
AIRWORTHINESS DIRECTIVE

On the commencement date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below repeals Airworthiness Directive (AD) AD/B737/16 Amdt 3 and issues the following AD under subregulation 39.001 (1) of CASR 1998 and subsection 33 (3) of the *Acts Interpretation Act 1901*. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct an 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/B737/16
Amdt 4**

**Engine Flameouts – Revised Operating
Technique and Modifications**

7/2016

Applicability: All Boeing Model 737-300, 737-400 and 737-500 series aeroplanes fitted with CFM International CFM56-3 series engines.

Requirement: 1. For Model 737-300 series aeroplanes:

- a. Perform the actions specified in paragraphs (a) (1), (a) (2), and (a) (3) of FAA AD 93-05-05.
- b. Perform the actions specified in paragraph (b) of FAA AD 93-05-05 by accomplishing the engine modification given in Boeing Service Bulletin 737-77-1031, Revision 1.

Incorporation of this modification constitutes terminating action for Requirement 1.a. of this AD. The associated Flight Manual revision, the Minimum Equipment List (MEL) configuration requirement, and the N1 placard may be removed concurrently.

2. For Model 737-400 and 737-500 series aeroplanes:-

- a. Perform the actions specified in paragraph (c) of FAA AD 93-05-05 by accomplishing the engine modification given in Boeing Service Bulletin 737-77-1031, Revision 1.

Upon incorporation of this modification, Flight Manual limitations pertaining to "OPERATION IN MODERATE TO HEAVY RAIN, HAIL, OR SLEET" may be removed, as well as the related flight compartment instrument panel placard, related MEL configuration requirements, and any related 45% N1 idle indication/control limitations.

Note 1: Compliance with the requirements of Amendment 3 to this AD constitutes compliance with the equivalent actions of this directive, AD/B737/16 Amdt 4.

Note 2: FAA AD 93-05-05 Amdt 39-8510 refers.

Boeing 737 Series Aeroplanes

AD/B737/16 Amdt 4 (continued)

Compliance: For Requirement 1.a. – Compliance times for equivalent actions taken in accordance with Amendment 3 to this Directive remain unchanged;

- For FAA AD 93-05-05 Para. (a) (1) and (a) (3): Prior to further flight after 16 January 1989.
- For FAA AD 93-05-05 Para. (a) (2): Prior to further flight after 23 January 1989.

For Requirement 1.b. and 2.a. – If not previously accomplished, before further flight from the commencement date of this AD.

This AD commences on 5 April 2016.

Background: The FAA issued Telegraphic Airworthiness Directive (AD) T88-11-51 on May 27, 1988, establishing a minimum engine fan speed (N1) when 737 aircraft equipped with CFM56 engines were operated during flight in or near heavy precipitation. That AD was subsequently superseded by AD T88-13-51, Initial Issue and Revision 1 which raised the minimum N1 limitation to ensure that the engine would continue to operate in the presence of heavy concentrations of rain and hail. CFM developed engine modifications designed to improve the rain and hail ingestion capability of the CFM56, thus permitting the engine to operate in heavy rain and hail at flight idle speed without losing power. As a result, in 1993, AD T88-13-51R1 was superseded by AD 93-05-05, which mandated the incorporation of the engine modification and eliminated the N1 limitation.

This Amendment makes editorial changes throughout the text to align the previously stated Requirements with FAA AD 93-05-05, which superseded AD 88-13-51R1.



William M. David
Delegate of the Civil Aviation Safety Authority

23 March 2016