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## AIRWORTHINESS DIRECTIVE

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On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/B747/201 Amdt 2 and issues the following AD under subregulation 39.1 (1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

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### Boeing 747 Series Aeroplanes

**AD/B747/201**                      **Centre Fuel Tank Wiring and Components**                      **13/2004**  
**Amdt 3**

Applicability:    Model 747 aeroplanes having line numbers 1 through 1124 inclusive.

- Requirement:    1. For aeroplanes listed in Boeing Service Bulletin (SB) 747-28-2205 Revision 1 dated 16 April 1998 accomplish the following in accordance with either SB 747-28-2205 Revision 1 dated 16 April 1998 or Revision 2 dated 17 May 1999:
- a. perform a one-time visual inspection of the centre fuel tank wiring and components to detect discrepancies (damage, disbonding or incorrect installation), and
  - b. perform a one-time electrical bonding test of the centre fuel tank components.

*Note 1: For the purposes of this Directive, a visual inspection is considered to be a general visual inspection defined as follows:*

*A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light and may require removal or opening of access panels or doors. Stands, ladders, or platforms, may be required to gain proximity to the area being checked.*

- 2. If, during the Requirement 1.a. visual inspection, any discrepancy is detected, either repair the discrepant component or replace it with a new or serviceable component.
- 3. If, during the Requirement 1.b. electrical bonding test, any measured resistance exceeds the limits specified in the service bulletin, rework the discrepant component.

## Boeing 747 Series Aeroplanes

AD/B747/201 Amdt 3 (continued)

*Note 2: Actions performed in accordance with SB 747-28-2205, dated 27 June 1997, accomplished prior to the effective date of this Directive or its original issue, are considered acceptable for compliance only with the corresponding applicable actions specified in this Directive. This excludes certain actions that are not described in that bulletin, such as inspection and testing of the body fuel tank components that are described in Revision 1 of SB 747-28-2205. Regardless of which version of the service bulletin is used to detect any discrepancies, the repair and replacement requirements of this Directive apply.*

4. For aeroplanes listed in Boeing Alert Service Bulletin (ASB) 747-28A2208 dated 14 May 1998, accomplish the following in accordance with either ASB 747-28A2208 dated 14 May 1998 or Revision 1 dated 26 August 1999:
  - a. perform a one-time insulation resistance test of the fuel quantity indicating system (FQIS),
  - b. perform a one-time visual inspection of the FQIS wiring and components to detect discrepancies (chafing, damage to the wiring and incorrect configuration of the terminal blocks),
  - c. replace FQIS probes (tank units and compensators) with new or serviceable components as detailed in Figure 5 of either ASB 747-28A2208 dated 14 May 1998 or Revision 1 dated 26 August 1999, and
  - d. carry out a system adjustment and system operational test.

*Note 3: Aeroplanes required to accomplish Requirement 4 of this Directive are exempt from accomplishing steps 1 through 9 in Figure 11 of SB 747-28-2205, Revision 1, dated 16 April 1998.*

*Note 4: For aeroplanes on which steps 1 through 9 in Figure 11 of SB 747-28-2205, dated 27 June 1997, or Revision 1, dated 16 April 1998, were accomplished prior to the effective date of this Directive, steps 1 through 6 in Figure 16 of ASB 747-28A2208, dated 14 May 1998 or Revision 1 dated 26 August 1999, are not required.*

5. If, during the Requirement 4 inspections and/or tests, any discrepancy is detected perform corrective actions in accordance with either ASB 747-28A2208 dated 14 May 1998 or Revision 1 dated 26 August 1999.
6. For aeroplanes having line positions 1 through 971 inclusive, install a flame arrestor in the inlet line of the electrical motor-operated scavenge pump of the centre fuel tank, in accordance with ASB 747-22A2210 dated 14 May 1998.

*Note 5: FAA AD 99-08-02 R1 Amdt 39-11215, AMOC 99-140S-177 dated 17 May 1999 and AMOC 99-140S-282 dated 11 August 1999 refer.*

## Boeing 747 Series Aeroplanes

AD/B747/201 Amdt 3 (continued)

- Compliance:
1. Within 24 months after the effective date of the original issue of this Directive.
  2. Before further flight.
  3. Before further flight.
  4. Within 24 months after the effective date of the original issue of this Directive.
  5. Before further flight.
  6. Within 24 months after the effective date of the original issue of this Directive.

This Amendment becomes effective on 23 December 2004.

Background: This Directive is based on Federal Aviation Administration AD 99-08-02, the issue of which was prompted by a design review and testing results obtained in support of an accident investigation. The Directive is intended to remove ignition sources from the centre fuel tank and prevent consequent fire and/or explosion in the fuel tank.

Amendment 1 clarified Requirement 4.c., removing the terms 'series 3' and 'series 4' and replacing them with a reference to a figure in the Boeing ASB. A definition of 'visual inspection' as applicable to this Directive was also included as a note.

This amendment introduces an alternate method of compliance (AMOC) for Requirements 1, 2 and 3 reflecting a Federal Aviation Administration AMOC.

Amendment 2 introduced an AMOC for Requirements 4 and 5 reflecting a Federal Aviation Administration AMOC.

Amendment 2 of this Airworthiness Directive became effective on 6 September 2000.

Amendment 1 of this Airworthiness Directive became effective on 2 December 1999.

The original issue of this Airworthiness Directive became effective on 17 June 1999.



James Coyne  
Delegate of the Civil Aviation Safety Authority

11 November 2004