
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/B747/251 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.

Boeing 747 Series Aeroplanes

AD/B747/251 Fuel Quantity Indicating System Wiring 4/2004 **Amdt 1**

Applicability: All Model 747-100, -200, -300, -SP and -SR series aeroplanes.

Requirement: Replace all the fuel quantity indication system (FQIS) wiring outside of the fuel tanks and surge tank with shielded wiring and install the new wiring so as to provide separation of that wiring from other aeroplane systems wiring in accordance with a method approved by Manager, Seattle Aircraft Certification Office, Federal Aviation Administration (FAA), Transport Airplane Directorate.

Installations of Smiths Industries Transient Suppression Units in accordance with Boeing SB 747-28-2233 dated 22 February 2001 (FAA STC ST00181SE refers), or in accordance with methods approved in FAA Letters 130S-00-0391 or 130S-03-375 are considered acceptable means of compliance with this Directive.

Note: FAA AD 98-20-40 Amdt 39-10808 refers.

Compliance: Remains unchanged as 'Before 31 December 2001'.

This Amendment becomes effective on 15 April 2004.

Background: The FAA issued AD 98-20-40 following a failure analysis of the FQIS system and testing, which revealed that excessive energy levels in the electrical wiring and probes of the fuel system could be induced by electrical transients. The original Directive required actions intended to prevent electrical transients, introduced by electromagnetic interference or electrical short circuits from causing arcing of the FQIS electrical wiring or probes in the fuel tank(s). Such arcing could result in ignition of the fuel tank(s). The Directive also included FAA STC ST00181SE as an alternate method of compliance.

This amendment introduces an additional alternate method of compliance to allow the use of alternate indicators in previously modified aeroplanes.

Boeing 747 Series Aeroplanes

AD/B747/251 Amdt 1 (continued)

The original issue of this Directive became effective on 9 August 2001.

A handwritten signature in black ink, appearing to read 'James Coyne', with a stylized flourish at the end.

James Coyne
Delegate of the Civil Aviation Safety Authority

4 March 2004