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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0949; Product Identifier 2018-NE-20-AD; Amendment 39-19484; AD 2018-22-11]

RIN 2120-AA64

Airworthiness Directives; Safran Helicopter Engines, S.A., Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Safran Helicopter Engines, S.A. (Safran Helicopter Engines), ASTAZOU XIV B and H model engines with certain 3rd-stage turbine wheels installed. This AD requires initial and repetitive inspections of the 3rd-stage turbine wheels. This AD was prompted by a report that six 3rd-stage turbine wheels were returned to service after a repair that could result in exceedance of the allowable vibration threshold during operation. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective March 18, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of March 18, 2019.

We must receive comments on this AD by April 15, 2019.

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 http://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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Safran Helicopter Engines service information identified in this final rule, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: +33 5 59 74 45 15; internet address:

https://www.safran-helicopter-engines.com/services/technical-assistance. You may view this service information at the FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0949.

Examining the AD Docket

You may examine the AD docket on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0949; 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), the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

SUPPLEMENTARY INFORMATION:
Discussion

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2018-0085, dated April 13, 2018 (referred to after this as "the MCAI"), to address an unsafe condition for the specified products. The MCAI states:

> Safran Helicopter Engines reported that an identified batch of stage 3 turbine wheels were released to service after repair in spite of the fact that the natural frequency of the turbine blades installed on those wheels did not comply with the acceptance criteria. Excessive turbine blade vibration may lead to progressive crack initiation on the rear face of the affected turbine wheel.
>
> This condition, if not detected and corrected, could lead to rupture of a turbine blade and its associated piece of rim, possibly resulting in an un-commanded engine in-flight shut-down and/or release of high energy debris, with consequent damage to, and/or reduced control of, the helicopter.
>
> To address this potentially unsafe condition, Safran Helicopter Engines issued the MSB to provide inspections instructions.
>
> For the reasons described above, this AD requires repetitive inspections of the affected parts and, depending on findings, accomplishment of applicable corrective action(s).

You may obtain further information by examining the MCAI in the AD docket on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0949.

Related Service Information Under 1 CFR Part 51

We reviewed Safran Helicopter Engines Mandatory Service Bulletin (MSB) 283 72 0813, Version A, dated February 26, 2018. The MSB describes procedures for inspecting the rear face of the 3rd-stage turbine wheel. 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 the ADDRESSES section.

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 us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all the relevant information provided by EASA and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires initial and repetitive inspections of 3rd-stage turbine wheels.

FAA's Justification and Determination of the Effective Date

No domestic operators use this product. Therefore, we find good cause that notice and opportunity for prior public comment are unnecessary. In addition, for the reason stated above, we find that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2018-0949 and Product Identifier 2018-NE-20-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. We will consider all comments received by the closing date and may amend this final rule because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this final rule.

Costs of Compliance

We estimate that this AD affects zero engines installed on helicopters of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect the 3rd-stage turbine wheel	5 work-hours × $85 per hour = $425	$0	$425	$0

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need this replacement:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace the 3rd-stage turbine wheel	8 work-hours × $85 per hour = $680	$217,131	$217,811

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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

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 this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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.

Adoption of 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 (AD):

2018-22-11 Safran Helicopter Engines (Type Certificate previously held by Turbomeca, S.A.): Amendment 39-19484; Docket No. FAA-2018-0949; Product Identifier 2018-NE-20-AD.

(a) Effective Date

This AD is effective March 18, 2019.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Safran Helicopter Engines, S.A. (Safran Helicopter Engines), ASTAZOU XIV B and H model engines with the 3rd-stage turbine wheels specified in Figure 1 to paragraph (c) of this AD installed.

Figure 1 to Paragraph (c) of This AD–3rd-Stage Turbine Wheels

Part Nos.	Serial Nos.
0 265 25 706 0	AD78691AD, AD78703AD, AD93845AD, CC52860, RD39596
0 265 25 705 0	L232AD

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by a report that six 3rd-stage turbine wheels were returned to service after a repair that could result in exceedance of the allowable vibration threshold during operation. We are issuing this AD to prevent failure of the 3rd-stage turbine wheel. The unsafe condition, if not addressed, could result in loss of engine power and reduced control of the helicopter.

(f) Compliance

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

(g) Required Action

(1) Perform an inspection of the 3rd-stage turbine wheel as follows:

(i) Before exceeding 400 engine cycles since the last engine overhaul, or within 50 engine start stop cycles after the effective date of this AD, whichever occurs later, inspect the rear face of each

affected 3rd-stage turbine wheel in accordance with the Accomplishment Instructions, paragraphs 2.4.2 and 2.4.3, in Safran Helicopter Engines Mandatory Service Bulletin (MSB) 283 72 0813, Version A, dated February 26, 2018.

(ii) After that, repeat the inspection required by paragraph (g)(1)(i) of this AD at intervals not to exceed 400 engine cycles since the last inspection.

(iii) A one-time, non-cumulative tolerance of 50 engine cycles may be applied to the repetitive inspection interval required by paragraph (g)(1)(ii) of this AD.

(2) If a crack indication is found during any inspection required by paragraph (g)(1) of this AD, remove the engine from service and repair the 3rd-stage turbine wheel in accordance with the Accomplishment Instructions, paragraph 4.3, in Safran Helicopter Engines MSB 283 72 0813, Version A, dated February 26, 2018.

(h) Terminating Action

A repair of the 3rd-stage turbine wheel in accordance with the Accomplishment Instructions, paragraph 4.3, in Safran Helicopter Engines MSB 283 72 0813, Version A, dated February 26, 2018, constitutes terminating action for the requirements of this AD for that engine.

(i) Definition

For the purpose of this AD, calculate "non-cumulative tolerance" by adding 50 engine cycles to the inspection interval of 400 engine cycles since the last inspection. For example, you may add 50 additional engines cycles to the 400 cycles since last inspection requirement to obtain an inspection interval of 450 engine cycles. Once this non-cumulative tolerance has been applied, all repetitive inspection intervals are required within 400 engine cycles of the previous inspection.

(j) No Reporting Requirement

No reporting requirement contained within the MSB referenced in paragraphs (g)(1) and (2) of this AD are required by this AD.

(k) 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 certification office, send it to the attention of the person identified in paragraph (l)(1) of this AD. 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.

(l) Related Information

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2018-0085, dated April 13, 2018, for more information. You may examine the EASA AD in the AD docket on the internet at http://www.regulations.gov by searching for and locating it in Docket No. FAA-2018-0949.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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) Safran Helicopter Engines Mandatory Service Bulletin 283 72 0813, Version A, dated February 26, 2018.

(ii) [Reserved]

(3) For Safran Helicopter Engines service information identified in this AD, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: +33 5 59 74 45 15; internet address: https://www.safran-helicopter-engines.com/services/technical-assistance.

(4) You may view this service information at FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives .gov/federal-register/cfr/ibr-locations.html.

Issued in Burlington, Massachusetts, on February 21, 2019.
Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.