



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 20-022

Issued: 29 January 2020

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 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:

SAFRAN HELICOPTER ENGINES

Type/Model designation(s):

ARRIEL 2 engines

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

TCDS Number(s): EASA.E.001

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine Fuel & Control – Full Authority Digital Engine Control B / Digital Engine Control Unit – Inspection / Replacement

Manufacturer(s):

SAFRAN Helicopter Engines S.A. (SAFRAN), formerly Turboméca S.A.

Applicability:

ARRIEL 2C and 2S1 engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Airbus Helicopters AS 365 N3 and Sikorsky S-76C helicopters.

Definitions:

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

The MSB: SAFRAN Mandatory Service Bulletin (MSB) 292 73 2872.

Affected part: A full authority digital engine control (FADEC) B digital engine control unit (DECU), having an s/n as listed in the "concerned" list given in Appendix 1 of the electronic version of the MSB available on the SAFRAN Engine Life Customer Portal.



Serviceable part: A FADEC B DECU, which is not an Affected part, as defined in this AD.

Groups: Group 1 engines are those which have an affected part installed. Group 2 engines are those which do not have an affected part installed.

Reason:

Occurrences have been reported of FADEC B DECU error messages, which were found to be caused by blistering of the varnish on the DECU circuit board. Subsequent investigation determined that the use of a non-compliant primer is related to the blistering effect which, in wet conditions, can cause malfunction of the stepper motor.

This condition, if not detected and corrected, could lead to loss of automatic control on both engines concurrently, possibly resulting in reduced control of the helicopter.

To address this potentially unsafe condition, SAFRAN issued the MSB to provide instructions for identification and replacement of affected parts.

For the reason described above, this AD requires replacement of affected parts with serviceable parts. This AD also prohibits (re)installation of affected parts.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) For Group 1 engines: Within 1 400 engine operating hours after the effective date of this AD, replace the affected part with a serviceable part in accordance with the instructions of the MSB.

Parts Installation:

- (2) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install a FADEC B DECU on an engine, provided it is a serviceable part, as defined in this AD.

Ref. Publications:

SAFRAN MSB 292 73 2872 Version A dated 17 October 2019.

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 12 February 2020.
2. Enquiries regarding this PAD should be referred to the EASA Programming and Continued Airworthiness 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](#).

4. For any question concerning the technical content of the requirements in this PAD, please contact: www.tools.safran-helicopter-engines.com.

