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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2016-9395; Product Identifier 2016-SW-027-AD; Amendment 39-19618; AD 2019-07-07]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Helicopters Deutschland GmbH Helicopters**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for various Airbus Helicopters Deutschland GmbH (Airbus Helicopters) Model MBB-BK117 and Model BO-105 helicopters. This AD requires removing the swashplate bellows (bellows) and repetitively inspecting the swashplate assembly. This AD was prompted by reports of loose and missing clamps installed on bellows. The actions of this AD are intended to detect and prevent an unsafe condition on these products.

**DATES:** This AD is effective May 24, 2019.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of May 24, 2019.

**ADDRESSES:** For service information identified in this final rule, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>.

You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9395.

#### **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-2016-9395; 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 AD, the European Aviation Safety Agency (EASA) AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for

Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Matt Fuller, Senior Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email matthew.fuller@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On April 20, 2018, at 83 FR 17510, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Model BO-105A, BO-105C, BO-105S, BO105LS A-3, MBB-BK 117A-1, MBB-BK 117A-3, MBB-BK 117A-4, MBB-BK 117B-1, MBB-BK 117B-2, MBB-BK 117C-1, MBB-BK 117C-2, and MBB-BK 117D-2 helicopters. The NPRM proposed to require removing the bellows and repetitively inspecting the swashplate assembly. The proposed requirements were intended to detect and prevent a loose bellows clamp. This condition can cause loss of the bellows, contact of the bellows with the main rotor blades, main rotor mast, and tail rotor, and subsequent loss of helicopter control.

The NPRM was prompted by AD No. 2016-0142, dated July 19, 2016, issued by EASA (EASA AD 2016-0142), which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters Model MBB-BK 117A-1, MBB-BK 117A-3, MBB-BK 117A-4, MBB-BK 117B-1, MBB-BK 117B-2, MBB-BK 117C-1, MBB-BK 117C-2, MBB-BK 117C-2e, BO-105A, BO-105C, BO-105D, BO105S, BO-105LS A-3 helicopters.

EASA advises of several reports of a lower clamp found missing from the bellows and damaging the swashplate bearing ring before becoming detached. EASA states an investigation showed that over-torquing can damage the clamp, which may have caused the clamp to become loose and detach. According to EASA, this condition, if not detected and corrected, could lead to loss of a swashplate clamp, resulting in loss of helicopter control. A detached clamp could damage the swashplate and pitch link or strike the tail rotor. EASA states that its AD is considered interim action and a further AD to implement a terminating action will follow.

### **Changes to the Final Rule**

On April 12, 2018, EASA revised its AD and issued AD No. 2016-0142R1 (“EASA AD 2016-0142R1”). EASA AD 2016-0142R1 removed the repetitive 100-hour and 400-hour inspections contained in EASA AD 2016-0142. EASA determined that the repetitive inspections were no longer required to address the unsafe condition. EASA states the 400-hour inspections will be included in the airworthiness limitations section of the aircraft maintenance manual, and the 100-hour inspections will be deleted.

We have made the same determination because of the lack of corrosion found on the parts since the bellows were removed. The 100-hour repetitive inspections contained in the NPRM have been removed in this Final rule.

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we received no comments on the NPRM.

## **FAA's Determination**

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to our bilateral agreement with the European Union, EASA has notified us of the unsafe condition described in the EASA AD. 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 helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed, except for the change previously described. This change is consistent with the intent of the proposals in the NPRM and will not increase the economic burden on any operator nor increase the scope of this AD.

## **Interim Action**

We consider this AD to be an interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

## **Differences Between This AD and the EASA AD**

EASA AD 2016-0142R1 has a different compliance time for helicopters with new bellows, while this AD does not. This AD applies to Model MBB-BK 117D-2 helicopters while EASA AD 2016-0142R1 does not. EASA AD 2016-0142R1 applies to Model BO-105D helicopters, while this AD does not. This AD requires repetitively inspecting the swashplate every 400 hours time-in-service, while EASA AD 2016-0142R1 does not.

## **Related Service Information Under 1 CFR Part 51**

We reviewed Airbus Helicopters Alert Service Bulletin (ASB) BO105-40A-107 for Model BO105 C-series, D-series and S-series helicopters; ASB BO105 LS-40A-12 for Model BO-105LS A-3 helicopters; ASB MBB-BK117-40A-115 for Model MBB-BK 117A-1, MBB-BK 117A-3, MBB-BK 117A-4, MBB-BK 117B-1, MBB-BK 117B-2, and MBB-BK 117C-1 helicopters; and ASB MBB-BK117 C-2-62A-007 for Model MBB-BK 117C-2 and MBB-BK 117C-2e helicopters. These ASBs are all Revision 4 and all dated May 23, 2016. We also reviewed Airbus Helicopters ASB MBB-BK117 D-2-62A-003, Revision 2, dated May 23, 2016, for Model MBB-BK117 D-2 and MBB-BK117 D-2m helicopters. This service information specifies removing the bellows and repetitively inspecting the swashplate.

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.

## **Costs of Compliance**

We estimate that this AD affects 286 helicopters of U.S. Registry and that labor costs average \$85 per work hour. Based on these estimates, we expect the following costs:

- Removing and inspecting the swashplate assembly requires 3 work-hours. No parts are needed for a cost of \$255 per helicopter and \$72,930 for the U.S. fleet per inspection cycle.
- Repairing a scratched support tube requires 3 work-hours. No parts are needed for a cost of \$255 per helicopter.
- Replacing a corroded or damaged clamp requires 2 work-hours. Parts cost \$8 for a cost of \$178 per helicopter.
- Replacing corroded ball bearings requires 4 work-hours. Parts cost \$3,000 for a cost of \$3,340 per helicopter.

- Removing foreign objects from the outer deflection ring requires 2 work-hours. No parts are needed for a cost of \$170 per helicopter.

### **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 helicopters identified in this rulemaking action.

### **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 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 adding the following new airworthiness directive (AD):



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**2019-07-07 Airbus Helicopters Deutschland GmbH:** Amendment 39-19618; Docket No. FAA-2016-9395; Product Identifier 2016-SW-027-AD.

**(a) Applicability**

This AD applies to Airbus Helicopters Deutschland GmbH Model BO-105A, BO-105C, BO-105S, BO105LS A-3, MBB-BK 117A-1, MBB-BK 117A-3, MBB-BK 117A-4, MBB-BK 117B-1, MBB-BK 117B-2, MBB-BK 117C-1, MBB-BK 117C-2, and MBB-BK 117D-2 helicopters, certificated in any category.

Note 1 to paragraph (a) of this AD: Helicopters with an MBB-BK 117C-2e designation are Model MBB-BK 117C-2 helicopters.

**(b) Unsafe Condition**

This AD defines the unsafe condition as a loose bellows clamp. This condition can cause loss of the bellows, contact of the bellows with the main rotor blades, main rotor mast, and tail rotor, and subsequent loss of helicopter control.

**(c) Effective Date**

This AD becomes effective May 24, 2019.

**(d) 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.

**(e) Required Actions**

(1) Within 50 hours time-in-service (TIS):

(i) Remove the swashplate bellows (bellows) part number (P/N) 105-10113.05, P/N 4638305043, P/N 4619305044, or B623M20X2240 from the swashplate.

(ii) Inspect the swashplate by following the Accomplishment Instructions, paragraph 3.B.1.(h) through 3.B.1.(k) of Airbus Helicopters Alert Service Bulletin (ASB) BO105-40A-107, Revision 4, dated May 23, 2016 (ASB BO105-40A-107); ASB BO105 LS-40A-12, Revision 4, dated May 23, 2016 (ASB BO105 LS-40A-12); ASB MBB-BK117-40A-115, Revision 4, dated May 23, 2016 (ASB MBB-BK117-40A-115); or ASB MBB-BK117 C-2-62A-007, Revision 4, dated May 23, 2016 (ASB MBB-BK117 C-2-62A-007); or paragraph 3.B.1.5 through 3.B.1.8 of Airbus Helicopters ASB MBB-BK117 D-2-62A-003, Revision 2, dated May 23, 2016 (ASB MBB-BK117 D-2-62A-003); whichever is applicable to your helicopter. If there is corrosion on a ball bearing, you are not required to contact Airbus Helicopters customer support; instead, before further flight, replace the ball bearing.

(2) Within 400 hours TIS after complying with the actions in paragraph (1) of this AD, and thereafter at intervals not to exceed 400 hours TIS, inspect the swashplate by following the Accomplishment Instructions, paragraph 3.B.3 of ASB BO105-40A-107, ASB BO105 LS-40A-12, ASB MBB-BK117-40A-115, ASB MBB-BK117 C-2-62A-007, or ASB MBB-BK117 D-2-62A-003.

(3) Do not install a bellows P/N 105-10113.05, P/N 4619305044, or P/N 4638305043 or a gearbox with a bellows P/N 105-10113.05, P/N 4619305044, or P/N 4638305043 on any helicopter.

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

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Matt Fuller, Senior Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@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.

**(g) Additional Information**

The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2016-0142, dated July 19, 2016, and EASA AD No. 2016-0142R1, dated April 12, 2018. You may view the EASA ADs on the internet at <http://www.regulations.gov> in Docket No. FAA-2016-9395.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 6200, Main Rotor System.

**(i) 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) Airbus Helicopters Alert Service Bulletin BO105-40A-107, Revision 4, dated May 23, 2016.

(ii) Airbus Helicopters Alert Service Bulletin BO105 LS-40A-12, Revision 4, dated May 23, 2016.

(iii) Airbus Helicopters Alert Service Bulletin MBB-BK117-40A-115, Revision 4, dated May 23, 2016.

(iv) Airbus Helicopters Alert Service Bulletin MBB-BK117 C-2-62A-007, Revision 4, dated May 23, 2016.

(v) Airbus Helicopters Alert Service Bulletin MBB-BK117 D-2-62A-003, Revision 2, dated May 23, 2016.

(3) For Airbus Helicopters service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. 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 March 21, 2019.  
Scott A. Horn,  
Deputy Director for Regulatory Operations, Compliance & Airworthiness Division,  
Aircraft Certification Service.