
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 39.001(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/B747/358 Integrated Display System and Fuel Tank Safety 9/2007

Applicability: Boeing 747 series aeroplanes identified in the Boeing Alert Service Bulletins (ASB) listed in Table 1.

Table 1

747 Series Aeroplanes	Boeing ASB
747-400, 747-400D and 747-400F	747-31A2351, Revision 1, dated 17 March 2005
747-400 and 747-400F	747-31A2350, Revision 1, dated 17 March 2005
747-400 and 747-400F	747-31A2352, Revision 1, dated 17 March 2005

Requirement: 1. Install new IDS-504 software in the integrated display units and electronic flight instrument system/engine indication and crew alerting system interface units of the flight deck, in accordance with the Accomplishment Instructions of the applicable ASB identified in Table 2.

Table 2

747 Series Aeroplanes	Boeing ASB
747-400, 747-400D and 747-400F	747-31A2351, Revision 1, dated 17 March 2005
747-400 and 747-400F	747-31A2350, Revision 1, dated 17 March 2005
747-400 and 747-400F	747-31A2352, Revision 1, dated 17 March 2005

Note 1: Each ASB identified in Table 2 refers to Rockwell Collins Service Bulletin (SB) IDS-7000-31-49, IDS-7000-31-50 or IDS-7000-31-51; all dated 28 June 2004; as applicable; as an additional source of service information for installing the new IDS software.

Installing new IDS-504 software before the effective date of this Directive, in accordance with the applicable ASB identified in Table 3 or during production of the aeroplane, is acceptable for compliance with Requirement 1.

Boeing 747 Series Aeroplanes

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Table 3

747 Series Aeroplanes	Boeing ASB
747-400, 747-400D and 747-400F	747-31A2351, dated 3 September 2004
747-400 and 747-400F	747-31A2350, dated 3 September 2004
747-400 and 747-400F	747-31A2352, dated 3 September 2004

For aeroplanes not equipped with a horizontal stabiliser tank (HST) - Installing IDS-503 software before the effective date of this Directive, in accordance with the applicable ASB identified in Table 4, is acceptable for compliance with Requirement 1.

Table 4

747 Series Aeroplanes	Boeing ASB
747-400, 747-400D and 747-400F	747-31A2340, Revision 1, dated 20 November 2003
747-400 and 747-400F	747-31A2341, Revision 1, dated 20 November 2003
747-400 and 747-400F	747-31A2342, Revision 1, dated 20 November 2003

Note 2: Each ASB identified in Table 4 refers to Rockwell Collins SB IDS-7000-31-46, IDS-7000-31-47 or IDS-7000-31-48; all dated 22 April 2003; as applicable; as an additional source of service information for installing the IDS-503 software.

Installing IDS-505 or IDS-506 software during production of the aeroplane is acceptable for compliance with Requirement 1. Additionally, installing IDS-506 software as a retrofit in accordance with the applicable SB identified in Table 5, is acceptable for compliance with Requirement 1.

Table 5

747 Series Aeroplanes	Boeing SB
747-400, 747-400D and 747-400F	747-31-2376, dated 5 September 2006
747-400 and 747-400F	747-31-2377, dated 5 September 2006
747-400 and 747-400F	747-31-2378, dated 5 September 2006

Note 3: Each SB identified in Table 5 refers to Rockwell Collins SB IDS-7000-31-52, IDS-7000-31-53 or IDS-7000-31-54; all dated 30 August 2006; as applicable; as an additional source of service information for installing the IDS-506 software.

Boeing 747 Series Aeroplanes

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2. For aeroplanes on which FR-HiTEMP fuel pumps have been installed in accordance with Boeing SB 747-28-2258, dated 19 December 2003, or Revision 1, dated 11 August 2005 or during production - Remove the ground wire of the wire integration unit that corresponds to the connector and pin locations in Table 6, in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Chapter 20-41-03 of the Boeing 747-400 Aircraft Maintenance Manual is one approved method.

Table 6

Connector	Pin
L-EIU DM7353CA	G13
C-EIU DM7352CA	G13
R-EIU DM7351CA	G13

3. Except as specified in Requirement 4, revise the Limitations section of the Aircraft Flight Manual (AFM) to include the information at Annex A to this Directive.
4. For aeroplanes on which FR-HiTEMP fuel pumps have been installed in accordance with SB 747-28-2258, original issue or Revision 1, or during production - Revise the Limitations section of the AFM to include the information at Annex A to this Directive.

Amendment of the AFM may be accomplished by inserting a copy of Annex A to this Directive into the AFM.

5. Remove the AFM amendments specified in the Airworthiness Directives identified in Table 7.

Table 7

Directive	Requirement	Equivalent FAA AD
AD/B747/270	1	2001-12-21 Amdt 39-12277
AD/B747/188 Amdt 3	4	2001-21-07 Amdt 39-12478
AD/B747/280	2	2002-19-52 Amdt 39-12900
AD/B747/283	Not Applicable	2002-24-52 Amdt 39-12993

Later revisions of the above SBs, approved by the United States Federal Aviation Administration (FAA) as an Alternate Method of Compliance (AMOC) to FAA AD 2007-13-14, are considered acceptable for compliance with the equivalent Requirements of this Directive.

Note 4: FAA AD 2007-13-04 Amdt 39-15108 refers.

Boeing 747 Series Aeroplanes

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Compliance: For Requirement 1 - Within six months after the effective date of this Directive.

For Requirement 2 - After installing the new IDS-504 software required by Requirement 1 and within six months after the effective date of this Directive.

For Requirement 3 - Concurrently with Requirement 1.

For Requirement 4 - Concurrently with the Requirement 2.

For Requirement 5 - Following compliance with Requirements 1 and 3.

This Airworthiness Directive becomes effective on 30 August 2007.

Background: This Directive is issued following a fuel system reviews conducted by the manufacturer. The Directive is issued to reduce the potential for ignition sources inside fuel tanks, which, in combination with flammable fuel vapours, could result in fuel tank explosions and consequent loss of the aeroplane.



David Punshon
Delegate of the Civil Aviation Safety Authority

26 June 2007

Boeing 747 Series Aeroplanes

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Annex A

Certification Limitations

Center Wing Tank (CWT):

The CWT fuel quantity indication system must be operative to dispatch with CWT mission fuel.

If the FUEL LO CTR L or R message is displayed both CWT override/jettison pumps must be selected OFF.

If the FUEL PRESS CTR L or R message is displayed, the corresponding CWT override/jettison pump must be selected OFF.

Note: In a low fuel situation, both CWT override/jettison pumps may be selected ON and all CWT fuel may be used.

Horizontal Stabilizer Tank (HST):

The following additional limitations must be followed if the HST is fueled and used:

The HST fuel quantity indication system must be operative to dispatch with HST mission fuel.

If the FUEL PMP STB L or R message is displayed while on the ground both HST pumps must be selected OFF.

If the FUEL LO STAB L or R message is displayed in flight the corresponding HST pump must be selected OFF.

If the FUEL PRESS STAB L or R message is displayed the corresponding HST pump must be selected OFF.

The remaining fuel in the HST must be considered unusable, and the effects of that unusable fuel on balance (CG) must be considered.

Note: In a low fuel situation, both HST transfer pumps may be selected ON and all HST fuel may be used.

Warning

Do not cycle CWT and HST pump switches from ON to OFF to ON with any continuous low pressure indication present.

Do not reset a tripped fuel pump circuit breaker.

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Defueling:

Prior to defueling any fuel tanks, perform a lamp test of the respective Fuel Pump Low Pressure indication lights. When defueling, the Fuel Pump Low Pressure indication lights must be monitored and the fuel pumps positioned to OFF at the first indication of fuel pump low pressure. When defueling with passengers on board, fuel pump switches must be selected OFF at or above approximately 7,000 pounds (3,200 kilograms) for the CWT, 3,000 pounds (1,400 kilograms) for main tanks, and 2,100 pounds (1,000 kilograms) for the HST.

The above requirements apply for defueling or transferring between tanks.