Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 25-138

Issued: 04 September 2025

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):
ARRIUS 2 engines

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

TCDS Number(s): EASA.E.029

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2024-0195R1 dated 22 October 2024.

ATA 73 – Engine Fuel & Control – Electronic Engine Control Unit – Software Update
ATA 73 – Engine Fuel & Control – Preference Injector – Non-extinguishing Test / Replacement

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Manufacturer(s):
SAFRAN Helicopter Engines (SAFRAN), formerly Turboméca

Applicability:
ARRIUS 2B2, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters Deutschland (AHD) EC135 twin-engine helicopters.

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

The MSB1: SAFRAN Mandatory Service Bulletin (MSB) 319 73 2867 version D.

The MSB2: SAFRAN MSB 319 73 2868 version B.

The modification MSB1: SAFRAN MSB 319 73 2173 version A.

The modification MSB2: SAFRAN MSB 319 73 2172 version A.

Serviceable part: A preference injector, eligible for installation in accordance with SAFRAN instructions, that is new (not previously installed); or that accumulated less than 500 flight hours (FH) since new or since last repair, as defined in this AD.

Repair: A preference injector repair accomplished in accordance with the instructions of SAFRAN Component Maintenance Manual Ref. X 73 15 06.

Groups: Group 1 engines are those eligible for installation on AHD EC135 T2, EC135 T2+, EC635 T2 or EC635 T2+ helicopters which are in pre-TU 173 configuration. Group 2 engines are those in post-TU 173 configuration. Group 3 engines are those eligible for installation on AHD EC135 T3, EC635 T3 helicopters which are in pre-TU 172 configuration. Group 4 engines are those in post-TU 172 configuration.

Reason:

A review of the data collected by SAFRAN from engines in service indicated that the preference injector may over time clog due to fuel coking, decreasing its permeability.

This condition, if not detected and corrected, and if combined with a sharp reduction in the fuel flow during the flight after a pilot command, could lead to a flame out in the combustion chamber, resulting in engine uncommanded in-flight shut-down, and, in consequence, reduced control of the helicopter.

To address this potential unsafe condition, SAFRAN introduced two design changes (TU 117 and TU 142). In combination, these two design changes reduce the clogging rate, but are not able to remove the potential unsafe condition. Therefore, SAFRAN issued the MSB 319 73 2867 version C and MSB 319 73 2868 version A, providing instructions to accomplish a non-extinguishing test and replacement of the preference injector at intervals shorter than those published in the Engine Maintenance Manual. In addition, SAFRAN developed modification (mod) TU 173 (only for engines installed on AHD EC135 T2, EC135 T2+, EC635 T2, or EC635 T2+ helicopters) introducing an Electronic Engine Control Unit (EECU) software upgrade, which allows automatic accomplishment of the non-extinguishing test. SAFRAN published the modification MSB1 providing instructions for mod TU 173 embodiment into in-service engines. Consequently, EASA issued AD 2024-0195 (later revised to amend Groups) requiring accomplishment of non-extinguishing tests and replacement of the preference injector at reduced intervals, and upgrade of the EECUs' software.

Since that AD was issued, SAFRAN developed mod TU 172, which upgrades EECU software allowing automatic accomplishment of the non-extinguishing test for engines installed on AHD EC135 T3 or EC635 T3 helicopters, and published the modification MSB2 providing instructions for that mod embodiment into in-service engines.

For the reasons described above, this AD retains the requirements of EASA AD 2024-0195R1, which is superseded, and additionally requires modification of Group 3 engines.

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:

Non-extinguishing Tests:

(1) For Group 1, Group 2, Group 3 and Group 4 engines: For engines having mod TU 117 and mod TU 142 embodied: Within 100 FH(*) after 01 November 2024 [the effective date of EASA AD 2024-0195R1], without exceeding 300 FH since last non-extinguishing test, and, thereafter, at intervals not exceeding 100 FH(*), perform a non-extinguishing test in accordance with the instructions of the MSB1 (see Note 1 of this AD).

(2) For Group 1, Group 2, Group 3 and Group 4 engines: For engines in pre-TU 117 or pre-TU 142 configuration: Within 100 FH(*) after 01 November 2024 [the effective date of EASA AD 2024-0195R1], without exceeding 100 FH since last non-extinguishing test, and, thereafter, at intervals not exceeding 100 FH(*), perform a non-extinguishing test in accordance with the instructions of the MSB1 (see Note 1 of this AD).

Note 1: A non-cumulative tolerance of 10% may be applied to the compliance times identified by an asterisk (*) in paragraphs (1), (2) and (6) of this AD to allow synchronization of the required inspections with other maintenance tasks, for which a non-cumulative tolerance is already granted in the applicable Maintenance Manual.

Software Upgrade:

(3) For Group 1 engines: Within 24 months after 01 November 2024 [the effective date of EASA AD 2024-0195R1], modify the EECU in accordance with the instructions of the modification MSB1. After this modification the engine is considered to be a Group 2 engine.

(4) For Group 3 engines: Within 24 months after the effective date of this AD, modify the EECU in accordance with the instructions of the modification MSB2. After this modification the engine is considered to be a Group 4 engine.

Alternative Method of Compliance:

(5) Accomplishment of a repair, as defined in this AD, or of an overhaul on an engine in accordance with the SAFRAN Overhaul Manual, is an acceptable alternative method to the accomplishment of a manual non-extinguishing test as required by paragraph (1) or (2), as applicable, of this AD.

Replacement:

(6) For Group 1 and Group 3 engines: Within 100 FH after 01 November 2024 [the effective date of EASA AD 2024-0195R1], or before the preference injector accumulates 500 FH(*) since new or since last repair, whichever occurs later, without exceeding 850 FH since new or since last repair, and, thereafter, at intervals not exceeding 500 FH(*), replace the preference injector with a serviceable part in accordance with the instructions of the MSB2 (see Note 1 of this AD).

Terminating Action:

(7) Modification of an engine in accordance with the instructions of the modification MSB1 or the modification MSB2 constitutes terminating action for the repetitive replacement as required by paragraph (6) of this AD for that engine.

Credit:

(8) Accomplishment of non-extinguishing tests on an engine, before the effective date of this AD, in accordance with the instructions of MSB 319 73 2867 version B or version C are acceptable to comply with the initial requirements of paragraph (1) or (2) of this AD, as applicable, for that engine.

(9) Accomplishment of a replacement on an engine, before the effective date of this AD, in accordance with the instructions of MSB 319 73 2868 version A is acceptable to comply with the initial requirements of the paragraph (6) of this AD for that engine.

Part(s) Installation:

(10) From 01 November 2024 [the effective date of EASA AD 2024-0195R1], it is allowed to install a preference injector on an engine, provided that the preference injector is a serviceable part, as defined in this AD.

(11) For Group 1 and Group 2 engines: Do not install an EECU pre-mod TU 173 on any engine, as required by paragraph (11.1) or (11.2) of this AD, as applicable:

(11.1) For Group 1 engines: After modification of the engine as required by paragraph (3) of this AD.

(11.2) For Group 2 engines: From 01 November 2024 [the effective date of EASA AD 2024-0195R1].

(12) For Group 3 and Group 4 engines: Do not install an EECU pre-mod TU 172 on any engine, as required by paragraph (12.1) or (12.2) of this AD, as applicable:

(12.1) For Group 3 engines: After modification of the engine as required by paragraph (4) of this AD.

(12.2) For Group 4 engines: From the effective date of this AD.

Ref. Publications:

SAFRAN MSB 319 73 2867 version B dated 05 July 2024 and version C dated 19 August 2024 and version D dated 28 July 2025.

SAFRAN MSB 319 73 2868 version A dated 05 July 2024 and version B dated 28 July 2025.

SAFRAN MSB 319 73 2173 version A dated 13 August 2024, including ERRATUM dated 10 September 2024.

SAFRAN MSB 319 73 2172 version A dated 28 July 2025.

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

Remarks:

1. This Proposed AD will be closed for consultation on 02 October 2025.

2. Enquiries regarding this PAD should be referred to the EASA Safety 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. This may include reporting on the same or similar components, other than those covered by the design to which this PAD 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.

4. For any question concerning the technical content of the requirements in this PAD, please contact your nearest SAFRAN Helicopter Engines technical representative, or connect to www.tools.safran-helicopter-engines.com.