of this AD, provided that an HFEC inspection of subject fastener holes has been accomplished (in accordance with Boeing 747 Non-Destructive Test Manual D6-7170, Part 6, Subject 51-00-00, Figure 16) prior to oversizing of the holes, and the holes were found to be free of cracks, corrosion, or damage. The FAA has added NOTE 3 to this final rule accordingly.

#### Request to Delete Certain Supplemental Structural Inspection Document Inspections

One commenter requests that the FAA revise the proposal by adding a paragraph that eliminates the requirement for certain inspections to be accomplished in accordance with the Supplemental Structural Inspection Document (SSID). The commenter justifies its request by saying that oversizing the web-to-chord fastener holes, as described in the optional terminating action in Boeing Service Bulletin 747-57-2305, Revision 1, will "zero time" the fastener holes, renewing the fatigue life. The commenter states that, if this optional terminating action is accomplished, SSID inspections W-24B at the front spar web-to-chord fastener holes between the upper link fittings and W-24C at the front spar web-to-chord fastener holes at the outboard upper link fittings would no longer be necessary.

The FAA partially concurs with the commenter's request. The FAA acknowledges that, following accomplishment of the optional

terminating action, fatigue life will be renewed in the affected web-to-chord fastener holes. However, the SSID inspections that the commenter references are required, along with various other inspections, by AD 94-15-12, amendment 39-8983 (59 FR 37933, July 26, 1994), and AD 94-15-18, amendment 39-8989 (59 FR 41233, August 11, 1994). The FAA finds that deleting SSID inspections required by other AD's is not an appropriate action to take in this AD. Therefore, no change to the final rule is necessary in this regard.

#### **Request to Allow Use of Original Issue of Service Bulletin**

One commenter requests that the FAA revise paragraphs (a), (b), and (c) of the proposal to reference the original issue of Boeing Service Bulletin 747-57-2305, dated October 8, 1998, in addition to Revision 1 of the service bulletin, as appropriate sources of service information for the actions required by this AD. The commenter states that there is no substantial difference between the two versions of the service bulletin, and the inspection methods and procedures for terminating action are the same. The commenter states that Revision 1 adds missing fastener codes and revises grip lengths of fasteners. Further, the commenter states that operators that accomplished inspections or terminating action in accordance with the original issue of the service bulletin should not be required to perform the inspections or terminating action in accordance with Revision 1, nor should they be required to apply for an alternative means of compliance.

The FAA does not concur with the commenter's request. The FAA considers the grip length of fasteners (one of the items changed between the original issue and Revision 1) important for proper clamp-up, and the FAA has been advised that certain fasteners specified in the original issue of the service bulletin had grip lengths that were too long. In addition, the FAA considers the fact that certain fastener codes were missing from the original issue of the service bulletin to be significant, in that it could result in installation of fasteners that are not structurally satisfactory. Also, Revision 1 of the service bulletin deleted inspections of the fasteners in the upper and lower chords between the upper link fittings. For these reasons, the FAA does not find that accomplishment of the actions required by this AD in accordance with the original issue of the service bulletin is acceptable for compliance with this AD. No change to the final rule is necessary in this regard.

#### **Request to Revise Statement of Unsafe Condition**

One commenter, the airplane manufacturer, requests that the FAA revise the reason for issuing the proposed rule. The proposed rule states that "the actions specified by the proposed AD are intended to detect and correct fatigue cracking of the upper and lower chords of the wing front spar, which could result in reduced structural capability and possible fuel leakage onto an engine and a resultant fire." The commenter states that the correct reason for issuing the AD is that cracks addressed by Boeing Service Bulletin 747-57-2305 are subject to Item W-24A and W-24B in Boeing Document D6-35022, "Supplemental Structural Inspection Document." The commenter also states that the service bulletin was issued to address undetected cracks in the front spar chords that could result in extensive labor hours and downtime if the cracks propagate to the extent that replacement of a section of chord is necessary. The commenter concludes that there are no safety-of-flight issues associated with such cracking, and that fuel leakage due to undetected cracks is very unlikely because, for leakage to occur, cracks in the chord would have to grow through the thickness of the chord, beyond the upper or lower edges of the front spar web, and beyond the fillet seal.

The FAA does not concur with the commenter's request. The statement of unsafe condition, as stated in the proposal, specifies what could happen if the inspections of the front spar upper and lower chords that will be required by this AD are not accomplished. The fact that fuel leaks have not been detected to date does not preclude leaks from occurring in the future. For example, even though an operator may have accomplished the strut and wing modification required by another AD (as discussed previously), if an HFEC inspection to detect cracking of the fastener holes was not accomplished, a crack may still be present and could grow to the point that fuel leakage occurs. The FAA finds no justification for revising the statement of unsafe condition as the commenter suggested. Therefore, no change to the final rule is necessary in this regard.

#### **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 332 Model 747-100 and -200 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 137 airplanes of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per airplane to accomplish the required inspection, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the inspection required by this AD on U.S. operators is estimated to be \$16,440, or \$120 per airplane, per inspection cycle.

The cost impact figure discussed above is 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.

Should an operator elect to accomplish the optional terminating action rather than continue the repetitive inspections, it will take approximately 37 work hours per airplane to accomplish the modification, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$5,000 per airplane. Based on these figures, the cost impact of this optional terminating action is estimated to be \$7,220 per airplane.

#### **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect 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, it is determined that this final rule does not have federalism implications under Executive Order 13132.

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

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Amendment**

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

**2000-03-01 Boeing:** Amendment 39-11558. Docket 99-NM-88-AD.

*Applicability:* Model 747-100 and -200 series airplanes, listed in Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999; 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 (d) 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 detect and correct fatigue cracking of the upper and lower chords of the wing front spar, which could result in reduced structural capability and possible fuel leakage onto an engine and a resultant fire, accomplish the following:

**Inspections and Corrective Action**

(a) Prior to the accumulation of 12,000 total flight cycles, or within 24 months after the effective date of this AD, whichever occurs later, accomplish an ultrasonic inspection for cracking of the upper and lower chord of the wing front spar, in accordance with Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999.

**Note 2:** Accomplishment of an open hole high frequency eddy current inspection in accordance with Figure 6 of Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999, is acceptable for compliance with the inspection requirement of paragraph (a) of this AD.

(1) If no cracking is found, repeat this inspection thereafter at intervals not to exceed 6,000 flight cycles, until the requirements of paragraph (c) of this AD have been accomplished.

(2) If any cracking is found, prior to further flight, accomplish "Part 2—Terminating Action" of the Accomplishment Instructions of the service bulletin, except as provided by paragraph (b) of this AD. Accomplishment of this action constitutes terminating action for the requirements of this AD.

(b) During accomplishment of the terminating action required by paragraph (a)(2) of this AD, if any crack is found in the upper chord that is outside the limits specified in Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999; or if any crack is found in the lower chord; prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; 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. For a repair method to be approved by the Manager, Seattle ACO, as required by this AD, the Manager's approval letter must specifically reference this AD.

**Optional Terminating Action**

(c) Accomplishment of "Part 2—Terminating Action" of the Accomplishment Instructions of Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999, constitutes terminating action for the requirements of this AD.

**Note 3:** Accomplishment of the wing and strut modification specified in AD 95-10-16, amendment 39-9233, or AD 95-13-07, amendment 39-9287, or the optional terminating action specified in AD 99-10-09, amendment 39-11162, constitutes terminating action for the repetitive inspections required by paragraph (a) of this AD, provided that an HFEC inspection of subject fastener holes has been accomplished in accordance with Boeing 747 Non-Destructive Test Manual D6-7170, Part 6, Subject 51-00-00, Figure 16, prior to oversizing of the holes in accordance with AD 95-10-16, AD 95-13-07, or AD 99-10-09, and the holes were found to be free of cracks, corrosion, or damage.

**Alternative Methods of Compliance**

(d) 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 ACO. 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 4:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

**Special Flight Permits**

(e) 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.

**Incorporation by Reference**

(f) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 13, 2000.

Issued in Renton, Washington, on January 31, 2000.

**Donald L. Riggan,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

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**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. 2000-NM-16-AD; Amendment 39-11557; AD 2000-02-39]

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Model A300 Series Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to certain Airbus Model A300 series airplanes. This action requires either a one-time ultrasonic inspection, or repetitive visual inspections and eventual ultrasonic inspection, to detect cracking of the longitudinal skin splice above the mid-passenger door panels, and corrective actions, if necessary. This amendment is prompted by issuance of mandatory continuing airworthiness information by a foreign civil airworthiness authority. The actions specified in this AD are intended to detect and correct cracking of the longitudinal skin splice above the mid-passenger door panels, which could result in reduced structural integrity of the fuselage pressure vessel.

**DATES:** Effective February 22, 2000.