

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2024-2424; Project Identifier AD-2024-00416-E]

RIN 2120-AA64

**Airworthiness Directives; CFM International, S.A. Engines**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for certain CFM International, S.A. (CFM) Model LEAP-1A, LEAP-1B, and LEAP-1C engines. This proposed AD was prompted by a manufacturer investigation that revealed a quality escape for low-pressure turbine (LPT) disks made from forgings with nonconforming grain size. This proposed AD would require removal and replacement of the LPT stage 4 and stage 5 disks. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by December 23, 2024.

**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 *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.

*AD Docket:* You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-2424; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For CFM material identified in this proposed AD, contact CFM International, S.A., GE Aviation Fleet Support, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45215; phone: (877)

432-3272; email: *aviation.fleetsupport@ge.com*.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

**FOR FURTHER INFORMATION CONTACT:**

Mehdi Lamnyi, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7743; email: *mehdi.lamnyi@faa.gov*.

**SUPPLEMENTARY INFORMATION:****Comments Invited**

The FAA invites 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-2024-2424; Project Identifier AD-2024-00416-E” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may revise this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *regulations.gov*, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

**Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Mehdi Lamnyi, Aviation Safety Engineer, FAA, 2200

South 216th Street, Des Moines, WA 98198. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

**Background**

The FAA received a report of a quality escape on LPT disks made from forgings with nonconforming material grain size on certain CFM Model LEAP-1A and LEAP-1B engines. The supplier assessed the duplex micro-structure using an arithmetic average grain size instead of considering the coarsest grain size. After a re-check of all forgings, the supplier has identified a number of parts with a coarse grain size that is below the drawing requirement.

This condition, if not addressed, could result in uncontained part release, damage to the engine, and damage to the airplane.

**FAA’s Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

**Material Incorporated by Reference Under 1 CFR Part 51**

The FAA reviewed CFM Service Bulletin (SB) LEAP-1A-72-00-0519-01A-930A-D, Issue 001-00, dated September 18, 2024 (CFM SB LEAP-1A-72-00-0519-01A-930A-D); CFM SB LEAP-1B-72-00-0419-01A-930A-D, Issue 001-00, dated September 18, 2024 (CFM SB LEAP-1B-72-00-0419-01A-930A-D); and CFM SB LEAP-1C-72-00-0100-01A-930A-D, Issue 001-00, dated September 18, 2024. This material specifies the part numbers and serial numbers of affected LPT disks, and the cycles since new thresholds for the replacement of affected LPT disks. These documents are distinct because they apply to different engine models. This material 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.

**Proposed AD Requirements in This NPRM**

This proposed AD would require removal and replacement of the LPT stage 4 and stage 5 disks at the next piece-part exposure, or before exceeding between 2,400 and 19,000 cycles since new, depending on the applicable threshold identified in CFM SB LEAP-1A-72-00-0519-01A-930A-D or CFM SB LEAP-1B-72-00-0419-01A-930A-D.

**Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 13

engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

**ESTIMATED COSTS**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove and replace LEAP-1A LPT stage 5 disk	150 work-hours × \$85 per hour = \$12,750 .....	\$225,500	\$238,250	\$476,500
Remove and replace LEAP-1B LPT stage 5 disk	150 work-hours × \$85 per hour = \$12,750 .....	205,100	217,850	1,742,800
Remove and replace LEAP-1B LPT stage 4 disk	150.00 work-hours × \$85 per hour = \$12,750 .....	442,800	455,550	1,366,650

**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.

The FAA is 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**

The FAA 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) Would not affect intrastate aviation in Alaska, and
- (3) Would 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:

**CFM International, S.A.:** Docket No. FAA–2024–2424; Project Identifier AD–2024–00416–E.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by December 23, 2024.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the following CFM International, S.A. (CFM) Model engines:

- (1) LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, LEAP-1A35A;
- (2) LEAP-1B21, LEAP-1B23, LEAP-1B25, LEAP-1B27, LEAP-1B28, LEAP-1B28B1, LEAP-1B28B2, LEAP-1B28B2C, LEAP-1B28B3, LEAP-1B28BBJ1, LEAP-1B28BBJ2; and
- (3) LEAP-1C28, LEAP-1C30, and LEAP-1C30B1.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

**(e) Unsafe Condition**

This AD was prompted by a manufacturer investigation that revealed a quality escape for certain low-pressure turbine (LPT) disks made from forgings with nonconforming grain size. The FAA is issuing this AD to prevent the fracture and uncontained failure of certain LPT stage 4 and stage 5 disks. The unsafe condition, if not addressed, could

result in uncontained part release, 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**

(1) For LEAP-1A engines with an installed LPT stage 5 disk having a part number (P/N) and serial number (S/N) listed in Table 1, Table 2, or Table 3 of CFM Service Bulletin (SB) LEAP-1A-72-00-0519-01A-930A-D, Issue 001-00, dated September 18, 2024 (CFM SB LEAP-1A-72-00-0519-01A-930A-D): At the next piece-part exposure of the LPT stage 5 disk, or before exceeding the applicable cycles since new (CSN) threshold identified in Table 1, Table 2, or Table 3 of CFM SB LEAP-1A-72-00-0519-01A-930A-D, whichever occurs first after the effective date of this AD, remove the LPT stage 5 disk from service and replace with a part eligible for installation.

(2) For LEAP-1B engines with an installed LPT stage 4 disk having a P/N and S/N listed in Table 1 of CFM SB LEAP-1B-72-00-0419-01A-930A-D, Issue 001-00, dated September 18, 2024 (CFM SB LEAP-1B-72-00-0419-01A-930A-D): At the next piece-part exposure of the LPT stage 4 disk, or before exceeding the applicable CSN threshold identified in Table 1 of CFM SB LEAP-1B-72-00-0419-01A-930A-D, whichever occurs first after the effective date of this AD, remove the LPT stage 4 disk from service and replace with a part eligible for installation.

(3) For LEAP-1B engines with an installed LPT stage 5 disk having a P/N and S/N listed in Table 2 or Table 3 of CFM SB LEAP-1B-72-00-0419-01A-930A-D: At the next piece-part exposure of the LPT stage 5 disk, or before exceeding the applicable CSN threshold identified in Table 2 or Table 3 of CFM SB LEAP-1B-72-00-0419-01A-930A-D, whichever occurs first after the effective date of this AD, remove the LPT stage 5 disk from service and replace with a part eligible for installation.

**(h) Installation Prohibition**

(1) After the effective date of this AD, do not install an LPT stage 5 disk that has a P/N and S/N identified in Table 1, Table 2, or Table 3, of CFM SB LEAP-1A-72-00-0519-01A-930A-D, in any LEAP-1A engine.

(2) After the effective date of this AD, do not install an LPT stage 4 disk or LPT stage 5 disk that has a P/N and S/N identified in

Table 1, Table 2, or Table 3, of CFM SB LEAP-1B-72-00-0419-01A-930A-D in any LEAP-1B engine.

(3) After the effective date of this AD, do not install an LPT stage 5 disk that has a P/N and S/N identified in Table 1 of CFM SB LEAP-1C-72-00-0100-01A-930A-D, Issue 001-00, dated September 18, 2024, in any LEAP-1C engine.

#### (i) Definitions

For the purpose of this AD:

(1) "LEAP-1A engines" are CFM Model LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26CJ, LEAP-1A26E1, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A engines.

(2) "LEAP-1B engines" are CFM Model LEAP-1B21, LEAP-1B23, LEAP-1B25, LEAP-1B27, LEAP-1B28, LEAP-1B28B1, LEAP-1B28B2, LEAP-1B28B2C, LEAP-1B28B3, LEAP-1B28BBJ1, and LEAP-1B28BBJ2 engines.

(3) "LEAP-1C engines" are CFM Model LEAP-1C28, LEAP-1C30, and LEAP-1C30B1 engines.

(4) A "part eligible for installation" on a LEAP-1A engine is an LPT stage 5 disk that does not have a P/N and S/N identified in Table 1, Table 2, or Table 3 of CFM SB LEAP-1A-72-00-0519-01A-930A-D.

(5) A "part eligible for installation" on a LEAP-1B engine is an LPT stage 4 disk or LPT stage 5 disk that does not have a P/N and S/N identified in Table 1, Table 2, or Table 3 of CFM SB LEAP-1B-72-00-0419-01A-930A-D.

#### (j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520 Continued Operational Safety 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 AIR-520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (l) of this AD and email to: [AMOC@faa.gov](mailto: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.

#### (k) Additional Information

For more information about this AD, contact Mehdi Lamnyi, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7743; email: [mehdi.lamnyi@faa.gov](mailto:mehdi.lamnyi@faa.gov).

#### (l) Material Incorporated by Reference

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

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

(i) CFM Service Bulletin (SB) LEAP-1A-72-00-0519-01A-930A-D, Issue 001-00, dated September 18, 2024.

(ii) CFM SB LEAP-1B-72-00-0419-01A-930A-D, Issue 001-00, dated September 18, 2024.

(iii) CFM SB LEAP-1C-72-00-0100-01A-930A-D, Issue 001-00, dated September 18, 2024.

(3) For CFM material identified in this AD, contact CFM International, S.A., GE Aviation Fleet Support, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45215; phone: (877) 432-3272; email: [aviation.fleetsupport@ge.com](mailto:aviation.fleetsupport@ge.com).

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov).

Issued on November 4, 2024.

**Peter A. White,**

*Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.*

[FR Doc. 2024-25869 Filed 11-7-24; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA-2024-1980; Airspace Docket No. 24-ASO-21]

RIN 2120-AA66

#### Amendment of Class E Airspace; Tarboro, NC

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** This action proposes to amend Class E airspace extending upward from 700 feet above the surface for Tarboro, NC, by adding the ECU Health Edgecombe Heliport, Tarboro, NC. This action would increase the existing radius to accommodate a new instrument approach procedure for ECU Health Edgecombe Heliport, Tarboro, NC. It also incorporates updated coordinates for Tarboro Edgecombe Airport, Tarboro, NC. Controlled airspace is necessary for the safety and management of instrument flight rule (IFR) operations at this airport.

**DATES:** Comments must be received on or before December 23, 2024.

**ADDRESSES:** Send comments identified by FAA Docket No. FAA-2024-1980 and Airspace Docket No. 24-ASO-21 using any of the following methods:  
\* *Federal eRulemaking Portal:* Go to [www.regulations.gov](http://www.regulations.gov) and follow the online instructions for sending your comments electronically.

\* *Mail:* Docket Operations, M-30; U.S. Department of Transportation, 1200 New Jersey Avenue SE, Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.

\* *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except for Federal holidays.

\* *Fax:* Fax comments to Docket Operations at (202) 493-2251.

*Docket:* Background documents or comments received may be read at [www.regulations.gov](http://www.regulations.gov) at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except for Federal holidays.

FAA Order JO 7400.11J Airspace Designations and Reporting Points and subsequent amendments can be viewed online at [www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/). You may also contact the Rules and Regulations Group, Office of Policy, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone: (202) 267-8783.

**FOR FURTHER INFORMATION CONTACT:** Robert Scott Stuart, Operations Support Group, Eastern Service Center, Federal Aviation Administration, 1701 Columbia Avenue, College Park, GA 30337; Telephone: (404) 305-5926.

#### SUPPLEMENTARY INFORMATION:

#### Authority for This Rulemaking

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. 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. This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the