

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 39

[Docket No. 89-ANE-05; Amendment 39-10290; AD 89-23-06 R1]

RIN 2120-AA64

**Airworthiness Directives; CFM International CFM56-2, -3, -3B, -3C, and -5 Series Turbofan Engines**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

**SUMMARY:** This amendment revises an existing airworthiness directive (AD), applicable to CFM International (CFMI) CFM56-2, -3, -3B, -3C, and -5 series turbofan engines, that currently requires repetitive magnetic chip detector (MCD) inspections and removal from service of certain No. 3 bearings. This amendment removes the requirement for MCD inspections for certain No. 3 bearings if the bearing has 6,000 or more hours time in service since new, extends the removal from service date for certain No. 3 bearings, changes the inspection interval for certain No. 3 bearings, deletes a specific No. 3 bearing part number, and replaces reference to specific maintenance manuals with service bulletins. Other requirements of the current AD remain unchanged and are carried over into this revised AD. This amendment is prompted by additional data that demonstrates a reduced bearing failure rate after a period of time in service; therefore, an acceptable level of safety can be maintained with a relaxation of some of the current AD requirements. The actions specified by this AD are intended to prevent a No. 3 bearing failure, and a subsequent inflight engine shutdown.

**DATES:** Effective January 28, 1998. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 28, 1998.

**ADDRESSES:** The service information referenced in this AD may be obtained from CFM International, Technical Publications Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2981, fax (513) 552-2816. This information may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA 01803-5299; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

## FOR FURTHER INFORMATION CONTACT:

Glorianne Messemer, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7132, fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by revising AD 89-23-06, Amendment 39-6370 (54 FR 43581, October 26, 1989), which is applicable to CFM International (CFMI) CFM56-2, -3, -3B, -3C, and -5 series turbofan engines, was published in the **Federal Register** on September 19, 1997 (62 FR 49177). That action proposed to require removing the requirement for magnetic chip detector (MCD) inspections for certain No. 3 bearings if the bearing has 6,000 or more hours time in service since new, extending the removal from service date for certain No. 3 bearings, changing the inspection interval for certain No. 3 bearings, deleting a specific No. 3 bearing part number, and replacing reference to specific maintenance manuals with service bulletins. Other requirements of the current AD remain unchanged and are carried over into this revised AD.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Two comments were received from air carriers, both of which support the rule as proposed. No comments were received on the FAA's determination of the cost to the public.

The FAA has revised paragraphs (a)(2) and (b)(2) of this AD in order to more accurately define an "affected No. 3 bearing." In addition, the FAA has revised paragraph (h) of this AD in order to more accurately define a "shop visit". Lastly, the FAA has added paragraph (g) in the AD to clarify what constitutes terminating action to the inspections required by the AD.

The FAA has also revised the calendar end-date in paragraphs (a)(2) and (b)(2) of this AD to January 31, 1998, based upon the anticipated effective date of this AD.

All changes introduced in this revised AD are relaxatory in nature except for the new inspection interval in paragraph (d). The manufacturer has advised the FAA that there is only one engine, not installed on a U.S. registered aircraft, that is affected by this new inspection interval. Therefore, no additional cost to U.S. operators is expected to result from this relaxatory action. In addition, since no U.S. operators will be affected by the new inspection interval a situation exists

that allows the immediate adoption of this regulation. Therefore, it is found that good cause exists for making this amendment effective in less than 30 days following publication.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption **ADDRESSES**.

**List of Subjects in 14 CFR Part 39**

Air Transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

**PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. Section 39.13 is amended by removing Amendment 39-6370 (54 FR 43581, October 26, 1989) and by adding a new airworthiness directive, Amendment 39-10290, to read as follows:

**89-23-06 R1 CFM International:**

Amendment 39-10290. Docket 89-ANE-05. Revises AD 89-23-06, Amendment 39-6370.

**Applicability:** CFM International (CFMI) CFM56-2, -3, -3B, -3C, and -5 series turbofan engines, installed on but not limited

to Airbus A319 and A320 series, McDonnell Douglas DC-8 series, and Boeing 737 series aircraft.

**Note 1:** This airworthiness directive (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 (i) 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:** Required as indicated, unless accomplished previously.

To prevent a No. 3 bearing failure and subsequent inflight engine shutdown, accomplish the following:

(a) For CFM56-3, -3B, and -3C series engines equipped with No. 3 bearings, Part Number (P/N) 9732M10P12 (Serial Number (S/N) series FAFDxxxx or FAFExxxx); 9732M10P18; or 1362M76P02 accomplish the following:

(1) Inspect the forward sump magnetic chip detector (MCD) in accordance with CFM56-3/-3B/-3C Service Bulletin (SB) No. 72-530, Revision 3, dated November 17, 1995, within the next 50 hours time in service (TIS) after the effective date of this AD. Thereafter, inspect the forward sump MCD at intervals not to exceed 50 hours TIS since the last inspection (SLI) in accordance with CFM56-3/-3B/-3C SB No. 72-530, Revision 3, dated November 17, 1995, until accomplishment of paragraph (a)(2) below, or, for bearing P/N 9732M10P12, until the TIS since new is 6,000 hours or more. Remove from service, prior to further flight, engines which exhibit MCD metallic debris defined as not serviceable in accordance with CFM56-3/-3B/-3C SB No. 72-530, Revision 3, dated November 17, 1995.

(2) Remove from service No. 3 bearings, P/N 9732M10P18 and 1362M76P02, at the next shop visit, or before January 31, 1998, whichever occurs first. Removal of No. 3 bearings in accordance with this paragraph constitutes terminating action to the inspection requirements of paragraph (a)(1) of this AD.

(b) For CFM56-2 series engines equipped with No. 3 bearings, P/N 9732M10P12 (S/N

series FAFDxxxx or FAFExxxx) or 9732M10P18, accomplish the following:

(1) Inspect the forward sump MCD in accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995, within the next 50 hours TIS after the effective date of this AD. Thereafter, inspect the forward sump MCD at intervals not to exceed 50 hours TIS SLI in accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995, until accomplishment of paragraph (b)(2) below, or, for bearing P/N 9732M10P12, until the TIS since new is 6,000 hours or more. Remove from service, prior to further flight, engines which exhibit MCD metallic debris defined as not serviceable in accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995.

(2) Remove from service No. 3 bearings, P/N 9732M10P18, at the next engine shop visit, or before January 31, 1998, whichever occurs first. Removal of No. 3 bearings in accordance with this paragraph constitutes terminating action to the inspection requirements of paragraph (b)(1) of this AD.

(c) For CFM56-3, -3B, and -3C series engines equipped with No. 3 bearings, P/N 9732M10P10; 9732M10P17; or 9732M10P12 (S/N series other than FAFDxxxx or FAFExxxx), inspect the forward sump MCD in accordance with CFM56-3/-3B/-3C SB No. 72-530, Revision 3, dated November 17, 1995, within the next 75 hours TIS after the effective date of this AD. Thereafter, inspect the forward sump MCD at intervals not to exceed 75 hours TIS SLI in accordance with CFM56-3/-3B/-3C SB No. 72-530, Revision 3, dated November 17, 1995, until the bearing TIS since new is 6,000 hours or more. Remove from service, prior to further flight, engines which exhibit MCD metallic debris defined as not serviceable in accordance with CFM56-3/-3B/-3C SB No. 72-530, Revision 3, dated November 17, 1995.

(d) For CFM56-2 series engines equipped with No. 3 bearings, P/N 9732M10P10; 9732M10P17; or 9732M10P12 (S/N series other than FAFDxxxx or FAFExxxx), inspect the forward sump MCD in accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995, within the next 75 hours TIS after the effective date of this AD. Thereafter, inspect the forward sump MCD at intervals not to exceed 75 hours TIS SLI in accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995, until the bearing TIS since new is 6,000 hours or more. Remove from service, prior to further flight, engines which exhibit MCD metallic debris defined as not serviceable in

accordance with CFM56-2 SB No. 72-620, Revision 4, dated November 17, 1995.

(e) For CFM56-5 series engines equipped with No. 3 bearing, P/N 9542M60P01, inspect the forward sump MCD in accordance with the Accomplishment Instructions of CFM56-5 Alert Service Bulletin (ASB) No. 72-A118, Revision 1, dated August 1, 1997, within the next 50 hours TIS after the effective date of this AD. Thereafter, inspect the forward sump MCD at intervals not to exceed 50 hours TIS SLI in accordance with the Accomplishment Instructions of CFM56-5 ASB No. 72-A118, Revision 1, dated August 1, 1997. Remove from service, prior to further flight, engines which exhibit MCD metallic debris defined as not serviceable in accordance with CFM56-5 ASB No. 72-A118, Revision 1, dated August 1, 1997.

(f) Bearing inspections accomplished in accordance with AD 89-17-04 or AD 89-23-06 satisfy the corresponding requirements of this AD.

(g) No. 3 bearing, P/N 9732M10P12 (S/N series FAFDxxxx or FAFExxxx), identified in paragraphs (a) or (b); or No. 3 bearing, P/N 9732M10P10, 9732M10P17, or 9732M10P12 (S/N series other than FAFDxxxx or FAFExxxx), identified in paragraphs (c) or (d); with a TIS since new of 6,000 hours or more constitutes terminating action to the applicable inspection requirements of paragraphs (a)(1), (b)(1), (c), or (d) of this AD.

(h) For the purpose of this AD, a shop visit is defined as the induction of an engine into the shop for maintenance resulting in exposure of the inlet gearbox.

(i) 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 requests 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.

(j) Special flight permits may be issued in accordance with sections 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.

(k) The actions required by this AD shall be done in accordance with the following CFMI SBs:

Document No.	Pages	Revision	Date
(CFM56-2) SB 72-620 .....	1-3 4-9 10	4 3 4	November 17, 1995. November 22, 1993. November 17, 1995.
Total pages .....	10		
(CFM56-3/3B/3C) SB 72-530 .....	1-3 4-11 12	3 2 3	November 17, 1995. November 22, 1993. November 17, 1995.
Total pages .....	12		
(CFM56-5) SB 72-A118 .....	1-7	1	August 1, 1997.

Document No.	Pages	Revision	Date
Total pages .....	7		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from CFM International, Technical Publications Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2981, fax (513) 552-2816. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(l) This amendment becomes effective on January 28, 1998.

Issued in Burlington, Massachusetts, on January 15, 1998.

**James C. Jones,**

*Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.*  
[FR Doc. 98-1704 Filed 1-27-98; 8:45 am]

BILLING CODE 4910-13-U

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 97-ANE-35-AD; Amendment 39-10289; AD 98-02-07]

RIN 2120-AA64

#### **Airworthiness Directives; Hartzell Propeller Inc. Model HC-E4A-3(A,I) Propellers**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to Hartzell Propeller Inc. Model HC-E4A-3(A,I) propellers. This action requires replacing propeller blade counterweight clamp bolts with improved bolts. This amendment is prompted by reports of a manufacturing defect in the counterweight clamp bolts that resulted in the blade counterweight separating and causing damage to the propeller. The actions specified in this AD are intended to prevent counterweight clamp bolt failure, which can result in propeller blade counterweight separation and damage to the propeller and aircraft.

**DATES:** Effective February 12, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director

of the Federal Register as of February 12, 1998.

Comments for inclusion in the Rules Docket must be received on or before March 30, 1998.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 97-ANE-35-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address:

“9-ad-engineprop@faa.dot.gov”.

Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Hartzell Propeller Inc., One Propeller Place, Piqua, OH 45356-2634, ATTN: Product Support; telephone (937) 778-4200, fax (937) 778-4321. This information may be examined at the FAA, New England Region, Office of the Regional Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

#### **FOR FURTHER INFORMATION CONTACT:**

Tomaso DiPaolo, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Ave., Des Plaines, IL 60018; telephone (847) 294-7031, fax (847) 294-7834.

#### **SUPPLEMENTARY INFORMATION:**

The Federal Aviation Administration (FAA) has received a report that a Hartzell Propeller Inc. Model HC-E4A-3(A,I) propeller blade counterweight clamp bolt broke, the propeller blade counterweight separated in flight and damaged the adjacent propeller blade (about 12 inches from the hub). The investigation revealed that the propeller blade counterweight clamp bolt failure was caused by a manufacturing defect known as liquid metal embrittlement. The manufacturer has informed the FAA that all propellers operated on aircraft of U.S. registry have accomplished the required actions, and, therefore, are no longer affected by this unsafe condition. This AD, then, is necessary to require accomplishment of the required actions for propellers installed on aircraft currently of foreign registry that may some day be imported into the U.S. Accordingly, the FAA has determined that notice and prior opportunity for comment are

unnecessary and good cause exists for making this amendment effective in less than 30 days. This condition, if not corrected, could result in counterweight clamp bolt failure, which can result in propeller blade counterweight separation and damage to the propeller and aircraft.

The FAA has reviewed and approved the technical contents of Hartzell Propeller Inc. Service Bulletin (ASB) No. HC-ASB-61-219, Revision 1, dated July 2, 1996, that describes procedures for replacing propeller blade counterweight clamp bolts with improved bolts.

Since an unsafe condition has been identified that is likely to exist or develop on other propellers of the same type design, this AD is being issued to prevent counterweight clamp bolt failure. This AD requires replacing propeller blade counterweight clamp bolts with improved bolts. The actions are required to be accomplished in accordance with the SB described previously.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

#### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption **ADDRESSES**. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.