

Airworthiness Directive

AD No.: 2024-0218

Issued: 18 November 2024

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):

ARRIUS 2F and 2R engines

Effective Date: 02 December 2024

TCDS Number(s): EASA.E.031

Foreign AD: Not applicable

Supersedure: None

ATA 72 – Engine – Gas Generator High-Pressure Turbine Blades – Replacement

Manufacturer(s):

SAFRAN Helicopter Engines (SAFRAN), formerly Turboméca

Applicability:

ARRIUS 2F and ARRIUS 2R engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC120 B single-engine helicopters, and Bell Textron Canada Ltd B505 single-engine helicopters.

Definitions:

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

The MSB: SAFRAN Mandatory Service Bulletin (MSB) 319 72 4853 version B.

Affected part: High-pressure (HP) turbine blade having Part Number (P/N) 2 319 40 A5X 0 (ARRIUS 2F) or P/N 2 319 40 A64 0 (ARRIUS 2R), and an s/n as listed in Appendix 1 of the MSB.

Serviceable part: A HP turbine blade, eligible for installation in accordance with SAFRAN instructions, that is not an affected part; or an affected part that has not exceeded 2 500 engine

cycles (EC) for P/N 2 319 40 A5X 0 (ARRIUS 2F engines) or 5 000 EC for P/N 2 319 40 A64 0 (ARRIUS 2R engines) since first installation.

Groups: Group 1 engines are those which have at least one affected part installed. Group 2 engines are those which do not have any affected part installed.

Reason:

An investigation revealed that a change in the casting manufacturing process of the affected part had an effect on the porosity rate in the root of those parts. A non-conformant porosity rate can have an effect on the mechanical strength of the HP turbine blade, causing its premature rupture.

This condition, if not corrected, could lead to an uncommanded engine shutdown in flight which, on a single-engine helicopter, may result in a significant reduction of the control of a helicopter.

To address this potential unsafe condition, SAFRAN issued the MSB, providing instructions for implementation of the reduced use limit of the affected parts and for the replacement of affected parts before exceeding the reduced use limit.

For the reasons described above, this AD requires the replacement of the affected parts with the serviceable parts, and provides condition for installation of affected parts.

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 engines: Within the compliance time specified in Table 1 of this AD, as applicable, replace each affected part with a serviceable part in accordance with the instructions of the MSB.

Table 1 – Replacement Compliance Time

Engine Model	Compliance Time
ARRIUS 2F engines	Before exceeding 2 500 EC since first installation
ARRIUS 2R engines	Before exceeding 5 000 EC since first installation

Part(s) Installation:

- (2) For Group 1 and Group 2 engines: From the effective date of this AD, it is allowed to install an affected part on an HP turbine assembly, provided that the affected part is a serviceable part, as defined in this AD and that, following installation, it is replaced as required by paragraph (1) of this AD.

Ref. Publications:

SAFRAN SB 319 72 4853 version B dated 10 October 2024.



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 16 October 2024 as PAD 24-120 for consultation until 13 November 2024. No comments were received during the consultation period.
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 your nearest SAFRAN Helicopter Engines technical representative, or connect to www.tools.safran-helicopter-engines.com.

