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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2017-1044; Product Identifier 2017-NE-38-AD; Amendment 39-19110; AD 2017-24-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; CFM International S.A. Turbofan Engines**

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

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

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain CFM International S.A. (CFM) LEAP-1A turbofan engines. This AD requires removal, inspection, rework, and re-identification of the high-pressure turbine (HPT) stage 2 disk, part number (P/N) 2466M52G03. This AD was prompted by a quality escape at the manufacturer that resulted in cracks appearing during forging of the HPT stage 2 disks. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective December 15, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 15, 2017.

We must receive comments on this AD by January 16, 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 final rule, 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 781-238-7125.

## **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-2017-1044; 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 final rule, 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:** 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](mailto:chris.mcguire@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We learned from CFM that there was a quality escape at the manufacturer that resulted in cracks appearing during forging of CFM LEAP-1A HPT stage 2 disks. This condition, if not corrected, could result in failure of the HPT stage 2 disk, uncontained release of the disk, damage to the engine, and damage to the airplane. We are issuing this AD to correct the unsafe condition on these products.

### **Related Service Information Under 1 CFR Part 51**

We reviewed CFM Service Bulletin (SB) LEAP-1A-72-00-0167-01A-930A-D, Issue 001, dated September 28, 2017. The SB describes procedures for removal, inspection, rework, and re-identification of HPT stage 2 disk, P/N 2466M52G03. 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 removal, inspection, rework, and re-identification of the HPT stage 2 disk, P/N 2466M52G03.

### **FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the compliance time for the required action is shorter than the time necessary for the public to comment and for us to publish the final rule. 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 2017-1044 and Product Identifier 2017-NE-38-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 7 engines installed on airplanes of U.S. registry.  
 We estimate the following costs to comply with this AD:

<b>Estimated Costs</b>				
<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Remove, inspect, rework, and re-identify HPT stage 2 disk	560 work-hours × \$85 per hour = \$47,600	\$0	\$47,600	\$333,200

**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):



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2017-24-06 CFM International S.A.:** Amendment 39-19110; Docket No. FAA-2017-1044; Product Identifier 2017-NE-38-AD.

**(a) Effective Date**

This AD is effective December 15, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to CFM International S.A. (CFM) LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26E1, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2 and LEAP-1A35A engines with a high-pressure turbine (HPT) stage 2 disk, with a part number (P/N) 2466M52G03 and serial number (S/N) listed in Table 1 of CFM Service Bulletin (SB) LEAP-1A SB 72-0167-01A-930A-D, Issue 001, dated September 28, 2017, installed.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 7250, Turbine Section.

**(e) Unsafe Condition**

This AD was prompted by a quality escape at the manufacturer that resulted in cracks appearing during forging of the HPT stage 2 disks. We are issuing this AD to prevent failure of the HPT stage 2 disks. The unsafe condition, if not corrected, could result in uncontained release of the HPT stage 2 disks, damage to the engine, and damage to the airplane.

**(f) Compliance**

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

**(g) Required Actions**

Prior to accumulating 1,200 engine cycles since new after the effective date of this AD, remove, inspect, rework, and re-identify the HPT stage 2 disk, P/N 2466M52G03, in accordance with the Accomplishment Instructions, paragraph 5.B.(2), in CFM SB LEAP-1A-72-00-0167-01A-930A-D, Issue 001, dated September 28, 2017.

## **(h) 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 (i) 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.

## **(i) Related Information**

For more information about this AD, contact Chris 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.

## **(j) 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.

(i) CFM Service Bulletin LEAP-1A-72-00-0167-01A-930A-D, Issue 001, dated September 28, 2017.

(ii) Reserved.

(3) 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.

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

(5) 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 November 21, 2017.

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