



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 23-123

Issued: 16 November 2023

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance/cancellation of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.
All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

CFM INTERNATIONAL S.A.

Type/Model designation(s):

LEAP-1A engines

Effective Date: [TBD – standard: 14 days after AD issue date]

TCDS Number(s): EASA.E.110

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – High Pressure Turbine – Rotor Interstage Seal – Replacement

Manufacturer(s):

SAFRAN Aircraft Engines, formerly SNECMA (France); General Electric Aviation (United States)

Applicability:

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 engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, certain Airbus A319, A320 and A321 aeroplanes.

Definitions:

For the purpose of this AD, the following definitions apply:

The SB: CFM International (CFM) Service Bulletin (SB), LEAP-1A-72-00-0492-01A-930A-D.

Affected part: High Pressure Turbine (HPT) Rotor Interstage Seal, having part number 2466M68P02 and s/n FIA1VGM8, FIA1VMEW, NCU7102E, NCU7602E, NCU7103E, FIA1VE98, FIA1VGM4, FIA1VGM2, FIA1VGNA, FIA1VGM6 or NCU7101E.



Serviceable part: Any HPT Rotor Interstage Seal, eligible for installation, that is not an affected part.

Groups: Group 1 engines are those that have an affected part installed.

Group 2 engines are those that do not have an affected part installed.

Qualified shop visit: Any engine shop visit where the HPT rotor assembly (Significant Item Number: 15000) is fully removed from the core per accomplishment of Engine Shop Manual procedure 72-00-02-51A-52AA-C.

Reason:

Following detection by the manufacturer of melt-related freckles in some billets, it has been determined that certain HPT rotor interstage seals may have been affected by subsurface anomalies resulting in reduced material properties, possibly affecting their capability to be operated until their published life limit.

This condition, if not corrected, could lead to failure of affected parts, possibly resulting in high energy debris release, with consequent damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, CFM published the SB to provide replacement instructions and list of the affected parts.

For the reason described above, this AD requires replacement of the affected parts and prohibits (re)installation.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Replacement:

- (1) For Group 1 engines: During the next qualified shop visit after the effective date of this AD, or before exceeding the threshold (as specified in Table 1 of this AD, as applicable), whichever occurs first, replace the affected part with a serviceable part in accordance with the instructions of the SB.

Table 1 - Affected Part Removal Thresholds

Engine Model	Removal Threshold
LEAP-1A23, LEAP-1A24, LEAP-1A24E1, LEAP-1A26, LEAP-1A26E1, LEAP-1A29, LEAP-1A30, LEAP-1A32, LEAP-1A33, LEAP-1A33B2, and LEAP-1A35A	5 000 Cycles Since New (CSN)
LEAP-1A26CJ and LEAP-1A29CJ	4 500 CSN

Note 1: The CSN specified in Table 1 of this AD are those accumulated by the affected part since its first installation on an engine.



Parts Installation:

(2) Do not install an affected part on any engine, as required by paragraph (2.1) or (2.2) of this AD, as applicable.

(2.1) For Group 1 engines: After replacement of each affected part on an engine as required by paragraph (1) of this AD.

(2.2) For Group 2 engines: From the effective date of this AD.

Ref. Publications:

CFM SB LEAP-1A-72-00-0492-01A-930A-D original issue (Issue 001) dated 06 April 2023.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 14 December 2023.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this PAD, please contact: CFM International S.A., Customer Support Centre, Telephone: +33 1 64 14 88 66, Fax: +33 1 64 14 87 65, E-mail: cfm.csc@safrangroup.com,

or

CFM Inc., GE Aviation Fleet Support, Telephone: +1 513-552-3272 or +1 877-432-3272,
E-mail: aviation.fleetsupport@ge.com.

