



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-9395; Product Identifier 2016-SW-027-AD]**

**RIN 2120-AA64**

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

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

**ACTION:** Notice of proposed rulemaking (NPRM).

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

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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> 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 proposed AD, the European Aviation Safety Agency (EASA) AD, the economic evaluation, any comments received, and other information. The street address for Docket Operations (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 proposed 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.

**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](mailto:matthew.fuller@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

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 might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, 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 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 proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

EASA, which is the aviation authority for Germany, has issued AD No. 2016-0142, dated July 19, 2016, 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-torqueing 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.

### **FAA's Determination**

These helicopters have been approved by the aviation authority of Germany and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in its AD. We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition is likely to exist or develop on other products of the same type design.

### **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.

### **Proposed AD Requirements**

This proposed AD would require a one-time inspection within 50 hours time-in-service (TIS) and repetitive inspections every 100 hours TIS and every 400 hours TIS, by following the instructions in the manufacturer's service bulletin. This proposed AD would also prohibit installing on any helicopter bellows P/N 105-10113.05, P/N 4619305044, and P/N 4638305043 and any gearbox that has these bellows installed.

### **Differences between this Proposed AD and the EASA AD**

The EASA AD requires compliance within different time intervals for some actions than what this proposed AD would require. The EASA AD allows a non-cumulative tolerance of 10 percent that may be applied to the compliance times, and this proposed AD would not. The EASA AD allows replacing the bellows clamps with cable ties before removing the bellows, and this proposed AD would not. This proposed AD would apply to Model MBB-BK 117D-2 helicopters while the EASA AD does not. The EASA AD applies to Model BO-105D helicopters, while this proposed AD would not.

## **Interim Action**

We consider this proposed 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.

## **Costs of Compliance**

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

- Removing and inspecting the swashplate assembly would require 3 work-hours. No parts would be needed for a cost of \$255 per helicopter and \$72,930 for the U.S. fleet per inspection cycle.
- Repairing a scratched support tube would require 3 work-hours. No parts would be needed for a cost of \$255 per helicopter.
- Replacing a corroded or damaged clamp would require 2 work-hours. Parts would cost \$8 for a cost of \$178 per helicopter.
- Replacing corroded ball bearings would require 4 work-hours. Parts would cost \$3,000 for a cost of \$3,340 per helicopter.
- Removing foreign objects from the outer deflection ring would require 2 work-hours. No parts would be 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 products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD 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.

For the reasons discussed, I certify this proposed regulation:

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 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 proposed 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.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Airbus Helicopters Deutschland GmbH:** 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) Comments Due Date**

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(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 100 hours TIS after complying with the actions in paragraph (1) of this AD, and thereafter at intervals not to exceed 100 hours TIS, inspect the swashplate by following the Accomplishment Instructions, paragraph 3.B.2 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, except you are not required to contact Airbus Helicopters customer support. If there is corrosion on a ball bearing, before further flight, replace the ball bearing.

(3) 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.

(4) 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. You may view the EASA AD on the Internet at <http://www.regulations.gov> in the AD Docket.

**(h) Subject**

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

Issued in Fort Worth, Texas, on April 11, 2018.

Lance T. Gant,

Director, Compliance & Airworthiness Division,  
Aircraft Certification Service.

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