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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2014-0395; Directorate Identifier 2014-SW-016-AD; Amendment 39-17876; AD 2014-06-51]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Helicopters Deutschland GmbH (Airbus Helicopters) (Type Certificate Previously Held by Eurocopter Deutschland GmbH) Helicopters**

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

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

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**SUMMARY:** We are publishing a new airworthiness directive (AD) for Airbus Helicopters Model MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, and MBB-BK 117 C-2 helicopters with a certain Metro Aviation, Inc. (Metro), vapor-cycle air conditioning kit pulley (pulley) installed, which was sent previously to all known U.S. owners and operators of these helicopters. This AD supersedes AD 2013-12-06, which required inspecting the pulley for looseness and properly installed lockwire and re-installing the pulley. Since we issued AD 2013-12-06, we received a report of a possible design and manufacturing deficiency in some pulleys wherein they did not have sufficient thread depth, allowing the pulley to detach from the rotor brake disc. This AD requires inspecting each pulley attaching bolt hole to determine if there is sufficient depth of the threads and either removing the pulley if the depth is insufficient or installing dual locking tabs under each pulley attaching bolt if the depth is sufficient. These actions are intended to prevent the pulley from detaching, resulting in damage to the tail rotor (T/R) driveshaft, and subsequent loss of control of the helicopter.

**DATES:** This AD becomes effective July 30, 2014 to all persons except those persons to whom it was made immediately effective by Emergency AD (EAD) 2014-06-51, issued on March 24, 2014, which contains the requirements of this AD.

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of July 30, 2014.

We must receive comments on this AD by September 15, 2014.

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

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590-0001.
- Hand Delivery: Deliver to the "Mail" address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **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 economic evaluation, any incorporated by reference service information, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this AD, contact Metro Aviation, Inc., 1214 Hawn Ave, Shreveport, LA 71107; phone: (318) 222-5529; Web site: [metroproductsupport.com](http://metroproductsupport.com). You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5170; email [7-AVS-ASW-170@faa.gov](mailto:7-AVS-ASW-170@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

#### **Discussion**

On June 13, 2013, we issued AD 2013-12-06, Amendment 39-17484 (78 FR 40956, July 9, 2013) (AD 2013-12-06), for Eurocopter Deutschland GmbH (now Airbus Helicopters) Model MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, and MBB-BK 117 C-2 helicopters with a Metro vapor-cycle air conditioning kit installed in accordance with Supplemental Type Certificate No. SH3880SW. AD 2013-12-06 required repetitively inspecting the air conditioning drive pulley for looseness and properly installed lockwire, and also required reinstalling the pulley. AD 2013-12-06 resulted from two reports of the pulley detaching from the rotor brake disk on the T/R driveshaft. We issued AD 2013-12-06 to prevent separation of the pulley, damage to the T/R driveshaft, and subsequent loss of control of the helicopter.

## **Actions Since AD 2013-12-06 Was Issued**

After we issued AD 2013-12-06, Metro developed a procedure to install a tabbed washer underneath the bolt heads securing the pulley to the rotor disc. This procedure was intended to provide a secondary locking feature to the bolts, and to relieve the requirement for repetitive inspections of the safety wire which secures the bolts. On December 20, 2013, Metro requested and we approved this procedure as a global Alternative Method of Compliance (AMOC) for AD 2013-12-06 in lieu of performing the repetitive inspections required by paragraph (e) of that AD.

On March 10, 2014, we received a report that an attaching bolt would not seat on the mating surface of the pulley. Compliance with the AMOC revealed a possible design deficiency and a manufacturing defect in some pulleys. Metro has determined that the pulley, along with two additional pulleys from other helicopters, did not have sufficient thread depth. This condition may allow the attaching bolts to come loose, resulting in the pulley detaching from the rotor brake disc, subsequent damage to the T/R driveshaft, and loss of control of the helicopter.

On March 24, 2014, we issued EAD 2014-06-51, which superseded AD 2013-12-06, for those to whom it was made immediately effective. EAD 2014-06-51 requires inspecting the pulley to determine if there is sufficient depth of the threads and removing the pulley if there is not sufficient depth. EAD 2014-06-51 also requires installing a dual locking tab on each pulley attaching bolt and reporting the inspection findings to the FAA. Finally, EAD 2014-06-51 revises the applicability to helicopters with a pulley, P/N 30001, installed rather than with the air conditioning kit installed because this pulley has been determined to be the unsafe condition. EAD 2014-06-51 was sent previously to all known U.S. owners and operators of these helicopters. The actions in EAD 2014-06-51 are intended to prevent the pulley detaching from the rotor brake disc, subsequent damage to the T/R driveshaft, and loss of control of the helicopter.

## **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

## **Related Service Information**

We reviewed Metro Alert Service Bulletin (ASB) No. MA145-21B-003, Revision B, dated December 20, 2013 (ASB MA145-21B-003), which describes procedures for installing a dual-locking tab on the air conditioning drive pulley attachment bolts.

Since we issued EAD 2014-06-51, Metro released ASB No. MA145-21-004, Revision IR, dated March 24, 2014, which describes procedures for inspecting the air conditioning drive pulley thread depth. This AD continues to reference ASB MA145-21B-003.

## **AD Requirements**

This AD requires, within 5 hours time-in-service, inspecting each pulley attaching bolt hole to determine if there is sufficient depth of the threads. If the depth is less than 0.61 inch, this AD requires removing the pulley. This AD also requires installing dual locking tabs under each pulley attaching bolt by following the Accomplishment Instructions, paragraphs 3.E. through 3.G., of ASB MA145-21B-003. This AD also requires submitting a report of the inspection findings to the FAA.

## **Differences Between This AD and the Service Information**

This AD requires determining the depth of the threaded portion of the pulley attaching bolt holes; the service information does not.

## **Costs of Compliance**

We estimate that this AD will affect 75 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. At an average labor rate of \$85 per work-hour, inspecting the pulley bolt holes, and installing the tabbed washers will require 6 work hours, and required parts will cost \$100, for a cost per helicopter of \$610 and a total cost of \$45,750 for the fleet.

Reviewing instructions, collecting and reviewing information, and submitting a report to the FAA will require 0.5 work-hour, for a cost per helicopter of \$43 and a cost of \$3,225 for the fleet.

If necessary, replacing a pulley will require about 2 work-hours, and required parts would cost \$800, for a total cost per helicopter of \$970.

## **Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting required by this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591. ATTN: Information Collection Clearance Officer, AES-200.

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

Providing an opportunity for public comments before adopting these AD requirements would delay implementing the safety actions needed to correct this known unsafe condition. Therefore, we found and continue to find that the risk to the flying public justifies waiving notice and comment prior to adopting this rule because the required corrective actions must be done within 5 hours time-in-service, a very short time period based on the average flight-hour utilization rate of these helicopters.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment before issuing this AD were impracticable and contrary to the public interest and that good cause existed to make the AD effective immediately by EAD 2014-06-51, issued on March 24, 2014, to all known U.S. owners and operators of these helicopters. These conditions still exist and the AD is hereby published in the Federal Register as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective to all persons.

## **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, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; 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.

We prepared an economic 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 removing Airworthiness Directive (AD) 2013-12-06, Amendment 39-17484 (78 FR 40956, July 9, 2013), and adding the following new AD:



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**2014-06-51 Airbus Helicopters Deutschland GmbH (Airbus Helicopters) (Type Certificate Previously Held By Eurocopter Deutschland GmbH) Helicopters:** Amendment 39-17876; Docket No. FAA-2014-0395; Directorate Identifier 2014-SW-016-AD.

**(a) Applicability**

This AD applies to Airbus Helicopters Model MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, and MBB-BK 117 C-2 helicopters with a Metro Aviation, Inc., vapor-cycle air conditioning kit pulley (pulley) part number (P/N) 30001 installed in accordance with Supplemental Type Certificate (STC) No. SH3880SW.

**(b) Unsafe Condition**

This AD defines the unsafe condition as insufficient thread depth which could allow the attaching bolts to come loose, resulting in the pulley detaching from the rotor brake disc, subsequent damage to the tail rotor (T/R) driveshaft, and loss of control of the helicopter.

**(c) Effective Date**

This AD becomes effective July 30, 2014 to all persons except those persons to whom it was made immediately effective by Emergency AD 2014-06-51, issued on March 24, 2014, which contains the requirements of this AD.

**(d) Affected ADs**

This AD supersedes AD 2013-12-06, Amendment 39-17484 (78 FR 40956, July 9, 2013).

**(e) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(f) Required Actions**

Within 5 hours time-in-service, inspect each pulley attaching bolt hole to determine the depth:

- (1) Relieve tension from the compressor drive belt and remove each bolt that attaches the pulley to the rotor brake disc. Do not remove all three bolts at the same time.
- (2) Remove AN960-416 washer or MAI-145-DUAL LOCK TAB washer.
- (3) Using a bolt or screw with 1/4-28 threads with 0.5 inch of threads and a minimum of 0.8 inch grip length, coat the shank with blue dye or permanent marker and thread into hole until threads have lightly bottomed (finger tight). Scribe the shank flush with the face of the rotor brake disk. Measure distance from end to scribe mark (length protruding into assembly). This dimension represents total depth of threads and stack-up of the brake disk.
- (4) If the depth measures less than 0.61 inch, remove the pulley.

(5) If the depth measures 0.61 inch or more, install dual locking tabs as described in the Accomplishment Instructions, paragraphs 3.E. through 3.G., of Metro Aviation, Inc., Alert Service Bulletin No. MA145-21B-003, Revision B, dated December 20, 2013.

**(g) Reporting Requirement**

Within 10 days after inspecting the pulley as required by paragraph (f)(3) of this AD, submit a report with the helicopter model, helicopter serial number, hole number 1 thread depth, hole number 2 thread depth (if measured), and hole number 3 thread depth (if measured) to the person identified in paragraph (h)(1) of this AD.

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

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5170; email 7-AVS-ASW-170@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(i) Additional Information**

(1) Metro Aviation, Inc., Alert Service Bulletin No. MA145-21-004, Revision IR, dated March 24, 2014, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Metro Aviation, Inc., 1214 Hawn Ave., Shreveport, LA 71107; phone: (318) 222-5529; Web site: metroproductsupport.com. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

(2) STC No. SH3380SW, amended April 16, 2004, may be found on the Internet at, <http://www.regulations.gov> in Docket No. FAA-2014-0395.

**(j) Subject**

Joint Aircraft Service Component (JASC) Code: 6500: Tail Rotor Drive.

**(k) 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) Metro Aviation, Inc., Alert Service Bulletin No. MA145-21B-003, Revision B, dated December 20, 2013.

(ii) Reserved.

(3) For Metro Aviation, Inc., service information identified in this AD, contact Metro Aviation, Inc., 1214 Hawn Ave, Shreveport, LA 71107; phone: (318) 222-5529; Web site: metroproductsupport.com.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(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 Fort Worth, Texas, on June 16, 2014.  
Lance T. Gant,  
Acting Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.