
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/B747/173 and issues the following AD under subregulation 39.1 (1) of CAR 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.

Boeing 747 Series Aeroplanes

AD/B747/173 **Fuel Boost and Override/Jettison Pumps** **8/2002**
Amdt 1

Applicability: All model 747 aeroplanes.

- Requirement:
1. Perform an initial visual inspection of the fuel boost and override/jettison pumps wire terminal assembly, electrical connector and wire insulation in accordance with Boeing Service Bulletin (SB) 747-28A2194 Revision 1 dated 18 January 1996 to detect any discrepancies such as fuel leak, heat discolouration and damage, and repetitive inspections unless any of the following conditions are met:
 - a. **For B747-100, -200, -300 and -400 series aeroplanes** - fuel pumps with ground fault interrupter (GFI) protection installed and Maintenance Planning Data (MPD) documentation is amended to ensure GFI circuits are tested at "C" maintenance check intervals (see Boeing Telex M-7200-02-00852 dated 31 May 2002).
 - b. **For B747-400 series aeroplanes with line number 1294 or greater** - Hydro-Aire fuel boost pumps part number (P/N) 60B89004-15 and override pumps P/N 60B92603-26 installed (see Boeing Telex M-7200-02-00852 dated 31 May 2002).
 - c. **For B747-100, -200, -300 and -400 series aeroplanes** - Hydro-Aire fuel boost and override/jettison pumps installed in accordance with Boeing Service Bulletin 747-28A2241 dated 11 June 2002 (see Boeing Telex M7200-02-00939 dated 20 June 2002).
 2. If a discrepancy is not detected during the Requirement 1 visual inspection, perform an insulation resistance test of each fuel pump's wiring in accordance with the Accomplishment Instructions of SB 747-28A2194 Rev 1.

Note 1. Each insulation resistance test of the fuel pump wiring includes a continuity check of the fuel pump ground wire, as specifically indicated in the Accomplishment Instructions of the Boeing service bulletin.

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3. If, as a result of the Requirement 2 test, any resistance measurement is found to be less than or equal to one megohm (1 M Ω) replace the fuel pump with a new or serviceable fuel pump in accordance SB 747-28A2194 Rev 1 and repeat the insulation resistance test.
4. If, as a result of the Requirement 2 test, all resistance measurements are found to be greater than one megohm (1 M Ω), but one or more resistance measurements are less than five megohms (5 M Ω) either:
 - a. repeat the Requirement 1 visual inspection, or
 - b. replace the fuel pump with a new or serviceable fuel pump in accordance SB 747-28A2194 Rev 1 and repeat the insulation resistance test.
5. If any discrepancy is noted during the Requirement 1 visual inspection, replace the fuel pump with a new or serviceable fuel pump in accordance SB 747-28A2194 Rev 1 and perform the Requirement 2 insulation resistance test.

Note 2: FAA AD 97-03-17 Amdt 39-9922 together with FAA AMOC Letters 140S-02-156, 130S-02-253 and 140S-02-191 refer.

Compliance: For Requirement 1 - Remains unchanged as "Prior to 14 July 1997 and thereafter at intervals not exceeding 5000 hours time in service (TIS) or 18 months, whichever occurs first".

Repetitive visual inspections may be terminated if any of the conditions specified in Requirement 1.a., 1.b. or 1.c. are met.

For Requirement 2 - Prior to further flight immediately following the Requirement 1 visual inspection.

For Requirement 3 - Prior to further flight immediately following the Requirement 2 insulation resistance test.

For Requirement 4.a - Within 500 hours TIS after the Requirement 2 insulation resistance test.

For Requirement 4.b - Prior to further flight immediately following the Requirement 2 insulation resistance test.

For Requirement 5 - Prior to further flight immediately following the Requirement 1 visual inspection.

This Amendment becomes effective on 8 August 2002.

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Background: The original issue of this Directive followed advice from Boeing that operators have reported fuel leaks at the boost and override/jettison fuel pumps. The actions mandated by the initial issue of the Directive were designed to provide early detection of fuel leaks preventing the likelihood of fire in the vicinity of the affected pump.

This Amendment introduces optional terminating actions for the Requirement 1 repetitive inspections.

The original issue of this Airworthiness Directive became effective on 27 March 1997.



Eugene Paul Holzapfel
Delegate of the Civil Aviation Safety Authority

28 June 2002