



Airworthiness Directive

AD No.: 2022-0074

Issued: 27 April 2022

Note: This Airworthiness Directive (AD) 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.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301 or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303 or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

CFM INTERNATIONAL S.A.

Type/Model designation(s):

LEAP-1B engines

Effective Date: 11 May 2022

TCDS Number(s): EASA.E.115

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Transfer Gearbox Module Scavenge Screens – Inspection / Modification

Manufacturer(s):

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

Applicability:

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 serial numbers (s/n).

These engines are known to be installed on, but not limited to, Boeing 737-8, 737-9 and 737-8200 aeroplanes.

Definitions:

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

The SB: CFM International S. A. (CFM) Service Bulletin (SB) LEAP-1B-72-00-0365-01A-930A-D.

The modification SB: CFM SB LEAP-1B-72-00-0258-01A-930A-C.

Affected part: Radial drive shafts (RDS), having Part Number 92500D03 and an s/n as listed in Table 1 of the SB.



Groups: Group 1 are engines that have an affected part installed. Table 1 of the SB provides, for reference only, a list of engines known to be Group 1 at the time of issuance of the SB. Group 2 are engines that do not have an affected part installed.

Metallic particles: Any metallic particles, except fuzz (being any quantity of material which greatest dimension is 0.1016 mm / 0.004 in, or less) and machining curls.

Qualified engine shop visit: Any in-shop engine repair or inspection during which the fan frame shroud is separated from the fan hub.

Reason:

Occurrences have been reported of commanded engine in-flight shut-down prompted by oil filter bypass indication in the cockpit. Subsequent investigation identified the root cause as failure of the RDS bearing cage. Consequently, CFM published SB LEAP-1B-72-00-0222-01A-930A-D, and EASA published AD 2019-0137, requiring repetitive inspections and, depending on findings, corrective action(s).

After that AD was issued, further investigation by CFM identified an additional contributing factor to the in-service bearing cage failures. CFM revised the Airworthiness Limitation Sections (ALS), incorporating the requirements of EASA AD 2019-0137, and updating the inspections and in-service limits to address the contributing factors to these failures, and EASA issued AD 2020-0055, superseding EASA AD 2019-0137, to require accomplishment of the actions specified in the ALS.

Since that AD was issued, further occurrences of RDS bearing cage failure have been reported. Consequently, CFM published the SB, providing instructions for additional Transfer Gearbox (TGB) inspections for a limited batch of engines not having the modification SB embodied.

For the reason described above, this AD requires repetitive inspections and, depending on findings, accomplishment of applicable corrective action(s). This AD also requires modification of engines, and prohibits installation of two Group 1 engines on the same aeroplane.

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

Required as indicated, unless accomplished previously:

Inspection:

- (1) For Group 1 engines: Within 50 flight hours (FH) after the effective date of this AD and, thereafter, at intervals not exceeding 50 FH, inspect each TGB1 and TGB2 scavenge screen in accordance with the instructions of the SB.

Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, metallic particles, as defined in this AD, are found in a screen, accomplish all applicable corrective actions in accordance with the instructions of, and within the compliance time as specified in the SB.

Modification:

- (3) For Group 1 engines: During the next qualified engine shop visit starting on or after the effective date of this AD, modify the engine in accordance with the instructions of the



modification SB. After that modification, that engine is effectively considered to be a Group 2 engine.

Terminating Action(s):

- (4) Accomplishment of corrective action(s) on an engine, as required by paragraph (2) of this AD, does not constitute terminating action for the repetitive inspections as required by paragraph (1) of this AD for that engine.
- (5) Modification of an engine in accordance with the instructions of the modification SB, as required by paragraph (3) of this AD, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that engine.

Part(s) Installation:

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

Engine(s) Installation:

- (7) From the effective date of this AD, do not install a (further) Group 1 engine on an aeroplane that has a Group 1 engine installed.

Ref. Publications:

CFM SB LEAP-1B-72-00-0365-01A-930A-D issue 001 dated 25 October 2021, or issue 002 dated 22 February 2022, or issue 003 dated 26 April 2022.

CFM SB LEAP-1B-72-00-0258-01A-930A-C issue 001 dated 18 November 2019, or issue 002 dated 15 September 2020.

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

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD 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 AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, 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 AD 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 AD, please contact: CFM International S.A., Customer Support Centre, Telephone: +33 1 64 14 88 66, Fax: +33 1 64 79 85 55, E-mail: cfm.csc@safrangroup.com

or

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