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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0429; Product Identifier 2018-NE-13-AD; Amendment 39-19287; AD 2018-09-51]

RIN 2120-AA64

Airworthiness Directives; CFM International S.A. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for CFM International, S.A., (CFM) CFM56-7B model engines. This emergency AD was sent previously to all known U.S. owners and operators of CFM CFM56-7B model engines. This AD requires a one-time ultrasonic inspection (USI) of the concave and convex sides of the fan blade dovetail. This AD was prompted by a recent engine failure due to a fractured fan blade, which resulted in the engine inlet cowl disintegrating and debris penetrating the fuselage, causing a loss of pressurization, and prompting an emergency descent. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 7, 2018 to all persons except those persons to whom it was made immediately effective by Emergency AD 2018-09-51, issued on April 20, 2018, which contained the requirements of this amendment.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of May 14, 2018 (83 FR 19176, May 2, 2018).

We must receive comments on this AD by July 9, 2018.

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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this 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. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0429.

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-2018-0429; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; Email: chris.mcguire@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On April 20, 2018, we issued Emergency AD 2018-09-51, which requires a one-time USI of the concave and convex sides of the fan blade dovetail. This emergency AD was sent previously to all known U.S. owners and operators of these CFM CFM56-7B model engines. This action was prompted by a recent engine failure due to a fractured fan blade. There was one passenger fatality as a result of the event. This condition, if not addressed, could result in the engine inlet cowl disintegrating and debris penetrating the fuselage, causing a loss of pressurization, and prompting an emergency descent.

Relevant Service Information Under 1 CFR Part 51

We reviewed CFM Service Bulletin (SB) CFM56-7B S/B 72-1033, dated April 20, 2018. The service information describes procedures for performing a USI for cracks of the fan blade dovetail and removal of cracked fan blades from service. 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.

FAA's Determination

We are issuing 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.

AD Requirements

This AD requires a one-time USI of the concave and convex sides of the fan blade dovetail.

Differences Between This AD and the Service Information

CFM SB CFM56-7B S/B 72-1033, dated April 20, 2018, provides actions for engines with fewer than 30,000 flight cycles, but this AD does not affect those engines. The service information also specifies repetitive inspections, but this AD does not require that the inspection be repeated. We published AD 2018-09-10 (83 FR 19176, May 2, 2018), which addresses those differences.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of Emergency AD 2018-09-51, issued on April 20, 2018, to all known U.S. owners and operators of these engines. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the USI must be performed within 20 days. These conditions still exist and the AD is hereby published in the Federal Register as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective to all persons. Therefore, we find good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reason stated above, we find that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2018-0429 and Product Identifier 2018-NE-13-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. We will consider all comments received by the closing date and may amend this final rule 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 final rule.

Costs of Compliance

We estimate that this AD affects 532 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect engine fan blade	2 work-hours × $85 per hour = $170	$0	$170	$90,440

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace fan blade	1 work-hour × $85 per hour = $85	$8,500	$8,585

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

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),

(3) Will not affect intrastate aviation in Alaska, 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.

Adoption of the Amendment

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

2018-09-51 CFM International S.A.: Amendment 39-19287; Docket No. FAA-2018-0429; Product Identifier 2018-NE-13-AD.

(a) Effective Date

This AD is effective June 7, 2018 to all persons except those persons to whom it was made immediately effective by Emergency AD 2018-09-51, issued on April 20, 2018, which contained the requirements of this amendment.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all CFM International, S.A., (CFM) CFM56-7B20, -7B22, -7B24, -7B26, -7B27, -7B22/B1, -7B24/B1, -7B26/B1, -7B26/B2, -7B27/B1, -7B27/B3, -7B20/3, -7B22/3, -7B24/3, -7B26/3, -7B27/3, -7B22/3B1, -7B24/3B1, -7B26/3B1, -7B26/3B2, -7B26/3F, -7B26/3B2F, -7B27/3B1, -7B27/3B3, -7B27/3F, -7B27/3B1F, -7B20E, -7B22E, -7B24E, -7B26E, -7B27E, -7B22E/B1, -7B24E/B1, -7B26E/B1, -7B26E/B2, -7B26E/F, -7B26E/B2F, -7B27E/B1, -7B27E/B3, -7B27E/F, -7B27E/B1F, -7B20/2, -7B22/2, -7B24/2, -7B26/2, -7B27/2, -7B27A, -7B27AE, and -7B27A/3 engine models, with 30,000 or more total accumulated flight cycles since new, as of April 20, 2018.

(d) Subject

Joint Aircraft System Component (JASC) Code 7200, Engine.

(e) Unsafe Condition

This AD was prompted by recent event involving an engine failure, resulting in the engine inlet cowl disintegrating, debris penetrating the fuselage causing a loss of pressurization and prompting an emergency descent. There was one passenger fatality as a result of the event. We are issuing this AD to address fan blade failure due to cracking, which could result in an engine in-flight shutdown (IFSD), uncontained release of debris, damage to the engine, damage to the airplane, and possible airplane decompression.

(f) Compliance

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

(g) Inspection

(1) Within 20 days after the effective date of this AD, perform a one-time ultrasonic inspection of all 24 fan blade dovetail concave and convex sides to detect cracking.

(2) Use the Accomplishment Instructions, paragraphs 3.A.(3)(a) through (i), of CFM Service Bulletin (SB) CFM56-7B S/B 72-1033, dated April 20, 2018, to perform the inspection required by paragraph (g)(1) of this AD.

(h) Corrective Action

If any unserviceable indication, as specified in CFM SB CFM56-7B S/B 72-1033, dated April 20, 2018, is found during any inspection required by this AD, remove the affected fan blade from service before further flight.

(i) No Reporting Required

Although CFM SB CFM56-7B S/B 72-1033, dated April 20, 2018, specifies to report findings, this AD does not include that requirement.

(j) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g)(1) of this AD, if those actions were performed before receipt of this AD using CFM SB CFM56-7B S/B 72-1019, dated March 24, 2017; or Revision 1, dated June 13, 2017; or CFM SB CFM56-7B S/B 72-1024, dated July 24, 2017.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l) of this AD. 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.

(3) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (k)(3)(i) and (k)(3)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(l) Related Information

For more information about this AD, contact Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; Email: chris.mcguire@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on May 14, 2018 (83 FR 19176, May 2, 2018).

(i) CFM International, S.A., (CFM) Service Bulletin CFM56-7B S/B 72-1033, dated April 20, 2018.

(ii) Reserved.

(4) For CFM service information identified in this 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.

(5) You may view this service information at 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 781-238-7759.

(6) You may view this service information that is incorporated by reference 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 18, 2018.
Robert J. Ganley,
Manager, Engine & Propeller Standards Branch,
Aircraft Certification Service.