

Boeing 737 Series Aeroplanes

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**AIRWORTHINESS DIRECTIVE**

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For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/B737/135 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.

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**AD/B737/135                      Refuel Valve Actuator Suppression Diodes                      9/2000**  
**Amdt 1**

Applicability:    Model 737-100, -200, -300, -400 and -500 series aeroplanes, line numbers 1 through 3016.

- Requirement:    1. For Group 1 aeroplanes, as identified in Boeing Service Bulletin (SB) 737-28-1115, dated 4 March 1999 or Revision 1 dated 11 May 2000 - Install a transient suppression diode, part number (P/N) 69-58806-4, in the wire bundle (W264) of the refuelling valve-to-float switch of each fuel tank, in accordance with either service bulletin.
2. For Groups 2, 3, and 4 aeroplanes, as identified in SB 737-28-1115 or Revision 1 dated 11 May 2000 - Replace the existing transient suppression diode, P/N 69-58806-1 or 69-58806-3, installed in the wire bundle (W264) of the refuelling valve-to-float switch of each fuel tank, with an improved diode, P/N 69-58806-4, in accordance with either service bulletin.
3. Following accomplishment of either Requirements 1 or 2, perform a functional test to verify proper installation of each diode in accordance with SB 737-28-1115 or Revision 1 dated 11 May 2000. If any discrepancy is detected during any functional test replace the discrepant diode and repeat the functional test.
4. Transient suppression diodes having either P/N 69-58806-1 or 69-58806-3 may not be installed on any aeroplane.

*Note: FAA AD 99-23-20 Amdt 39-11416 and Alternate Method of Compliance (AMOC) 140S-00-188 dated 26 April 2000 refer.*

Compliance:    For Requirement 1 - Remains unchanged as “Within 12 months from the effective date of the original issue of this Directive”.

                         For Requirement 2 - Remains unchanged as “Within 12 months from the effective date of the original issue of this Directive”.

                         For Requirement 3 - Prior to further flight.

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

This Amendment becomes effective on 7 September 2000.

**Background:** Boeing has advised of two incidents of electrical fire during fuelling of Boeing Model 737 aeroplanes. Investigation revealed that these incidents were due to a short circuit and overheating of a transient suppression diode.

The original issue of this Directive was intended to prevent the short circuit and overheating from occurring. Those conditions, if not corrected, could result in electrical arcing and ignition of fuel vapours at the refuelling receptacle for the fuel tanks, together with the possibility of fire during fuelling.

This amendment introduces an AMOC which allowed a revised SB to be utilised.

The original issue of this Airworthiness Directive became effective on 24 February 2000.



Eugene Paul Holzapfel  
Delegate of the Civil Aviation Safety Authority

27 July 2000