
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (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/B747/308

Air Data System

8/2004

Applicability: Model 747-400, 747-400D and 747-400F series aeroplanes identified in Boeing Alert Service Bulletin (ASB) 747-34A2460, Revision 2, dated 14 June 2001.

Requirement: 1. Change the termination of the wires and perform an operational test, according to the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-31-2313, Revision 1, dated 26 September 2002; and/or

Note 1: Requirement 1 is optional for all aeroplanes without three Air Data Computers (ADC) and, if accomplished, extends the compliance for Requirement 2 from 24 months to 72 months.

2. Modify the ADC system as follows:

Re-route wires associated with ADC overspeed warnings, replace the P1-1 and P3-1 module assemblies in the flight deck with improved module assemblies, install various wires in and between the flight deck and main equipment centre of the aeroplane, and perform a test of the source select module and a system functional test, according to the Accomplishment Instructions of ASB 747-34A2460, Revision 2.

Note 2: Boeing SB 747-34A2460, Revision 2, refers to Boeing Component Service Bulletins 233U2200-31-01 and 233U2205-31-01, both dated 20 April 1995, as additional sources for instructions to change the ADC computer source select switch on the P1-1 and P3-1 panels, respectively.

3. Unless previously accomplished, carry out the following:

Boeing 747 Series Aeroplanes

AD/B747/308 (continued)

For aeroplanes listed in Boeing SB	Accomplish all actions associated with:	According to the Accomplishment Instructions of Boeing SB
747-31-2179, dated 26 May 1994	Replacing the three Electronic Flight Information System (EFIS)/Engine Indicating and Crew Alerting System (EICAS) interface units (EIU) in the main equipment centre with improved EIUs and installing new software in six integrated display units (IDU) and three EIUs.	747-31-2179
747-31-2180, dated 17 March 1994	Replacing the three EIUs in the main equipment centre with improved EIUs and installing new software in six IDUs and three EIUs.	747-31-2180
747-31-2217, dated 19 May 1994	Installing new software in six IDUs and three EIUs.	747-31-2217
747-31-2217 and 747-31-2178, dated 1 July 1993	Replacing three EIUs with improved EIUs and installing new software in six IDUs and three EIUs.	747-31-2178
747-31-2217 and 747-45-2005, dated 8 February 1990	Replacing certain central maintenance computers (CMCs) with improved CMCs, modifying related wiring, and modifying the data loader control panel.	747-45-2005
747-31-2217 and 747-45-2010, dated 17 December 1992	Installing new software in the CMC.	747-45-2010
747-31-2217 and 747-31-2163, dated 14 February 1991	Installing new software in six IDUs and three EIUs.	747-31-2163

4. Parts listed in the “Existing Part Number” column under paragraph II.D. of the following Boeing SBs may not be installed on any aeroplane as a replacement part:

Boeing 747 Series Aeroplanes

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747-31-2163	747-31-2179	747-45-2005
747-31-2178	747-31-2180	747-45-2010

Note 3: FAA AD 2004-10-05 Amdt39-13635 refers.

Compliance: For Requirement 1: **For aeroplanes without three ADCs** - Within 18 months after the effective date of this Directive, if Requirement 2 is not complied with, within 24 months after the effective date of this Directive.

For aeroplanes with three ADCs - This Requirement is not applicable.

For Requirement 2: **For aeroplanes that have complied with Requirement 1** - Within 72 months after the effective date of this Directive.

For aeroplanes that have not complied with Requirement 1 and aeroplane that have three ADCs - Within 24 months after the effective date of this Directive.

For Requirement 3 - Prior to or concurrently with Requirement 2.

For Requirement 4 - As of the effective date of this Directive.

This Airworthiness Directive becomes effective on 5 August 2004.

Background: This Directive requires a modification of the ADC system, which involves installing certain new circuit breakers, relays, and related components, and making various wiring changes in and between the flight deck and main equipment centre. For certain aeroplanes, this amendment also requires accomplishment of various other actions prior to, or concurrently with, the modification of the ADC system. For some aeroplanes, this Directive also contains an option that will extend the compliance time to accomplish the modification of the ADC system.

These actions are necessary to ensure that the flight crew is able to silence an erroneous overspeed or stall aural warning. A persistent erroneous warning could confuse and distract the flight crew and lead to an increase in the flight crews workload. Such a situation could lead the flight crew to act on hazardously misleading information, which could result in loss of control of the aeroplane.



James Coyne
Delegate of the Civil Aviation Safety Authority

23 June 2004