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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NE-23-AD; Amendment 39-12833; AD 2002-15-05]

RIN 2120-AA64

Airworthiness Directives; Turbomeca Makila 1 A, 1 A1, and 1 A2 Turboshaft Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to Turbomeca Makila 1 A, 1 A1, and 1 A2 turboshaft engines. This action requires replacing certain digital electronic control units (DECU's) and electronic control units (ECU's) with modified DECU's and ECU's. This amendment is prompted by a report of an uncontained engine turbine wheel failure and the subsequent loss of control of the helicopter. The actions specified in this AD are intended to prevent an engine overspeed condition resulting from the failure of two or more NTL channels.

DATES: Effective August 16, 2002. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of August 16, 2002.

Comments for inclusion in the Rules Docket must be received on or before September 30, 2002.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2001-NE-23-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Turbomeca, 40220 Tarnos, France; telephone (33) 05 59 74 40 00; fax (33) 05 59 74 45 15. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Glorianne Niebuhr, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7132; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The Direction Generale De L'Aviation Civile (DGAC), which is the airworthiness authority for France, recently notified the FAA that an unsafe condition may exist on Turbomeca Makila 1 A, 1 A1, and 1 A2 turboshaft engines. The DGAC advises that there has been an accident in which the helicopter experienced an engine overspeed, which resulted in an uncontained power turbine burst and the failure of both engines. Investigation has determined that the power turbine overspeed was caused by a failure of an engine-to-main gearbox (MGB) connection. One of the two failed NTL channels could be selected by the ECU and used to set the gas generator (Ng) demand, which in turn could cause an overspeed condition. Modification TU 203 to the ECU's that are used on the Makila 1 A and 1 A1 turboshaft engines improves failure detection of the ECU and simulates a fixed power turbine speed (Npt) if two of the three channels fail. Modification TU 215 to the ECU's used on the Makila 1A and 1A1 turboshaft engines changes the ceramic case timer to a metal case timer, which improves the unit's mechanical resistance. The simulated fixed Npt causes the gas generator to decelerate to a safe level. Modification TU 205C to the DECU's used on the Makila 1 A2 turboshaft engines upgrades the DECU software from version 6.01 to version 7.01. That upgrade improves the failure detection of the DECU and simulates a revised fixed Npt when both channels fail. The revised simulated fixed Npt value drives the gas generator to decelerate to 65% instead of the 85% value before modification. The 85% value before modification may not have been enough to avoid Npt overspeed.

The compliance times required by this AD were determined as a function of the manufacturing rate of the required parts and the maximum availability of the repairing centers.

Manufacturer's Service Information

Turbomeca has issued the following service bulletins (SB's):

- SB No. 298 73 0149, dated January 13, 2000, that specifies procedures for incorporating modification TU 205C on DECU's used on Makila 1 A2 turboshaft engines.
- SB No. 298 73 0166, dated October 5, 2001, that specifies procedures for incorporating modification TU 215 on ECU's used on Makila 1 A and 1 A1 turboshaft engines.

The DGAC classified these service bulletins as mandatory and issued AD's 2000-068(A), dated February 9, 2000, and 2001-546(A), dated November 14, 2001, in order to assure the airworthiness of these Turbomeca engines in France.

Bilateral Agreement Information

This engine model is manufactured in France and is type certificated for operation in the United States under the provisions of Sec. 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DGAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DGAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

FAA's Determination of an Unsafe Condition and Required Actions

Since an unsafe condition has been identified that is likely to exist or develop on other Turbomeca Makila 1 A, 1 A1, and 1 A2 turboshaft engines of the same type design, this AD is being issued to prevent an engine overspeed condition resulting from the failure of two or more NTL channels. This AD requires replacing the Makila 1 A and 1 A1 ECU's, P/N's 0 177 69 810 0, 0 177 69 811 0, 0 177 69 812 0, 0 177 69 813 0, 0 177 69 814 0, 0 177 69 815 0, 0 177 69 816 0, 0 177 69 817 0, 0 177 69 818 0, 0 177 69 819 0, 0 177 69 820 0, and 0 177 69 824 0, 0 177 69 825 0, 0 177 69 826 0, 0 177 69 827 0, 0 177 69 828 0, and 0 177 69 829 0; with ECU's that have been modified to modification standard TU 215. This AD also requires replacing Makila 1 A2 DECU's, P/N 70CMB01040, with modified DECU's, P/N 70CMB01050.

Immediate Adoption of This AD

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2001-NE-23-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-15-05 Turbomeca: Amendment 39-12833. Docket No. 2001-NE-23-AD.

Applicability

This airworthiness directive (AD) is applicable to Turbomeca Makila 1 A, 1 A1, and 1 A2 turboshaft engines with digital electronic control units (DECU's) and electronic control units (ECU's) that have a part number (P/N) listed in the following Table 1:

TABLE 1.—ECU AND DECU P/N'S

ECU or DECU P/N	Used on
0 177 69 810 0, 0 177 69 811 0, 0 177 69 812 0, 0 177 69 813 0, 0 177 69 814 0, 0 177 69 815 0, 0 177, 69 816 0, 0 177 69 817 0, 0 177 69 818 0, 0 177 69 819 0, 0 177 69 820 0, 0 177 69 824 0, 0 177 69, 825 0, 0 177 69 826 0, 0 177 69 827 0, 0 177 69 828 0, and 0 177 69 829 0.	Makila 1 A and 1 A1 engines.
70CMB01040	Makila 1 A2 engines.

These engines are installed on, but not limited to Eurocopter France model AS 332C, AS 332L, AS 332L1 and AS 332L2, helicopters.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required within 45 days after the effective date of this AD, unless already done.

To prevent an engine overspeed condition resulting from the failure of two or more NTL channels, do the following:

(a) For Makila 1 A and 1 A1 engines do either of the following:

(1) Replace ECU's that have a P/N listed in Table 1 of this AD, with ECU's that have been modified to modification standard TU 215, or

(2) Replace the comparator / selector circuit board in accordance with Turbomeca service bulletin (SB) 298 73 0166, dated October 5, 2001.

(b) For Makila 1 A2 engines, replace DECU, P/N 70CMB01040, with modified DECU, P/N 70CMB01050. Information on the modified DECU may be found in Turbomeca service bulletin (SB) 298 73 0149, dated January 13, 2000.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated By Reference

(e) The inspection must be done in accordance with Turbomeca Service Bulletin No. 298 73 0166, dated October 5, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Turbomeca, 40220 Tarnos, France. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Note 3: The subject of this AD is addressed in DGAC airworthiness directives 2000-068(A), dated February 9, 2000, and 2001-546(A), dated November 14, 2001.

Effective Date

(f) This amendment becomes effective on August 16, 2002.

Issued in Burlington, Massachusetts, on July 23, 2002.
Francis A. Favara,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 02-19164 Filed 7-31-02; 8:45 am]
BILLING CODE 4910-13-P