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#### DEPARTMENT OF TRANSPORTATION

**Federal Aviation Administration** 

**14 CFR Part 39** 

[Docket No. FAA-2009-0606; Directorate Identifier 2009-NE-11-AD; Amendment 39-16324; AD 2010-12-03]

**RIN 2120-AA64** 

Airworthiness Directives; CFM International, S.A. Models CFM56-3 and -3B Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain CFM International, S.A. models CFM56-3 and -3B turbofan engines. This AD requires initial and repetitive inspections for damage to the fan blades. This AD results from a report of a failed fan blade with severe out-of-limit wear on the underside of the blade platform where it contacts the damper. We are issuing this AD to prevent failure of multiple fan blades, which could result in an uncontained failure of the engine and damage to the airplane.

**DATES:** This AD becomes effective July 13, 2010. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of July 13, 2010.

**ADDRESSES:** You can get the service information identified in this AD from CFM International, S. A., Technical Publication Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2800; fax (513) 552-2816.

The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

**FOR FURTHER INFORMATION CONTACT:** Antonio Cancelliere, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: antonio.cancelliere@faa.gov; telephone (781) 238-7751; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to certain CFM International, S.A. models CFM56-3 and -

3B turbofan engines. We published the proposed AD in the Federal Register on July 23, 2009 (74 FR 36420), and published a supplemental proposed AD in the Federal Register on April 1, 2010 (75 16361). Those actions proposed to require initial and repetitive inspections for damage to the fan blades.

# **Examining the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

#### **Comments**

We provided the public the opportunity to participate in the development of this AD. We previously responded to the comments received on the original proposed AD in the supplemental proposed AD. We have considered the one comment received on the supplemental proposed AD. The commenter supports the proposal.

#### **Conclusion**

We have carefully reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

# **Costs of Compliance**

We estimate that this AD will affect 50 engines installed on airplanes of U.S. registry. We also estimate that it will take about 8 work-hours per engine to perform the AD actions, and that the average labor rate is \$80 per work-hour. Required parts will cost about \$38,000 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$1,932,000.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect 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.

For the reasons discussed above, I certify that this AD:

- (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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

## List of Subjects in 14 CFR Part 39

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

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends 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. The FAA amends § 39.13 by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE



www.faa.gov/aircraft/safety/alerts/ www.gpoaccess.gov/fr/advanced.html

**2010-12-03 CFM International, S.A.:** Amendment 39-16324. Docket No. FAA-2009-0606; Directorate Identifier 2009-NE-11-AD.

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#### **Effective Date**

(a) This airworthiness directive (AD) becomes effective July 13, 2010.

#### Affected ADs

(b) None.

# **Applicability**

- (c) This AD applies to CFM International, S.A. models CFM56-3 and -3B turbofan engines with 25 degrees midspan shroud fan blades, part numbers (P/Ns) 9527M99P08, 9527M99P09, 9527M99P10, 9527M99P11, 1285M39P01, or fan blade pairs, P/Ns 335-088-901-0, 335-088-902-0, 335-088-903-0, and 335-088-904-0 installed. These engines are installed on, but not limited to, Boeing 737 series airplanes.
- (d) CFM International, S.A. has added to the basic engine model number on the engine nameplate to identify minor variations in engine configuration, installation components, or reduced ratings peculiar to aircraft installation requirements.
- (e) Those engines marked on the engine data plate as CFM56-3-B1 are included in this AD as CFM56-3 turbofan engines.
- (f) Those engines marked on the engine data plate as CFM56-3B-2 are included in this AD as CFM56-3B turbofan engines.

#### **Unsafe Condition**

(g) This AD results from a report of a failed fan blade with severe out-of-limit wear on the underside of the blade platform where it contacts the damper. We are issuing this AD to prevent failure of multiple fan blades, which could result in an uncontained failure of the engine and damage to the airplane.

## **Compliance**

(h) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

# **Inspection for Wear**

(i) Within 900 cycles-in-service after the effective date of this AD, perform an on-wing or inshop inspection of the fan blade and damper for wear. Use paragraphs 3.A.(1) through 3.A.(5) or

- paragraphs 3.B.(1) through 3.B.(5) respectively, of the Accomplishment Instructions of CFM International Service Bulletin (SB) No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007.
- (j) If you find out-of-limit wear on at least one fan blade platform underside, perform the additional inspections and disposition the parts, as specified in paragraphs 3.A.(3) and 3.A.(5) or paragraphs 3.B.(3) and 3.B.(5) respectively, of the Accomplishment Instructions of CFM International SB No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007.
- (k) Thereafter, within intervals not to exceed 3,000 cycles-since-last inspection, perform an on-wing or in-shop inspection for wear. Use paragraphs 3.A.(1) through 3.A.(5) or paragraphs 3.B.(1) through 3.B.(5) respectively, of the Accomplishment Instructions of CFM International SB No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007.
- (l) If you find wear on at least one fan blade platform underside, perform additional inspections and disposition the parts, as specified in paragraphs 3.A.(3) and 3.A.(5) or paragraphs 3.B.(3) and 3.B.(5) respectively, of the Accomplishment Instructions of CFM International SB No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007.

#### **Installation Prohibition**

(m) After the effective date of this AD, don't install any 25 degrees midspan shroud fan blades, P/Ns 9527M99P08, 9527M99P09, 9527M99P10, 9527M99P11, 1285M39P01, or fan blade pairs, P/Ns 335-088-901-0, 335-088-902-0, 335-088-903-0, and 335-088-904-0, unless they have passed an inspection specified in paragraph 3. of the Accomplishment Instructions of CFM International SB No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007.

### **Optional Terminating Action**

(n) Replacing the 25 degrees midspan shroud fan blade set with a 37 degrees midspan shroud fan blade set terminates the repetitive inspection requirements specified in paragraph (k) of this AD.

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

(o) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

#### **Related Information**

- (p) Contact Antonio Cancelliere, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: antonio.cancelliere@faa.gov; telephone (781) 238-7751; fax (781) 238-7199, for more information about this AD.
- (q) European Aviation Safety Agency AD 2009-0036, dated February 20, 2009, also addresses the subject of this AD.

# **Material Incorporated by Reference**

(r) You must use CFM International Service Bulletin No. CFM56-3/3B/3C S/B 72-1067, dated February 15, 2007, to perform the inspections and parts dispositions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact CFM International, S. A., Technical Publication Department, 1 Neumann Way, Cincinnati, OH 45215; telephone (513) 552-2800; fax (513) 552-2816, for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and

Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Burlington, Massachusetts, on May 25, 2010. Peter A. White, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.