Boeing 737 Series Aeroplanes

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 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.

AD/B737/150 Fuel Quantity Indicating System - No. 2 Tank Wiring Harness 4/2001

Applicability: All Model 737-300, -400 and -500 series aeroplanes.

Requirement:

1. Except as provided by Requirement 6 of this Directive, perform a one-time detailed visual inspection of the Fuel Quantity Indication System (FQIS) wiring and fuel tubing on the inboard side of the right wing rib wing buttock line (WBL) 227 and on the aft side of stringer No 13 to determine if clearance of 9.5mm (3/8 inch) or greater exists between the FQIS wire harness and the refuel tube and tube coupling, and to detect any loose or broken refuel tube clamp or bracket, or chafing of the FQIS wire harness, in accordance with Boeing Alert Service Bulletin (ASB) 737-28A1168, Revision 1, dated 11 January 2001.

Note 1: For the purposes of this Directive, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

2. If, during the Requirement 1 inspection, the clearance between the FQIS wire harness and the refuel tube is found to be less than 9.5mm (3/8 inch) readjust the refuel tube and relocate the bonding jumper or, if necessary, lockwire away from the wiring in accordance with the ASB.

3. If, during the Requirement 1 inspection, any loose or broken refuel tube clamp or bracket is found, replace the broken clamp with a new clamp; repair the broken bracket or replace the broken bracket with a new bracket; and secure the loose clamp or bracket; as applicable; in accordance with the ASB.

4. If any chafing of the FQIS wiring harness is found, replace the wire harness with a new wire harness or accomplish the applicable action(s) specified below, in accordance with the ASB.

    a. For jacket damage only that is less than 25.4mm (1 inch) in length with no sign of abrasion to the wire insulation - Install a Teflon sleeve over the wiring.

    b. For jacket damage or a harness with an exposed shield or conductor and the insulation of the other wire is not damaged (there can be no broken shield strands if the shield wire is damaged or no broken wire strands if the unshielded wire is damaged) - Install a Teflon sleeve over the wiring terminal and along the wire to the damaged area.

5. For wiring that was repaired in accordance with Requirement 4.a., repair the wire harness or replace the wire harness with a new wire harness.

6. For aeroplanes on which the modification per FAA AD 99-03-04, Amdt 39-11018 has been accomplished prior to the effective date of this Directive - Perform the actions specified in Requirement 1, and in Requirements 2 or 3 of this Directive.

Note 2: Repairs accomplished by splicing the wires in accordance with the procedure included in Boeing ASB 737-28A1168, dated 26 September 2000, prior to the effective date of this Directive, are considered acceptable for compliance with Requirements 1, 2 and 3 of this Directive.

7. Submit a report of inspection findings to Service Bulletin Engineering, Boeing Commercial Airplane Group, PO Box 3707, Mail Stop 2H-37, Seattle, Washington 98124-2207, USA, as follows:

    a. For aeroplanes on which the Requirement 1 inspection is accomplished after the effective date of this Directive.

    b. For aeroplanes on which the Requirement 1 inspection has been accomplished prior to the effective date of this Directive.

Note 3: FAA AD 2001-01-13 requires submission to the FAA of a compliance plan for this work. CASA does not require submission of such a plan. However, operator planning should note: the amount of work involved. the relatively short compliance period, and the difficulty to satisfy the requirements of an exclusion under CAR (1998) 39.4.

Note 4: FAA AD 2001-01-13 Amdt 39-12084 refers.

Compliance: For Requirement 1 - Within 6 months after the effective date of this Directive.

For Requirement 2 - Before further flight.

For Requirement 3 - Before further flight.

For Requirement 4 - Before further flight.

For Requirement 5 - At the next scheduled "C" Check, but no later than 15 months after the effective of this Directive.

For Requirement 6 - Within 18 months after the effective date of this Directive.

For Requirement 7.a. - Within 10 days after performing the inspection.

For Requirement 7.b. - Within 10 days after the effective date of this Directive.

This Airworthiness Directive becomes effective on 19 April 2001.

Background: This Directive requires, among other actions, a one-time detailed visual inspection of the FQIS wiring and fuel tubing to determine if clearance exists between the FQIS wire harness and the refuel tube and tube coupling, and to detect any loose or broken refuel tube clamp or bracket or chafing of the FQIS wire harness.

These actions are necessary to detect and correct chafing and to prevent electrical contact between the FQIS wiring and the surrounding structure, which, in conjunction with another wiring failure outside the fuel tank, could result in fire or explosion of the fuel tank.

Eugene Paul Holzapfel
Delegate of the Civil Aviation Safety Authority

8 March 2001

The above AD is notified in the *Commonwealth of Australia Gazette* on 21 March 2001.