

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

[Docket No. FAA-2008-0148; Directorate Identifier 2007-NM-299-AD]

RIN 2120-AA64

**Airworthiness Directives; Boeing Model 747 Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Boeing Model 747 airplanes. This proposed AD would require a one-time inspection of certain fuselage skins at section 41 to find any external doublers that cover the inspection areas and to identify the external doublers that end on a stringer and those that do not, and related investigative and corrective actions if necessary. This proposed AD results from reports of cracks found at fastener locations in the fuselage skins at section 41. We are proposing this AD to detect and correct fuselage skin cracks at fastener locations along the skin-to-stringer attachments, which could join together and become large and consequently result in rapid decompression of the cabin.

**DATES:** We must receive comments on this proposed AD by March 24, 2008.

**ADDRESSES:** You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
  - *Fax:* 202-493-2251.
  - *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
  - *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M-30, West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through

Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590.

**SUPPLEMENTARY INFORMATION:****Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2008-0148; Directorate Identifier 2007-NM-299-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We have received two reports of cracks found at fastener locations in the fuselage skins at section 41. One operator reported finding skin cracks at a fastener location at stringer 5 (S-5) near station (STA) 365, on a Model 747-200F series airplane. These cracks were found during incorporation of the skin modification specified in Boeing Service Bulletin 747-53-2272. The cracks were 0.25 inch long and located on the forward and aft side of the fastener hole. The airplane had accumulated 13,726 total flight cycles. In the other report, multiple skin cracks were found during Boeing Model 747-400 series airplane fatigue testing. That test article had accumulated 40,000 test cycles. The cracks were found at locations where there are no internal doublers, at stringers 10 and 13, and between STA 260 and STA 300. Fuselage skin cracks at fastener locations along the skin-to-stringer attachments, if not corrected, could join together and become large

and consequently result in rapid decompression of the cabin.

**Relevant Service Information**

We have reviewed Boeing Alert Service Bulletin 747-53A2704, dated October 4, 2007. The service bulletin describes procedures for doing a one-time general visual inspection of certain fuselage skins at section 41 to find any external doublers that cover the inspection area and to identify the external doublers that end on a stringer and those that do not; and related investigative and corrective actions if necessary. The related investigative actions include the following:

- Removing any external doubler and doing a one-time detailed inspection and an open-hole high frequency eddy current (HFEC) inspection for any crack in the skin at the skin-to-stringer attachments, for an inspection area where the skin-to-stringer attachment is covered by an external doubler that ends on a stringer in the inspection area.
- Doing repetitive external HFEC inspections for any crack in the skin at the skin-to-stringer attachments, for an inspection area where the skin-to-stringer attachment is not covered by an external doubler.

For the one-time general visual inspection, one-time detailed inspection, one-time open-hole HFEC inspection, and the initial external HFEC inspection, the service bulletin specifies a compliance time of 16,000 or 25,000 total flight cycles depending on the airplane configuration, or 2,000 flight cycles after the date on the service bulletin, whichever occurs later. The service bulletin also specifies that if a skin panel was replaced, the inspection threshold for the affected area can be calculated from the time it was replaced. For the repetitive external HFEC inspections, the service bulletin specifies a repeat interval of 3,000 flight cycles.

The corrective actions include repairing any crack found in an inspection area, and installing a new external doubler where any external doubler has been removed from the inspection area. The service bulletin specifies accomplishing the corrective actions before further flight.

**FAA's Determination and Requirements of This Proposed AD**

We are proposing this AD because we evaluated all relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the(se) same type design(s). This proposed AD would require accomplishing the actions specified in the service

information described previously, except as discussed under “Differences Between the Proposed AD and Service Bulletin.”

#### Differences Between Proposed AD and Service Bulletin

Although Figure 19 of the service bulletin specifies doing a “detailed visual inspection” of the fastener holes, this proposed AD would require doing a “detailed inspection.”

This proposed AD expands the inspection area at certain skin-to-stringer attachments. In Figure 3 of the service bulletin, S-5 and S-5A from STA 340 to STA 360 should be bold in the illustration to include those areas as part of the recommended inspection (similar to Figure 8 for the right side). Also, in Figure 15 of the service bulletin, S-14A from STA 200 to STA 220 should be bold in the illustration to include that area as part of the recommended inspection (similar to Figure 17 for the right side). Boeing is aware of these discrepancies, concurs with the changes, and has issued Information Notice (IN) 747-53A2704 IN 01, dated December 19, 2007, to inform operators of the errors. We have included this information in paragraph (g) of this proposed AD.

#### Clarification of Proposed Requirements

The service bulletin notes that, at locations where external doublers exist that do not end on a stringer in the inspection area, repetitive inspections of the skin for cracking at critical rows of fasteners are required in accordance with Boeing Document Number D6-36181, “Repair Assessment Guidelines—Model 747.” These inspections would not be required by this AD, since compliance is already required by sections 91.410, 121.370, 125.248, and 129.32 of the Federal Aviation Regulations (14 CFR 91.410, 121.370, 125.248, and 129.32).

#### Costs of Compliance

We estimate that this proposed AD would affect 165 airplanes of U.S. registry. We also estimate that it would take up to 64 work-hours per product to comply with this proposed AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this proposed AD to the U.S. operators to be \$844,800 or \$5,120 per product.

#### Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII:

Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Is not a “significant rule” under the 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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

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

Air transportation, Aircraft, Aviation safety, Safety.

#### The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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. The FAA amends § 39.13 by adding the following new AD:

**Boeing:** Docket No. FAA-2008-0148; Directorate Identifier 2007-NM-299-AD.

#### Comments Due Date

(a) We must receive comments by March 24, 2008.

#### Affected ADs

(b) None.

#### Applicability

(c) This AD applies to all Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, certificated in any category.

#### Unsafe Condition

(d) This AD results from reports of cracks found at fastener locations in the fuselage skins at section 41. We are issuing this AD to detect and correct fuselage skin cracks at fastener locations along the skin-to-stringer attachments, which could join together and become large and consequently result in rapid decompression of the cabin.

#### Compliance

(e) Comply with this AD within the compliance times specified, unless already done.

#### Repetitive Inspections and Related Investigative/Corrective Actions

(f) At the applicable compliance times specified in Tables 1 and 2 of paragraph 1.E. of Boeing Alert Service Bulletin 747-53A2704, dated October 4, 2007: Do a general visual inspection of the fuselage skins at section 41 to find any external doublers that cover the inspection area and to identify the external doublers that end on a stringer in the inspection area and those that do not, and do all the related investigative and corrective actions as applicable, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of the service bulletin, except as provided by paragraph (g) of this AD. Repeat the related investigative actions thereafter at the interval specified in Tables 1 and 2 of the service bulletin, as applicable.

#### Exceptions to the Service Bulletin

(g) Where Tables 1 and 2 of paragraph 1.E. of Boeing Alert Service Bulletin 747-53A2704, dated October 4, 2007, specify counting the compliance time from “\* \* \* after the date on this service bulletin,” this AD requires counting the compliance time from the effective date of this AD. Where Figure 19 of the service bulletin specifies doing a “detailed visual inspection” for any crack at fastener holes common to the stringer, this AD would require doing a detailed inspection. In Figure 3 of the service bulletin, also inspect the areas at stringer 5 (S-5) and S-5A between station (STA) 340 and STA 360 (similar to Figure 8 for the right side). In Figure 15 of the service bulletin, also inspect the area at S-14A between STA 200 and STA 220 (similar to Figure 17 for the right side).

#### Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Seattle Aircraft Certification Office, FAA, ATTN: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, 1601 Lind Avenue, SW., Renton,

Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

Issued in Renton, Washington, on January 31, 2008.

**Ali Bahrami,**

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

[FR Doc. E8-2352 Filed 2-7-08; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2008-0149; Directorate Identifier 2007-NM-319-AD]

RIN 2120-AA64

#### **Airworthiness Directives; Boeing Model 737-100, -200, -200C, -300, -400, and -500 Series Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This proposed AD would require replacing the existing straight-to-90-degree hose assembly for the Lavatory "A" water supply. The replacement is a new straight hose assembly and a separate 90-degree elbow fitting. This proposed AD results from a report of a separated hose assembly for the passenger water system. We are proposing this AD to prevent a water leak into the flight deck ceiling, which could result in an electrical short and possible loss of several functions essential to safe flight.

**DATES:** We must receive comments on this proposed AD by March 24, 2008.

**ADDRESSES:** You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 202-493-2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
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For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

#### **Examining the AD Docket**

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#### **FOR FURTHER INFORMATION CONTACT:**

Marcia Smith, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6484; fax (425) 917-6590.

#### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include "Docket No. FAA-2008-0149; Directorate Identifier 2007-NM-319-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

*www.regulations.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

#### **Discussion**

We have received a report of a separated hose assembly for the passenger water system. The hose assembly supplies potable water through a 90-degree end fitting to Lavatory "A." The break occurred at the 90-degree end fitting when the elbow separated at a soldered joint adjacent to the hose assembly sleeve. The break was located just above and inside the flight deck entry door, and resulted in water spilling into the flight deck ceiling, which affected various radios and the Aircraft Communications Addressing and Reporting System (ACARS) and caused them to become inoperative. These affected parts had to be replaced due to water damage. An analysis of the broken hose assembly showed signs of previous small leaks. It was concluded that an incompletely soldered joint failed and consequently separated. A broken hose assembly in this location, if not corrected, could leak into the flight deck ceiling and result in an electrical short and possible loss of several functions essential to safe flight.

#### **Relevant Service Information**

We have reviewed Boeing Alert Service Bulletin 737-38A1054, dated August 23, 2007. The service bulletin describes procedures for replacing the existing straight-to-90-degree hose assembly for the Lavatory "A" water supply. The replacement is a new straight hose assembly and a separate 90-degree elbow fitting.

#### **FAA's Determination and Requirements of This Proposed AD**

We are proposing this AD because we evaluated all relevant information and determined the unsafe condition described previously is likely to exist or develop in other airplanes of the same type design. This proposed AD would require accomplishing the actions specified in the service information described previously.

#### **Costs of Compliance**

We estimate that this proposed AD would affect 779 airplanes of U.S. registry. We also estimate that it would take between 4 and 7 work-hours per airplane to comply with this proposed AD, depending on the airplane configuration. The average labor rate is \$80 per work-hour. Required parts would cost about \$400 per product. Based on these figures, we estimate the