



Airworthiness Directive

AD No.: 2023-0110

Issued: 26 May 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):

ARRIEL 1 engines

Effective Date: 09 June 2023

TCDS Number(s): EASA.E.073

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2022-0256 dated 19 December 2022.

ATA 26 – Fire Protection – Fire Detectors – Replacement

Manufacturer(s):

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

Applicability:

ARRIEL 1C, ARRIEL 1C1, ARRIEL 1C2, ARRIEL 1K and ARRIEL 1K1 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, Sud Aviation) SA 365 C3, SA 365 N, SA 365 N1 and AS 365 N2 helicopters; and Leonardo Helicopters (formerly Agusta) A109K2 helicopters.

Definitions:

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

The SB: SAFRAN Mandatory Alert Service Bulletin (SB) A292 26 0864 Version B.

Affected part: Fire detectors, having a Part Number (P/N), s/n and type as listed in Appendix 1 of this AD.

Serviceable part: Any fire detector that is not an affected part.

Affected engine: An engine that has at least one affected part installed.



Affected helicopter: A helicopter that has two affected engines installed.

Reason:

Occurrences were reported of spurious engine fire warnings. The subsequent investigation results identified a manufacturing non-compliance on the fire detectors, which caused a shift of the detection threshold towards temperature values that are lower than specified, potentially leading to a spurious engine fire warning. When two engines on a helicopter are fitted with an affected part, an engine fire warning could occur on both engines during the same flight.

This condition, if not corrected, could lead to commanded engine in-flight shut-down, possibly resulting in damage to, and consequent reduced control of, the helicopter.

To address this potential unsafe condition, SAFRAN issued SB A292 26 0864 Version A, addressing certain ARRIEL 1 engine models, to provide instructions to identify and replace the affected parts. Consequently, EASA issued AD 2022-0256 to require replacement, and to prohibit (re)installation, of the affected parts.

Since that AD was issued, it was confirmed that some additional ARRIEL 1 models have to be addressed, and SAFRAN issued the SB accordingly.

For the reasons described above, this AD retains the requirements of EASA AD 2022-0256, which is superseded, and expands the Applicability.

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

Required as indicated, unless accomplished previously:

Replacement:

- (1) For affected helicopters: Within 30 flight hours or 60 days, whichever occurs first after the reference date, as identified in Table 1 of this AD, as applicable, replace the affected parts installed on one of the affected engines with serviceable parts, as defined in this AD, in accordance with the instructions of section 2 of the SB.

Table 1 – Reference Date

Engine Model	Reference Date
ARRIEL 1C, ARRIEL 1C1 and ARRIEL 1C2	02 January 2023 [the effective date of EASA AD 2022-0256]
ARRIEL 1K and ARRIEL 1K1	The effective date of this AD

Credit:

- (2) Replacement of the affected parts accomplished on a helicopter before the effective date of this AD in accordance with the instructions of the SAFRAN SB A292 26 0864 Version A, is an acceptable method to comply with the requirements of paragraph (1) of this AD for that helicopter.



Part(s) Installation:

- (3) For all engines: From the reference date, as identified in Table 1 of this AD, as applicable, do not install an affected part on any engine.

Engine Installation:

- (4) From the reference date, as identified in Table 1 of this AD, as applicable, it is allowed to install an engine on any helicopter, provided that, prior to installation, it is determined that no affected part is installed on that engine.

Ref. Publications:

SAFRAN Mandatory Alert SB A292 26 0864 Version A dated 14 December 2022, or Version B dated 16 May 2023.

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. 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.
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: SAFRAN Helicopter Engines, S.A. at data-fleet.fr.she@safrangroup.com.



Appendix 1 – Affected Parts

Fire Detector Type	200°C
Supplier P/N	H242-1
SAFRAN P/N	9550177170
s/n	
MT4786	MT4800
MT4790	MT4801
MT4791	MT4803
MT4792	MT4804
MT4794	MT4846
MT4795	MT4847
MT4797	MT4860
MT4799	MT4865



Appendix 1 – Affected Parts (continued)

Fire Detector Type		300°C
Supplier P/N		H342-1
SAFRAN P/N		9550177140
s/n		
BG10890	BG10908	BG10937
BG10892	BG10909	BG10938
BG10893	BG10910	BG10940
BG10894	BG10913	BG10941
BG10895	BG10914	BG10942
BG10896	BG10915	BG10944
BG10897	BG10916	BG10945
BG10898	BG10917	BG10946
BG10899	BG10919	BG10949
BG10900	BG10924	BG10951
BG10901	BG10926	BG10953
BG10903	BG10927	BG10957
BG10904	BG10928	
BG10906	BG10929	
BG10907	BG10935	

