
AIRWORTHINESS DIRECTIVE

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/B737/202 Amdt 1 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.

Boeing 737 Series Aeroplanes

**AD/B737/202
Amdt 2**

Centre Fuel Tank Limitations

18/2011

Applicability: Model 737-600, -700, -700C, -800, and -900 series aeroplanes with line numbers prior to 1494.

Requirement: 1. If not previously accomplished in accordance with AD/B737/202 original issue or AD/B737/202 Amdt 1:

Revise the Limitations Section of the Aircraft Flight Manual (AFM) to include the following (this may be accomplished by inserting a copy of this Directive into the AFM):

CERTIFICATE LIMITATIONS

The centre tank fuel pumps must be OFF for takeoff if centre tank fuel is less than 5,000 pounds (2,300 kilograms) with the aeroplane readied for initial taxi.

Both centre tank fuel pump switches must be selected OFF when centre tank fuel quantity reaches approximately 1,000 pounds (450-500 kilograms) during climb and cruise or 3,000 pounds (1,400 kilograms) during descent and landing. The fuel pumps must be positioned OFF at the first indication of fuel pump low pressure.

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

Note

The CONFIG indicator will annunciate when centre tank fuel exceeds 1,600 pounds (726 kilograms) and the centre tank fuel pump switches are OFF. Do not accomplish the CONFIG non-normal procedure prior to or during takeoff with less than 5,000 pounds (2,300 kilograms) of centre tank fuel or during descent and landing with less than 3,000 pounds (1,400 kilograms) of centre tank fuel.

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AD/B737/202 Amdt 2 (continued)

Note

In a low fuel situation, both centre tank pumps may be selected ON and all centre tank fuel may be used.

If the main tanks are not full, the zero fuel gross weight of the aeroplane plus the weight of centre tank fuel may exceed the maximum zero fuel gross weight by up to 5,000 pounds (2,300 kilograms) for takeoff, climb and cruise and up to 3,000 pounds (1,400 kilograms) for descent and landing, provided that the effects of balance (CG) have been considered.

If a centre tank fuel pump fails with fuel in the centre tank, accomplish the FUEL PUMP LOW PRESSURE non-normal procedure.

When defueling centre or main wing tanks, 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. Defueling with passengers on board is prohibited.

The limitations contained in this Directive supersede any conflicting basic Aircraft Flight Manual limitations.

Accomplishment of Requirement 2 of AD/B737/198 or Requirement 1.b. of AD/B737/198 Amdt 1 is acceptable for compliance with the requirements of this Directive. This Directive does not require that those actions be repeated unless the terminating actions specified in Requirement 6 of AD/B737/198 or Requirement 3 of AD/B737/198 Amdt 1 have been accomplished.

Accomplishment of the terminating actions specified in Requirement 6 of AD/B737/198 or Requirement 3 of AD/B737/198 Amdt 1, does not allow removal of the AFM revisions required by this Directive.

2. For mixed fleet operations (i.e. operators with aircraft with line number 1494 and subsequent together with aircraft with line number below 1494) install a placard on the flight deck of aircraft that do not have automatic fuel pump shut-off system installed to alert the crew that the Requirement 1 procedures must be followed on that aircraft stating either:

“AD/B737/202 fuel usage restrictions required” or

“AD 2002-24-51 fuel usage restrictions required”.

For aircraft that have a placard required by AD/B737/198 or AD/B737/198 Amdt 1, that placard can be used to fulfil this requirement for mixed fleet operations.

Boeing 737 Series Aeroplanes

AD/B737/202 Amdt 2 (continued)

Note: FAA Emergency AD 2002-24-51 and FAA AMOC Letter 140S-04-105 dated 28 May 2004 refer.

Compliance: Date remains unchanged to that detailed in Amendment 1 of this Directive.

Despite the new AD/B737/202 Amdt 2, an exclusion or an alternate method of compliance that was in force before the coming into effect of AD/B737/202 Amdt 2 continues to be in force.

This Amendment becomes effective on 30 September 2011.

Background: The United States Federal Aviation Administration has received reports indicating that two fuel tank pumps from different Model 747 series aeroplanes showed evidence of extreme localized overheating of parts in the priming and vapour pump section of the fuel pump. The priming and vapour pump section of the pump is open to the fuel tank via the pump inlet line and the vapour vent of the pump. The cause of this overheating is believed to be friction between the pump parts; however, the specific cause of the friction is unknown at this time.

The fuel pumps installed on Model 737-600, -700, -700C, -800, and -900; Model 747; and Model 757 series aeroplanes are all potentially affected since the pumps are almost identical in design.

Overheating of the parts in the priming and vapour pump section of the fuel pump provides an ignition source in the fuel tank during dry running of the pump, which could result in fire/explosion of the fuel tank.

The original issue of this Directive required revision of the AFM to require the flight crew to maintain certain minimum fuel levels in the centre fuel tanks. These procedures specify crew monitoring of fuel levels and shutoff of centre fuel tank pumps at specified levels that ensure the pump inlet remains covered during pump operation. Covering the pump inlet prevents fuel vapours from coming into contact with potentially overheated parts in the priming and vapour pump section of the fuel pump, together with the likelihood of preventing the overheating condition itself. This action was considered interim and further rule making is anticipated.

This amendment recognises incorporation of an automatic fuel pump shut-off system on line number 1494 and subsequent. The amendment also introduces a requirement for placarding aircraft without the automatic shutoff system in mixed fleet operations.

Amendment 2 allows alternate wording for the placard detailed in Requirement 2. This is to allow easier cross referencing to FAA AD 2011-18-03 which details the terminating actions for the requirements of this AD.

Alternative Methods of Compliance for AD 2002-24-51 that are approved by the FAA are acceptable as a means of compliance against this AD.

Boeing 737 Series Aeroplanes

AD/B737/202 Amdt 2 (continued)

The original issue of this Directive became effective on 26 November 2002.

Amendment 1 of this Directive became effective on 23 June 2005.

A handwritten signature in black ink, appearing to be 'MH' with a stylized flourish.

Mike Higgins
Delegate of the Civil Aviation Safety Authority

5 September 2011