[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0313; Product Identifier 2017-NE-11-AD]

RIN 2120-AA64

Airworthiness Directives; CFM International S.A. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain CFM International S.A. (CFM) CFM56-7B turbofan engines. This proposed AD was prompted by a report of an in-flight fan blade failure and uncontained forward release of debris on a CFM56-7B turbofan engine. This proposed AD would require an ultrasonic inspection (USI) of certain fan blades and, if they fail the inspection, their replacement with parts eligible for installation. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact CFM International Inc., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: 877-432-3272; fax: 877-432-3329; email: aviation.fleetsupport@ge.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-0313; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kasra Sharifi, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238-7199; email: kasra.sharifi@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0313; Directorate Identifier 2017-NE-11-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received a report of a fan blade failure and inlet separation on a CFM56-7B engine that occurred during a revenue flight. This fan blade failure was contained by the engine case, but there was subsequent uncontained forward release of inlet cowl and other debris. The fracture in the blade initiated from the fan blade dovetail. The investigation, however, into the root cause of the fan blade failure is not complete. This condition, if not corrected, could result in fan blade failure, uncontained forward release of debris, damage to the engine, and damage to the airplane.

Related Service Information under 1 CFR part 51

We reviewed CFM Service Bulletin (SB) No. CFM56-7B S/B 72-1019, Revision 1 dated June 13, 2017. The SB describes procedures for performing a USI of the affected fan blades. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

CFM CFM56-7B Engine Shop Manual, Revision 55, dated January 15, 2017, task 72-21-01-200-001, provides guidance on performing an eddy current inspection of the affected fan blades.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require a USI of the affected fan blades.

Interim Action

We consider this proposed AD interim action. We will determine if further action is needed based on the results of the root cause investigation of the fan blade failure.

Costs of Compliance

We estimate that this proposed AD affects 220 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
USI	2 work-hours X $85 per hour = $170	$0	$170	$37,400

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) 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.

List of Subjects in 14 CFR Part 39

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

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 (AD):

CFM International S.A.: Docket No. FAA-2017-0313; Product Identifier 2017-NE-11-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to CFM International S.A. (CFM) CFM56-7B20, CFM56-7B22, CFM56-7B22/B1, CFM56-7B24, CFM56-7B24/B1, CFM56-7B26, CFM56-7B26/B2, CFM56-7B27, CFM56-7B27A, CFM56-7B26/B1, CFM56-7B27/B1, CFM56-7B27/B3, CFM56-7B20/2, CFM56-7B22/2, CFM56-7B24/2, CFM56-7B26/2, CFM56-7B27/2, CFM56-7B20/3, CFM56-7B22/3, CFM56-7B22/3B1, CFM56-7B24/3, CFM56-7B24/3B1, CFM56-7B26/3, CFM56-7B26/3B1, CFM56-7B26/3B2, CFM56-7B27/3, CFM56-7B27/3B1, CFM56-7B27/3B3, CFM56–7B27A/3, CFM56-7B26/3F, CFM56-

7B26/3B2F, CFM56-7B27/3F, CFM56-7B27/3B1F, CFM56-7B20E, CFM56-7B22E, CFM56-7B22E/B1, CFM56-7B22E/B2, CFM56-7B24E, CFM56-7B24E/B1, CFM56-7B26E, CFM56-7B26E/B1, CFM56-7B26E/B2, CFM56-7B27E, CFM56-7B27E/B1, CFM56-7B27E/B3, CFM56-7B26E/F, CFM56-7B26E/B2F, CFM56-7B27E/F, and CFM56-7B27E/B1F engine models.

(d) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by a report of an in-flight failure of a fan blade on a CFM56-7B turbofan engine. We are issuing this AD to prevent fan blade failure, uncontained forward release of debris, damage to the engine, and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) For engines, on the effective date of this AD, with more than 15,000 cycles-in-service (CIS) since the last engine shop visit, with any part number (P/N) fan blade installed, perform an ultrasonic inspection (USI) of the fan blades within 6 months after the effective date of this AD.

(2) For engines, on the effective date of this AD, with 15,000 CIS or less since the last engine shop visit and with fan blades, P/N 340-001-022-0, 340-001-027-0, 340-001-029-0, 340-001-037-01, or 340-001-039-0, installed, perform a USI of the fan blades within 18 months after the effective date of this AD or at the next fan blade lubrication after the effective date of this AD, whichever occurs first.

(3) Use the Accomplishment Instructions, paragraphs 3.A (3)(a) through (g), of CFM Service Bulletin (SB) No. CFM56-7B 72-1019, Revision 1, dated June 13, 2017, to do the USI required by paragraphs (f)(1) and (2) of this AD.

(4) If any fan blade fails the inspection required by paragraphs (f)(1) or (2) of this AD, replace with a part eligible for installation.

(g) Definition

(1) For the purpose of this AD, an "engine shop visit" is the removal of an engine when the subsequent engine maintenance performed prior to reinstallation of the engine entails:

(i) a 360-degree separation of major mating engine flanges, or

(ii) the removal of a disk, hub, or spool.

(2) The following actions do not constitute an engine shop visit:

(i) Replacement of an engine module on-wing,

(ii) Replacement of a gearbox, or

(iii) Accomplishment of a top/bottom case.

(h) Credit for Previous Actions

You may take credit for the USI required by paragraph (f) of this AD, if you performed an eddy current inspection of the affected fan blades before the effective date of this AD.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, FAA, ECO Branch, Compliance and Airworthiness Division, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Kasra Sharifi, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District

Avenue, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238-7199; email: kasra.sharifi@faa.gov.

(2) CFM SB No. CFM56-7B 72-1019, Revision 1, dated June 13, 2017, and CFM CFM56-7B Engine Shop Manual (ESM), Revision 55, dated January 15, 2017 can be obtained from CFM using the contact information in paragraph (j)(3) of this proposed AD.

(3) For service information identified in this proposed AD, contact CFM International Inc., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: 877-432-3272; fax: 877-432-3329; email: aviation.fleetsupport@ge.com.

(4) You may view this service information at the FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on August 18, 2017.

Robert J. Ganley,
Manager, Engine & Propeller Standards Branch,
Aircraft Certification Service.
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