



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2023-1397; Project Identifier MCAI-2023-00014-E; Amendment
39-22626; AD 2023-24-09]**

RIN 2120-AA64

**Airworthiness Directives; Safran Helicopter Engines, S.A. (Type Certificate
Previously Held by Turbomeca S.A.) Engines**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Safran Helicopter Engines, S.A. (Safran) (type certificate previously held by Turbomeca S.A.) Model Arrius 2R engines. This AD is prompted by reports of inconsistencies between the torque (TQ) and measured gas temperature (MGT) conformation values recorded in the avionics and the TQ and MGT conformation values recorded on the engine log cards following replacement of the M01 and M02 modules installed on the engine. This AD requires a one-time check of the consistency between the TQ and MGT conformation values recorded in the avionics and the values recorded on the engine log cards, and, if necessary, recalibrating the values and updating the engine logs, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF
PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2023-1397; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For service information identified in this final rule, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: ad.easa.europa.eu.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2023-1397.

FOR FURTHER INFORMATION CONTACT: Kevin Clark, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (781) 238-7088; email: kevin.m.clark@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Safran Helicopter Engines, S.A. Model

Arrius 2R engines. The NPRM published in the *Federal Register* on July 12, 2023 (88 FR 44232). The NPRM was prompted by EASA AD 2022-0265R1, dated January 6, 2023 (EASA AD 2022-0265R1) (also referred to as the MCAI), issued by EASA, which is the Technical Agent for the Member States of the European Union. The MCAI states that inconsistencies were reported between the TQ and MGT conformation values recorded in the avionics and the values recorded on the engine log cards following replacement of the M01 or M02 modules installed on the engine. This condition, if not corrected, could affect the engine power assurance check and lead to underestimated or overestimated TQ and MGT conformation values. Underestimated MGT conformation values could lead to an exceedance of the certified thermal limit of the high-pressure (HP) blades, possibly resulting in HP blade rupture with consequent sudden power loss and release of low-energy debris. Underestimated TQ conformation values could lead to overpassing the helicopter transmission limit. Overestimated TQ and MGT conformation values could lead to an electronic engine control unit embedded value that could result in power non-availability. Each of the above conditions could result in reduced control of the helicopter.

In the NPRM, the FAA proposed to require accomplishing the actions specified in the MCAI, except for any differences identified as exceptions in the regulatory text. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1397.

Discussion of Final Airworthiness Directive

The FAA received a comment from one commenter, Summit Helicopters, Inc (Summit). The following presents the comments received on the NPRM and the FAA's

response to each comment.

Request to Not Incorporate the EASA AD by Reference

Summit objected to incorporating the foreign government's AD by reference in FAA ADs, including this one. Summit mentioned that the work of revising the EASA AD to match the exceptions in the AD significantly increases the paperwork and hours needed to complete the requirements of the AD. Summit also objected to requiring U.S.-based mechanics to access foreign government websites to comply with the AD. Summit pointed out that accessing the foreign government website to retrieve and, further, modify the EASA AD with the exceptions contained in the FAA AD, specifically to comply, has the potential for confusion, especially with to the differing effective dates of the EASA AD and the FAA AD. Summit suggested that the FAA instead copy the required actions from the foreign AD into the FAA AD. The FAA also infers that Summit is requesting that the FAA discontinue the incorporation by reference of foreign ADs in all FAA ADs.

The FAA disagrees with the request. While this newer type of AD format results in another document needing to be reviewed by the mechanic, there is a benefit to operators that is not readily apparent. Most MCAIs permit using future approved revisions of required and related material without the need for an operator to request an alternative method of compliance (AMOC). The FAA is not permitted to include “or future approved revisions” directly in an AD. When an MCAI is not incorporated by reference, the FAA would require operators to be issued an AMOC allowing future, alleviating revisions of required material. Therefore, this method minimizes the need for AMOCs. Finally, since the MCAI is made available within the docket on regulations.gov when the NPRM is published, it is unnecessary for a U.S.-based person to access a foreign website to obtain a copy.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information under 1 CFR Part 51

The FAA reviewed EASA AD 2022-0265R1, which specifies instructions for a one-time check of the consistency between the TQ and MGT conformation values recorded in the avionics and the values recorded in the engine log cards, and, if necessary, recalibrating the values and updating the engine logs.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 145 engines installed on helicopters of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Perform consistency check	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$12,325

The FAA estimates the following costs to do any necessary recalibration that would be required based on the results of the consistency check. The agency has no way of determining the number of aircraft that might need recalibration:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Recalibrate conformation values and update records	1 work-hour X \$85 per hour = \$85	\$0	\$85

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2023-24-09 Safran Helicopter Engines, S.A. (Type Certificate Previously Held by Turbomeca, S.A.): Amendment 39-22626; Docket No. FAA-2023-1397; Project Identifier MCAI-2023-00014-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Safran Helicopter Engines, S.A. (type certificate previously held by Turbomeca S.A.) Model Arrius 2R engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7700, Engine Indicating System.

(e) Unsafe Condition

This AD was prompted by reports of inconsistencies between the torque (TQ) and measured gas temperature (MGT) conformation values recorded in the avionics and the TQ and MGT conformation values recorded on the engine log cards following replacement of the M01 or M02 modules installed on the engine. The FAA is issuing this AD to address inconsistencies between the TQ and MGT conformation values recorded. The unsafe condition, if not addressed, could result in reduced control of the helicopter due to one or more of the following: a power non-availability; a high-pressure blade rupture with consequent power loss and release of low-energy debris; or an overpassing of the helicopter transmission limit.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified in paragraphs (h) and (i) of this AD: Perform all required actions within the compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2022-0265R1, dated January 6, 2023 (EASA AD 2022-0265R1).

(h) Exceptions to EASA AD 2022-0265R1

(1) Where EASA AD 2022-0265R1 refers to January 4, 2023 (the effective date of the original issue of EASA AD 2022-0265), this AD requires using the effective date of this AD.

(2) This AD does not adopt the Remarks paragraph of EASA AD 2022-0265R1.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2022-0265R1 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact Kevin Clark, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (781) 238-7088; email: kevin.m.clark@faa.gov.

(I) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2022-0265R1, dated January 6, 2023.

(ii) [Reserved]

(3) For EASA AD 2022-0265R1, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this EASA AD on the EASA website at ad.easa.europa.eu.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on November 30, 2023.

Ross Landes,
Deputy Director for Regulatory Operations, Compliance & Airworthiness Division,
Aircraft Certification Service.

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