# PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

### CAA-AD-050/2001

Datum vydání: 07. června 2001

## MOTOR - LOŽISKO - KONTROLA

**Týká se:** motorů CFM56-2, -2B, -3, -5B, -5C a -7B, vyrobených firmou CFM International, s ložiskem č.4, katalogového čísla (P/N) 305-355-717-0, která mají výrobní čísla (S/N) uvedená v Tabulce č.1 FAA AD 2001-11-05 (příloha tohoto PZZ). Tyto motory mohou být instalovány na letadlech Airbus Industrie A319, A320, A321 a A340, Boeing 737 a KC135 a McDonnell Douglas DC8, ale nejen na těchto.

Datum účinnosti: 11. června 2001

Provést v termínech: Jak je popsáno v FAA AD 2001-11-05, od data účinnosti tohoto PZZ.

Postup provedení prací: Dle FAA AD 2001-11-05 (příloha tohoto PZZ).

Poznámky: Provedení tohoto PZZ musí být zapsáno do motorové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL technický inspektorát - Ing. Toman. Pokud to vyžaduje povaha tohoto PZZ, musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě FAA AD 2001-11-05.

# Ing. Pavel MATOUŠEK Ředitel technického inspektorátu Úřad pro civilní letectví

**2001-11-05** CFM International: Amendment 39-12246. Docket 2001-NE-18-AD.

Applicability: This airworthiness directive (AD) is applicable to CFM International CFM56-2, -2B, -3, -5B, -5C and -7B series turbofan engines with a No. 4 bearing, part number (P/N) 305-355-717-0, that has a serial number (SN) listed in Table 1 of this AD installed. These engines are installed on, but not limited to Airbus Industrie A319, A320, A321 and A340 series airplanes, Boeing 737 and KC135 series airplanes, and McDonnell Douglas DC8 series airplanes.

**Note 1:** This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (h) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated, unless already done.

To prevent bearing failures, which could cause an engine failure, do the following:

### Number of Hours Until Number of Engines Must Be Limited

(a) Limit the number of engines with a suspect No. 4 bearing that has a SN listed in the following Table 1 of this AD to one on each airplane within 300 hours time-in-service (TIS) after the effective date of this AD, but no later than July 1, 2001, whichever occurs earlier:

Table 1.—CFM56 Engines With Suspect No. 4 Bearings

Part No.	Part Serial No.	Engine Model	Engine Serial No.
305-355-717-0	DB387598-C	2B	714172

305-355-717-0	DB387670-5	2	692251
305-355-717-0	DB387608-F	3	725109
305-355-717-0	DB387612-8	3	720493
305-355-717-0	DB387614-4	3	721253
305-355-717-0	DB387625-H	3	720383
305-355-717-0	DB387647-Y	3	857594
305-355-717-0	DB387650-6	3	721237
305-355-717-0	DB387651-5	3	726245
305-355-717-0	DB387661-K	3	856671
305-355-717-0	DB387604-K	5B	779783
305-355-717-0	DB387605-J	5B	779784
305-355-717-0	DB387603-L	5B	779785
305-355-717-0	DB387590-5	5B	779786
305-355-717-0	DB387591-4	5B	779787
305-355-717-0	DB387634-3	5B	779796
305-355-717-0	DB387658-D	5B	779798
305-355-717-0	DB387654-2	5B	779799
305-355-717-0	DB387683-G	5B	779802
305-355-717-0	DB387648-W	5B	779803
305-355-717-0	DB387660-L	5B	779804
305-355-717-0	DB387606-H	5B	779960
305-355-717-0	DB387618-O	5B	779961
305-355-717-0	DB387599-B	5C	741948
305-355-717-0	DB387609-Y	7B	876395
305-355-717-0	DB387611-7	7B	876399
305-355-717-0	DB387615-3	7B	876400
305-355-717-0	DB387601-N	7B	876401
305-355-717-0	DB387594-1	7B	876403
305-355-717-0	DB387592-3	7B	876405
305-355-717-0	DB387610-8	7B	876406
305-355-717-0	DB387600-P	7B	876410
305-355-717-0	DB387649-V	7B	876421
305-355-717-0	DB387678-C	7B	876423
305-355-717-0	DB387652-4	7B	876424
305-355-717-0	DB387659-C	7B	876429
305-355-717-0	DB387693-1	7B	876431
305-355-717-0	DB387655-1	7B	876432
305-355-717-0	DB387684-F	7B	876434
305-355-717-0	DB387588-V	7B	876727
305-355-717-0	DB387657-E	7B	876729
305-355-717-0	DB387653-3	7B	876730
305-355-717-0	DB387597-D	7B	877404
305-355-717-0	DB387602-M	7B	877408
305-355-717-0	DB387589-U	7B	877427

305-355-717-0	DB387656-O	7B	875232
305-355-717-0	DB387671-4	7B	874219

## Replacement of Suspect No. 4 Bearings

(b) For engines that have a suspect No. 4 bearing that has a SN listed in Table 1 of this AD, replace the No. 4 bearing with a serviceable part within 2,000 hours TIS, after the effective date of this AD, but no later than December 31, 2001, whichever occurs earlier.

## Installation of Suspect No. 4 Bearings

- (c) After the effective date of this AD, do not install any No. 4 bearing that has a SN listed in Table 1 of this AD.
- (d) After the effective date of this AD, do not install any engine that has a No. 4 bearing with a serial number listed in Table 1 of this AD.

## **Initial Inspections for Chip Detector Indications**

- (e) For engines that have a suspect No. 4 bearing that has a SN listed in Table 1 of this AD, inspect for magnetic chip indications within in the specified times, and if necessary, disposition as follows:
- (1) For CFM56-5B engines, check electronic magnetic chip detector (EMCD) visual indicator within 50 to 75 hours TIS after the effective date of this AD.
- (2) For CFM56-5C engine (741948), check for class 2 Electronic Centralized Aircraft Monitor (ECAM) message "MAGNETIC CHIP DETECTED" before further flight.
- (3) For CFM56-7B engines equipped with Debris Monitoring System (DMS) option, check Flight Management Computer--Master Control Display Unit (FMC-MCDU) for message 79-2114 before further flight.
- (4) For CFM56-7B engines equipped with classic magnetic chip detectors (MCD), inspect aft sump MCD within 50 to 75 hours TIS after the effective date of this AD.
- (5) For CFM56-2, -2B, and -3 engines, inspect aft sump MCD within 50 to 75 hours TIS after the effective date of this AD.
- (6) If bearing particles are found, remove engine from service before further flight.

#### **Repetitive Inspections for Chip Detector Indications**

- (f) Thereafter, inspect for chip indications in accordance with the specified time-since-last-inspection (TSLI), and if necessary, disposition as follows:
- (1) For CFM56-5B engines, check EMCD visual indicator every 50-75 hours TSLI.
- (2) For CFM56-5C engine (741948), check for class 2 ECAM message "MAGNETIC CHIP DETECTED" after every flight.
- (3) For CFM56-7B engines equipped with DMS option, check FMC-MCDU for message 79-2114 once per day.
- (4) For CFM56-7B engines equipped with classic MCD, inspect aft sump MCD every 50-75 hours TSLI.
- (5) For CFM56-2, -2B, and -3 engines, inspect aft sump MCD every 50-75 hours TSLI.
- (6) If bearing particles are found, remove engine from service before further flight.

## **Terminating Action**

(g) Replacement of a No. 4 bearing that has a SN listed in Table 1 of this AD with a No. 4 bearing that does not have a SN listed in Table 1 of this AD is terminating action for the repetitive inspection requirements specified in paragraph (f) of this AD.

#### **Alternative Methods of Compliance**

(h) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office. Operators shall submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Engine Certification Office.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

## **Special Flight Permits**

(i) Special flight permits may be issued in accordance Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

#### Effective Date of This AD

(j) This amendment becomes effective on June 11, 2001.