

Airworthiness Directive

AD No.: 2023-0218

Issued: 19 December 2023

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:

SAFRAN HELICOPTER ENGINES

Type/Model designation(s):

MAKILA 1 engines

Effective Date: 02 January 2024

TCDS Number(s): EASA.E.072

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Critical Life-Limited Parts – Replacement

Manufacturer(s):

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

Applicability:

MAKILA 1A, 1A1, 1A2 engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France, Aérospatiale) AS 332 C, AS 332 C1, AS 332 L, AS 332 L1 and AS 332 L2 helicopters.

Definitions:

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

The SB: SAFRAN Mandatory Service Bulletin (SB) A298 72 0837 Version A.

ASLL: Authorized in-service life limit (ASLL) listed in the applicable Engine Maintenance Manual (EMM), task 05-10-01-200-801, as applicable.

Affected part: Axial wheel stage 1, axial wheel stage 2, axial wheel stage 3, centrifugal impeller, injection wheel, high pressure turbine disc 1 and high pressure turbine disc 2, having an s/n as listed in Appendix 1 of the SB.



Serviceable part: An affected part having a re-calculated service life not exceeding the ASLL; or axial wheel stage 1, axial wheel stage 2, axial wheel stage 3, centrifugal impeller, injection wheel, high pressure turbine disc 1 and high pressure turbine disc 2, which are not an affected part.

Re-calculated service life: For an affected part, the consumed life calculated in accordance with the instructions of section 2 of the SB.

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.

Reason:

It has been determined that the accumulated service life of certain critical parts may have been underestimated.

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

To address this potential unsafe condition, SAFRAN published the SB, as defined in this AD, listing the affected parts, and providing instructions to re-calculate their service life, as well as subsequent replacement instructions.

For the reasons described above, this AD requires the determination of the re-calculated service life of the affected parts and their replacement. This AD also provides the (re)installation conditions for the affected parts.

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

Required as indicated, unless accomplished previously:

Service Life Correction:

- (1) For Group 1 engines: Within 10 flight hours (FH) or 30 days, whichever occurs first after the effective date of this AD, determine the re-calculated service life of each affected part in accordance with the instructions of section 2 of the SB.

Replacement:

- (2) Depending on the re-calculated service life determined during the service-life correction as required by paragraph (1) of this AD, within the compliance time as defined in Table 1 of this AD, as applicable, replace each affected part with a serviceable part in accordance with approved SAFRAN maintenance instructions.



Table 1 – Replacement

Affected Part Status Determined during Service Life Correction	Compliance Time after Service Life Correction
200 engine cycles (EC) or more, before reaching the ASLL	Before the re-calculated service life exceeds the ASLL
Less than 200 EC before reaching the ASLL, or equal to the ASLL	Within 400 EC
Between 1 EC and 400 EC in excess of the ASLL	Before the re-calculated service life exceeds the ASLL by more than 400 EC, or within 10 FH, whichever occurs later
More than 400 EC in excess of the ASLL	Within 10 FH

Part(s) Installation:

- (3) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install an affected part on an engine, provided it is a serviceable part and that, thereafter, it is replaced with a serviceable part before the re-calculated service life of that part exceeds the ASLL.

Ref. Publications:

SAFRAN Mandatory SB A298 72 0837 Version A dated 15 November 2023.

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

Remarks:

- If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
- 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.
- Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
- 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.
- For any question concerning the technical content of the requirements in this AD, please contact: SAFRAN Helicopter Engines, S.A. at data-fleet.fr.she@safrangroup.com

