



## Airworthiness Directive

**AD No.:** 2018-0216

**Issued:** 08 October 2018

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, 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 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-1A engines

**Effective Date:** 22 October 2018

**TCDS Number(s):** EASA.E.110

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 72 – Engine – Full Authority Digital Electronic Control Software – Replacement

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### Manufacturer(s):

Safran Aircraft Engines, formerly SNECMA (France); General Electric Aircraft Engines (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).

These engines are known to be installed on, but not limited to, Airbus A320-251N, A320-252N, A321-251N, A321-252N, A321-253N, A321-251NX, A321-252NX, and A321-253NX aeroplanes.

### Definitions:

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

**The SB:** CFM International S. A. (CFM) Service Bulletin (SB) LEAP-1A-73-00-0027-01A-930A-D Issue 001.

**Affected SW:** Full authority digital electronic control (FADEC) software (SW), Part Number (P/N) 2590M00P07 (version L1A0510) or earlier; and prognostic health monitoring (PHM) SW, P/N 2784M64P01 (version PL1A0510), or earlier.



**Not Affected SW:** FADEC SW P/N 2590M00P08 (version L1A0550) and PHM SW P/N 2784M64P02 (version PL1A0550), commonly referred to as FCS5.5 SW, or later versions of the FCS software.

**Groups:** Group 1 engines are those that have an electronic engine control (EEC) with affected SW installed. Group 2 engines are those that have both EECs with a not affected SW installed. An engine having s/n 598-782 or higher is a Group 2 engine, provided it is determined that the EEC SW currently installed on that engine is still a not affected SW.

**Reason:**

Several occurrences were reported of CFM LEAP-1A engines that were unable to accelerate to the target thrust during take-off on certain Airbus A320 NEO aeroplanes. Subsequent investigation determined that water can accumulate inside the FADEC pressure sub system (PSS), or discharge pressure (PS3) and compressor bleed pressure (P3B) sense lines.

This condition, if not corrected, could lead to a FADEC PS3 and/or P3B disagree fault, possibly resulting in loss of thrust and consequent reduced control of the aeroplane.

To address this potential unsafe condition, CFM defined new EEC SW, with improved capability to identify report the presence of PS3 and/or P3B disagree fault, and issued the SB providing modification instructions.

For the reason described above, this AD requires updating the EEC SW.

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

Required as indicated, unless accomplished previously:

**SW update:**

- (1) For Group 1 engines: Within 3 months after the effective date of this AD, update the EEC SW in accordance with the instruction of the SB.
- (2) Uploading a not affected SW on the engine EECs, or installing EECs having not affected SW on an engine in accordance with CFM instructions is an acceptable method to comply with the requirement of paragraph (1) of this AD for that engine.

**Parts Installation:**

- (3) Do not install on any engine an EEC with an affected SW installed, and do not upload an affected SW on any EEC, as required by paragraph (3.1) or (3.2) of this AD, as applicable.
  - (3.1) For Group 1 engines: After modification of that engine as required by paragraph (1) of this AD.
  - (3.2) For Group 2 engines: From the effective date of this AD.



**Ref. Publications:**

CFM International S.A. SB LEAP-1A-73-00-0027-01A-930A-D Issue 001 dated 30 July 2018.

The use of later approved revisions of the above-mentioned document 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. This AD was posted on 28 August 2018 as PAD 18-119 for consultation until 25 September 2018. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](#).
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](mailto:cfm.csc@safrangroup.com)

or

CFM Inc. Aviation Operations Centre, Telephone: +1 513-552-3272, or +1 877-432-3272, Fax: +1 877-432-3329, E-mail: [geae.aoc@ge.com](mailto:geae.aoc@ge.com), or [aviation.fleetsupport@ge.com](mailto:aviation.fleetsupport@ge.com).

