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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/B747/212 and issues the following 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.

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### Boeing 747 Series Aeroplanes

#### **AD/B747/212    Modular Avionics Warning Electronic Assembly    8/2009 Amdt 1**

**Applicability:** Model 747-400 and 747-400F series aeroplanes equipped with a modular avionics warning electronic assembly (MAWEA) power supply Part Number (P/N) 285T0035-201.

**Requirement:**

1. Check the status page of the engine indication and crew alerting system (EICAS) for any MAWEA failure.
2. If any failure of the MAWEA or the loss of any visual, aural, or tactile alert is detected during any Requirement 1 check replace the power supplies of the MAWEA with new or modified power supplies having P/N 285T0035-202 Mod A, in accordance with either Boeing Service Bulletin (SB) 747-31-2288, dated 17 December 1998, or Revision 1, dated 28 January 1999; or with new, modified, or serviceable power supplies having P/N 285T0035-202 Mod A, P/N 285T0035-10, or P/N 285T0035-11, in accordance with Boeing SB 747-31-2288, Revision 2, dated 18 November 1999.

*Note 1: Page 59 of Boeing Service Bulletin 747-31-2288, Revision 1, incorrectly references the Boeing 767 AMM as the appropriate source of service information for accomplishment of the removal and installation of the power supply. However, the correct reference is the Boeing 747 AMM.*

*Note 2: Boeing Component Service Bulletin 285T0035-31-07, dated December 17, 1998, describes procedures for modifying MAWEA power supplies having P/N 28T0035-201 to 285T0035-202 Mod A.*

3. If not already accomplished, replace MAWEA power supplies having P/N 285T0035-201, with new or modified power supplies having P/N 285T0035-202 Mod A; or new, modified, or serviceable power supplies having P/N 285T0035-9, P/N 285T0035-10, or P/N 285T0035-11, in accordance with SB 747-31-2288, or Revision 1, or Revision 2.

After the effective date of this Directive only SB 747-31-2288 Revision 2 may be used to accomplish MAWEA power supply replacement unless later revisions of the SB have been approved by the United States Federal Aviation Administration (FAA) as an Alternate Method of Compliance (AMOC) to the equivalent Requirements of FAA AD 2001-11-08.

## Boeing 747 Series Aeroplanes

AD/B747/212 Amdt 1 (continued)

4. MAWEA power supply P/N 285T0035-201 may not be installed on any aeroplane as a replacement part.

*Note 3: FAA AD 2001-11-08 Amdt 39-12250 refers.*

Compliance: For Requirement 1 - Before every flight until the MAWEA power supply is replaced in accordance with Requirement 2 or Requirement 3.

For Requirement 2 - Before further flight.

For Requirement 3 - Within six months after the effective date of this Directive.

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

This Amendment becomes effective on 30 July 2009.

Background: The FAA received a report advising that during a production test flight of a Model 747-400 series aeroplane the flight test crew noticed a power supply failure on the status page of the EICAS. Investigation revealed the automatic bench test procedure for the MAWEA overstressed the 5.7 volt over-voltage clamp circuit which resulted in the failure of the circuit to protect the warning cards in the MAWEA.

A slow failure of the MAWEA power supply could result in the gradual degradation of available visual, aural and tactile alerts which could result in flight crew not being aware of and not taking immediate or appropriate action in the event of an unsafe condition occurring.

The original issue of this Directive required repetitive checks to detect failures of the MAWEA power supply and if necessary, corrective action. The Directive also provided for an optional terminating action.

This Amendment increased the applicability to include all 747-400 and 747-400F series aeroplanes with a P/N 285T0035-201 MAWEA power supply and made the terminating action mandatory.

The original issue of this Directive became effective on 22 September 1999.



James Coyne  
Delegate of the Civil Aviation Safety Authority

16 June 2009