

Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 24-143

Issued: 22 November 2024

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, LEAP-1B and LEAP-1C engines

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

TCDS Number(s): EASA.E.110 and EASA.E.115

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Low Pressure Turbine – Stage 4 and Stage 5 Disks – Replacement

Manufacturer(s):

SAFRAN Aircraft Engines, formerly SNECMA (France); General Electric (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 and LEAP-1A35A engines, all serial numbers (s/n).

LEAP-1B21, LEAP-1B23, LEAP-1B25, LEAP-1B27, LEAP-1B28, LEAP-1B28B1, LEAP-1B28B2, LEAP-1B28B2C, LEAP-1B28B3, LEAP-1B28BBJ1 and LEAP-1B28BBJ2 engines, all s/n.

LEAP-1C28, LEAP-1C30 and LEAP-1C30B1 engines, all s/n.

These engines are known to be installed on, but not limited to, certain Airbus A319, A320, A321, Boeing 737-8, 737-8200, 737-9 and COMAC C919 aeroplanes.

Definitions:

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



The SB: CFM International (CFM) Service Bulletin (SB) LEAP-1A-72-00-0519-01A-930A-D, LEAP-1B-72-00-0419-01A-930A-D and LEAP-1C-72-00-0100-01A-930A-D, as applicable.

Affected part:

For LEAP-1A and LEAP-1C engines:

Low Pressure Turbine (LPT) Stage 5 disk, having Part Number (P/N) 362-600-011-0 and having s/n GA003989, GA003997, GA006176, GA003991, GA009605, GA009603, GA010117, GA010645, GA010742, GA008019, GA008794, GA009872, GA010032, GA010120, GA008563, GA009874, GA009799, GA008811, GA010193, GA009602, GA010228 or GA014872;

For LEAP-1B engines:

LPT Stage 4 Disk-Stubshafts (LPT Stage 4 Disk) having P/N 364-001-611-0 and having s/n HG658293, HJ604057, HE226041 or HF527464;

LPT Stage 5 Disks having P/N 364-600-011-0 and having s/n GA010663, GA010432, GA010220, GA005334, GA010216, GA010072, GA011001, GA010668, GA010444, GA010439, GA011291, GA010213, GA008147, GA011277, GA010435, GA010211, GA009165, GA010665, GA009259, GA009265, GA008318, GA009264, GA010208, GA010069, GA010661 or GA011690.

Serviceable part: Any LPT stage 4 Disk-Stubshaft and LPT Stage 5 Disk, eligible for installation, which is not an affected part.

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

Group 2 engines are those that are not Group 1 engines.

Reason:

It has been determined that the affected parts may have reduced material properties due to non-conforming grain size, 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 or in-flight shut-down, 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 to prohibit reinstallation of affected parts.

While LPT Stage 5 disk P/N 362-600-011-0 are eligible for installation on LEAP-1C engines, on the effective date of this AD, no affected part is known to have been installed on any LEAP-1C28, LEAP-1C30 or LEAP-1C30B1 engine.

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 by this AD, unless the action(s) required by this AD have been already accomplished:



Replacement:

- (1) For Group 1 LEAP-1A and LEAP-1B engines: During the next piece part exposure or before exceeding the threshold as specified in Tables 1, 2 and 3 of SB LEAP-1A-72-00-0519-01A-930A-D or SB LEAP-1B-72-00-0419-01A-930A-D, as applicable, whichever occurs first after the effective date of this AD, replace the affected part with a serviceable part in accordance with the instructions of the SB.

Parts Installation:

- (2) For Group 1 and Group 2 engines: From the effective date of this AD, do not install an affected part on any engine.

Ref. Publications:

CFM SB LEAP-1A-72-00-0519-01A-930A-D original issue (Issue 001) dated 18 September 2024.

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

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

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

Remarks:

1. This Proposed AD will be closed for consultation on 03 January 2025.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. 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.
4. 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.

