



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2025-1725; Project Identifier AD-2025-00583-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 supersede Airworthiness Directive (AD) 2018-19-16, which applies to all CFM International, S.A. (CFM) Model LEAP-1A23, -1A24, -1A24E1, -1A26, -1A26E1, -1A26CJ, -1A29, -1A29CJ, -1A30, -1A32, -1A33, -1A33B2, and -1A35A engines with certain full authority digital engine control (FADEC) and prognostic health monitoring (PHM) software installed. AD 2018-19-16 requires removing certain FADEC and PHM software and installing versions eligible for installation. Since the FAA issued AD 2018-19-16, the manufacturer has developed a new pressure subsystem (PSS) with a heater element to evaporate potential moisture on the PSS manifold/transducer interface and prevent freezing at low temperature. This proposed AD would require replacing certain FADEC and PHM software with new versions that are eligible for installation, replacement of certain harnesses with newly designed harnesses, and replacement of the PSS with a newly designed heated PSS. 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 [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 [regulations.gov](https://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.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2025-1725; 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.

**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](mailto: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 using a method listed under the ADDRESSES section. Include “Docket No. FAA-2025-1725; Project Identifier AD-2025-00583-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](https://www.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 issued AD 2018-19-16, Amendment 39-19416 (83 FR 50818, October 10, 2018) (AD 2018-19-16), for certain CFM Model LEAP-1A23, -1A24, -1A24E1, -1A26, -1A26E1, -1A26CJ, -1A29, -1A29CJ, -1A30, -1A32, -1A33, -1A33B2, and -1A35A engines. AD 2018-19-16 was prompted by aborted takeoffs after engines did not advance to the desired takeoff fan speed due to icing in the pressure sensor line. AD 2018-19-16 requires removing certain FADEC and PHM software and installing versions eligible for installation. The agency issued AD 2018-19-16 to prevent icing in the pressure sensor lines and inaccurate pressure sensor readings, which could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

### **Actions Since AD 2018-19-16 Was Issued**

The preamble to AD 2018-19-16 specifies that the FAA considers that AD "interim action," that the manufacturer was developing a modification to address the unsafe condition, and that the FAA might consider further rulemaking once the modification is developed, approved, and available. Since the FAA issued AD 2018-19-16, the manufacturer has developed a new pressure subsystem with a heater element to evaporate potential moisture on the PSS manifold/transducer interface and prevent freezing at low temperature, which would mitigate the unsafe condition specified in AD 2018-19-16. The FAA has determined that this modification should be required.

## 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.

## Proposed AD Requirements in this NPRM

This proposed AD would retain none of the requirements of AD 2018-19-16. This proposed AD would require replacing certain FADEC and PHM software with new versions that are eligible for installation, replacement of the HJ6A and HJ6B harnesses with newly designed harnesses, and replacement of the PSS with a newly designed heated PSS.

## Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 306 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
Install electronic engine control software	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$26,010
Replace PSS with heated PSS	1 work-hours x \$85 per hour = \$85	\$185,950	\$186,035	\$56,926,710
Replace HJ6A and HJ6B harnesses	1 work-hour x \$85 per hour = \$85	\$57,510	\$57,595	\$17,624,070

## 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 that the 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:

- a. Removing Airworthiness Directive 2018-19-16, Amendment 39-19416 (83 FR 50818, October 10, 2018); and

- b. Adding the following new airworthiness directive:

**CFM International, S.A.:** Docket No. FAA-2025-1725; Project Identifier AD-2025-00583-E.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2018-19-16, Amendment 39-19416 (83 FR 50818, October 10, 2018) (AD 2018-19-16).

**(c) Applicability**

This AD applies to CFM International, S.A. (CFM) Model LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26E1, LEAP-1A26CJ, LEAP-1A29, LEAP-1A29CJ, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7600, Engine Controls.

**(e) Unsafe Condition**

This AD was prompted by aborted takeoffs after engines did not advance to the desired takeoff fan speed due to icing in the pressure sensor line. The FAA is issuing this AD to prevent icing in the pressure sensor lines and inaccurate pressure sensor readings. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

At the next engine shop visit after the effective date of this AD, do the following actions:

(1) Install electronic engine control (EEC) full authority digital electronic control (FADEC) software having part number (P/N) 2590M00P13, version L1A0850, or later approved version; and prognostic health monitoring (PHM) software having P/N 2784M64P08, version PL1A0850, or later approved version.

Note 1 to paragraph (g)(1): The software release that includes EEC FADEC software P/N 2590M00P13, version L1A0850, and PHM software P/N 2784M64P08, version PL1A0850, is commonly referred to as “FCS8.5.” Guidance for replacing the EEC FADEC software and PHM software may be found in CFM Service Bulletin LEAP-1A-73-00-0050-01A-930A-D, Issue 001-00, dated January 03, 2024.

(2) For engines with an installed HJ6A harness having P/N 362-085-905-0 (significant item number (SIN) 65004), remove the HJ6A harness from service and replace with an HJ6A harness having P/N 362-085-906-0, or later approved P/N.

(3) For engines with an installed HJ6B harness having P/N 362-086-004-0 (SIN 65005), remove the HJ6B harness from service and replace with an HJ6B harness having P/N 362-086-005-0, or later approved P/N.

(4) For engines with an installed pressure subsystem (PSS) having P/N 2474M65P05 (vendor identification number (VIN) 261811055-0303), remove the PSS from service and replace with a heated PSS having P/N 2474M65P08 (VIN 261811055-0410), or later approved P/N.

#### **(h) Definitions**

For the purpose of this AD, an “engine shop visit” is the induction of the engine into the shop for maintenance involving the separation of major mating engine flanges, except for the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance.

#### **(i) 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 (j)(1) of this AD. Information may be emailed to: 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) Additional Information**

(1) 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.

(2) For material identified in this AD that is not incorporated by reference, contact CFM, GE Aviation Fleet Support, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45215; phone: (877) 432-3272; email: aviation.fleetsupport@ge.com.

**(k) Material Incorporated by Reference**

None.

Issued on July 25, 2025.

Peter A. White,  
Deputy Director, Integrated Certificate Management Division,  
Aircraft Certification Service.

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