

[Federal Register Volume 76, Number 225 (Tuesday, November 22, 2011)]  
[Rules and Regulations]  
[Pages 72091-72093]  
From the Federal Register Online via the Government Printing Office [www.gpo.gov]  
[FR Doc No: 2011-30061]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2011-1037; Directorate Identifier 2011-NE-30-AD; Amendment 39-16872; AD 2011-24-08]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Turbomeca S.A. Makila 1A2 Turboshift Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

A helicopter experienced an inadvertent activation of the 65% N1 (gas generator speed) back up control mode.

The subsequent technical investigations carried by Turbomeca revealed that an N2 (power turbine speed) sensor harness wire crimping discrepancy was at the origin of this event. Further quality investigations performed with the supplier led to the conclusion that N2 sensor Part Number (P/N) 0 301 52 001 0 whose Serial Numbers (S/N) are between S/N 242 and S/N 339 inclusive are potentially concerned by the same manufacturing discrepancy.

This condition, if not corrected, could lead to the inadvertent activation of the 65% N1 back up mode and consequently to significant power loss on one or more or both engines installed on the same helicopter, potentially resulting in an emergency landing of the helicopter.

We are issuing this AD to prevent inadvertent activation of the backup control mode, which could result in engine power loss and emergency landing of the helicopter.

**DATES:** This AD becomes effective December 7, 2011.

We must receive comments on this AD by December 22, 2011.

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: (202) 493-2251.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone: (800) 647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: [james.lawrence@faa.gov](mailto:james.lawrence@faa.gov); phone: (781) 238-7176; fax: (781) 238-7199.

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, issued EASA Airworthiness Directive 2011-0147, dated August 5, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

A helicopter experienced an inadvertent activation of the 65% N1 (gas generator speed) back up control mode.

The subsequent technical investigations carried by Turbomeca revealed that an N2 (power turbine speed) sensor harness wire crimping discrepancy was at the origin of this event. Further quality investigations performed with the supplier led to the conclusion that N2 sensor Part Number (P/N) 0 301 52 001 0 whose Serial Numbers (S/N) are between S/N 242 and S/N 339 inclusive are potentially concerned by the same manufacturing discrepancy.

This condition, if not corrected, could lead to the inadvertent activation of the 65% N1 back up mode and consequently to significant power loss on one or more or both engines installed on the same helicopter, potentially resulting in an emergency landing of the helicopter.

For the reasons described above, this AD requires replacement of affected N2 sensor harnesses with serviceable parts. This AD also prohibits the installation of non serviceable N2 sensor harnesses on an engine.

You may obtain further information by examining the MCAI in the AD docket.

## **Relevant Service Information**

Turbomeca has issued Service Bulletin 298 77 0817, Version B, dated August 23, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

## **FAA's Determination and Requirements of This AD**

This product has been approved by the aviation authority of France 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 information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This AD requires replacement of the affected N2 sensor harnesses with N2 sensor harnesses eligible for installation.

## **FAA's Determination of the Effective Date**

Since no domestic operators use this product, notice and opportunity for public comment before issuing this AD are unnecessary. Therefore, we are adopting this regulation immediately.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2011-1037; Directorate Identifier 2011-NE-30-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD 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 with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

## **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.

## **Regulatory Findings**

We determined that 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), 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **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 AD:



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**2011-24-08 Turbomeca S.A.:** Amendment 39-16872; Docket No. FAA-2011-1037; Directorate Identifier 2011-NE-30-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective December 7, 2011.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Makila 1A2 turboshaft engines, all serial numbers.

**(d) Reason**

(1) This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

A helicopter experienced an inadvertent activation of the 65% N1 (gas generator speed) back up control mode.

The subsequent technical investigations carried by Turbomeca revealed that an N2 (power turbine speed) sensor harness wire crimping discrepancy was at the origin of this event. Further quality investigations performed with the supplier led to the conclusion that N2 sensor Part Number (P/N) 0 301 52 001 0 whose Serial Numbers (S/N) are between S/N 242 and S/N 339 inclusive are potentially concerned by the same manufacturing discrepancy.

This condition, if not corrected, could lead to the inadvertent activation of the 65% N1 back up mode and consequently to significant power loss on one or more or both engines installed on the same helicopter, potentially resulting in an emergency landing of the helicopter.

(2) We are issuing this AD to prevent inadvertent activation of the backup control mode, which could result in engine power loss and emergency landing of the helicopter.

**(e) Actions and Compliance**

(1) Unless already done, do the following actions.

(2) For engines equipped with N2 sensor harnesses, P/N 0 301 52 001 0, whose S/Ns are between S/N 242 and S/N 339 inclusive, do the following:

(i) If an affected P/N is installed on each of the 2 (two) engines of the helicopter, then within 10 flight hours (FHs) after the effective date of this AD, replace one N2 sensor harness with an N2 sensor harness that is eligible for installation, and within 50 FHs after the effective date of this AD, replace the second harness with an N2 sensor harness that is eligible for installation.

(ii) If an affected P/N is installed only on 1 (one) engine of the helicopter, then within 50 FHs after the effective date of this AD, replace the affected N2 sensor harness with an N2 harness that is eligible for installation.

(3) After the effective date of this AD, do not install in an engine any N2 sensor harness, P/N 0 301 52 001 0, whose S/N is between S/N 242 and S/N 339 inclusive, unless the part has "SB 0815" marked on the identification plate.

(4) After the effective date of this AD, do not install in a helicopter an engine equipped with an N2 sensor harness, P/N 0 301 52 001 0, whose S/N is between S/N 242 and S/N 339 inclusive, unless the part has "SB 0815" marked on the identification plate.

**(f) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

**(g) Related Information**

(1) Refer to MCAI EASA AD 2011-0147, dated August 5, 2011, and Turbomeca Service Bulletin No. 298 77 0817, for related information. Contact Turbomeca; 40220 Tarnos, France; phone: 33-05-59-74-40-00; fax: 33-05-59-74-45-11; for a copy of this service information.

(2) Contact James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: james.lawrence@faa.gov; phone: (781)-238-7176; fax: (781) 238-7199, for more information about this AD.

**(h) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on November 9, 2011.

Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.