



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0100; Project Identifier MCAI-2020-00309-E]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Safran Helicopter Engines, S.A. Arriel 2C and Arriel 2S1 model turboshaft engines. This proposed AD was prompted by reports of error messages on the full authority digital engine control (FADEC) B digital engine control unit (DECU), caused by blistering of the varnish on the DECU circuit board. This proposed AD would require the replacement of certain FADEC B DECUs. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12 140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, 40220 Tarnos, France; phone: +33 (0) 5 59 74 40 00. 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 (781) 238-7759.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100; 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 NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: wego.wang@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0100; Project Identifier MCAI-2020-00395-E” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2020-0046, dated March 4, 2020 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

Occurrences have been reported of FADEC B DECU error messages, which were found to be caused by blistering of the varnish on the DECU circuit board. Subsequent investigation determined that the use of a non-compliant primer is related to the blistering effect which, in wet conditions, can cause malfunction of the stepper motor.

This condition, if not corrected, could lead to loss of automatic control on both engines concurrently, possibly resulting in reduced control of the helicopter.

To address this potentially unsafe condition, SAFRAN issued the MSB, as defined in this [EASA] AD, to provide instructions for identification and replacement of affected parts.

For the reason described above, this [EASA] AD requires replacement of affected parts with serviceable parts. This [EASA] AD also prohibits (re-)installation of affected parts.

You may obtain further information by examining the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0100.

FAA's Determination

This product has been approved by EASA and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified the FAA of the unsafe condition described in the MCAI and service information. The FAA is issuing this NPRM because the agency evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Safran Helicopter Engines Note Technique AA187866, Version A, dated October 18, 2019. This service information identifies the serial numbers (S/Ns) of certain FADEC B DECU's installed on Arriel 2C and Arriel 2S1 model turboshaft engines. 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.

Other Related Service Information

The FAA reviewed Safran Helicopter Engines Mandatory Service Bulletin (MSB) No. 292 73 2872, Version A, dated October 17, 2019. This MSB describes procedures for identifying the S/Ns of certain FADEC B DECU's and replacing certain FADEC B DECU's on Arriel 2C and Arriel 2S1 model turboshaft engines.

Proposed AD Requirements in This NPRM

This proposed AD would require the replacement of certain FADEC B DECU's installed on Safran Helicopter Engines Arriel 2C and Arriel 2S1 model turboshaft engines.

Differences Between this Proposed AD and the MCAI or Service Information

Safran Helicopter Engines MSB No. 292 73 2872 is applicable to Arriel 2C, 2 C-PM, and Arriel 2S1 model turboshaft engines. This proposed AD is only applicable to Arriel 2C and Arriel 2S1 model turboshaft engines. There is no Arriel 2 C-PM model turboshaft engine type certificated in the United States.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 148 engines installed on helicopters of U.S. registry.

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

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Replace the FADEC B DECU	1 work-hour x \$85 per hour = \$85	\$0	\$85	\$12,580

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

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would 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 Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

Safran Helicopter Engines, S.A. (Type Certificate Previously Held by Turbomeca, S.A.): Docket No. FAA-2021-0100; Project Identifier MCAI-2020-00309-E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 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.) Arriel 2C and Arriel 2S1 model turboshaft engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7321, Fuel Control/Turbine Engines.

(e) Unsafe Condition

This AD was prompted by reports of error messages of the full authority engine control (FADEC) B digital engine control unit (DECU), caused by blistering of the varnish on the DECU circuit board. The FAA is issuing this AD to prevent failure of the FADEC B DECU. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the helicopter.

(f) Compliance

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

(g) Required Actions

For affected engines having an installed FADEC B DECU with a serial number (S/N) identified in Safran Helicopter Engines Note Technique AA187866, Version A, dated October 18, 2019 (the Note Technique), within 1,400 engine operating hours after the effective date of this AD, replace the FADEC B DECU with a part eligible for installation.

(h) Installation Prohibition

After the effective date of this AD, do not install onto any engine a FADEC B DECU having an S/N listed in the Note Technique.

(i) Definition

For the purpose of this AD, a part eligible for installation is a FADEC B DECU that does not have an S/N listed in the Note Technique.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO 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 ECO Branch, send it to the attention of the person identified in Related Information. You may email your request 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) Related Information

(1) For more information about this AD, contact Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: wego.wang@faa.gov.

(2) Refer to European Union Aviation Safety Agency AD 2020-0046, dated March 4, 2020, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating it in Docket No. FAA-2021-0100.

(3) For service information identified in this AD, contact Safran Helicopter Engines, S.A., Avenue du 1er Mai, 40220 Tarnos, France; phone: +33 (0) 5 59 74 40 00. You may view this referenced 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 (781) 238-7759.

Issued on February 18, 2021.

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

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