




適航指令發布單

Airworthiness Directive Issuance Form

民航局AD編號 AD Number	CAA-2015-08-008	發布日期 Date issued	2015/8/18
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	MBB-BK117 A-1, MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, MBB-BK117 B-2, MBB-BK117 C-1, MBB-BK117 C-2 and MBB-BK117 C-2e helicopters, all serial numbers (s/n), and BO105 A, BO105 C, BO105 D, BO105 S and BO105 LS A-3 helicopters, all variants, all s/n.		
主旨摘要	Main Rotor – Swashplate Assembly – Replacement / Inspection		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主關機構 Original Authorities <input type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國AD編號 Original AD number	2015-0166	
	1. 直接採用原AD之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) ____ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將AD執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 62. This AD supersedes EASA AD 2014-0180R1(CAA-2014-07-025A), dated 16 October 2014. Ref. Publications: AHD ASB MBB-BK117-40A-115 original issue dated 31 March 2014, or Revision 1 dated 04 August 2014, and Revision 2 dated 30 July 2015. and AHD ASB MBB-BK117C-2-62A-007 original issue dated 31 March 2014, revision 01 dated 04 August 2014, and Revision 2 dated 30 July 2015. and AHD ASB BO105-40A-107 original issue dated 31 March 2014, or Revision 1 dated 08 September 2014, and Revision 2 dated 30 July 2015. and AHD ASB BO105LS-40A-12 original issue dated 31 March 2014, or Revision 1 dated 08 September 2014, and Revision 2 dated 30 July 2015.		
註： 1. AD內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw			

EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2015-0166
	Date: 11 August 2015 <p>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>
<p>This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EU 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>	
Design Approval Holder's Name: AIRBUS HELICOPTERS DEUTSCHLAND GmbH	Type/Model designation(s): MBB-BK117 and BO105 helicopters
TCDS Numbers: EASA.R.010 and EASA.R.011	
Foreign AD: Not applicable	
Supersedure: This AD supersedes EASA AD 2014-0180R1, dated 16 October 2014.	
ATA 62	Main Rotor – Swashplate Assembly – Replacement / Inspection
Manufacturer(s):	Airbus Helicopters Deutschland GmbH (AHD) (formerly Eurocopter Deutschland GmbH, Eurocopter Hubschrauber GmbH, Messerschmitt-Bölkow-Blohm GmbH), Airbus Helicopters Inc. (formerly American Eurocopter LLC), Eurocopter Canada Ltd. (formerly Messerschmitt-Bölkow-Blohm Helicopter Canada Ltd.)
Applicability:	MBB-BK117 A-1, MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, MBB-BK117 B-2, MBB-BK117 C-1, MBB-BK117 C-2 and MBB-BK117 C-2e helicopters, all serial numbers (s/n), and BO105 A, BO105 C, BO105 D, BO105 S and BO105 LS A-3 helicopters, all variants, all s/n.
Reason:	<p>During a post flight check on a BO105 helicopter, it was detected that the lower clamp installed on the swashplate bellows was missing. Prior to this, the loose clamp had caused damage to the swashplate bearing ring. Similar cases had already been reported in the past.</p> <p>Investigation showed that over-torquing can cause damage to the clamp, which may have contributed to the loosening and subsequent loss of the clamp.</p> <p>This condition, if not detected and corrected, could lead to further cases of lost swashplate clamps, possibly resulting in loss of control of the helicopter.</p> <p>To address this unsafe condition, AHD issued Alert Service Bulletins (ASB) MBB-BK117-40A-115, MBB-BK117C-2-62A-007, BO105-40A-107 and BO105LS-40A-12 (hereafter collectively referred to as “the applicable ASB” in this AD) to provide instructions for clamp replacement and for repetitive inspections. EASA issued AD 2014-0180 (later revised) to require replacement</p>

	<p>of swash-plate clamps with cable ties, repetitive inspections of cable ties for loose fit and replacement of cable ties with serviceable parts.</p> <p>Since EASA AD 2014-0180R1 was issued, several reports were received of further separations of swashplate bellows, which were installed with the new cable ties.</p> <p>This condition, if not detected and corrected, could lead to further cases of lost swashplate bellows, possibly resulting in loss of control of the helicopter and injury to persons on the ground.</p> <p>To address this unsafe condition, AHD revised the ASBs to require the removal of the swashplate bellows and accomplishment of repetitive inspections.</p> <p>For the reasons stated above, this AD partially retains the requirements of EASA AD 2014-0180R1, which is superseded, requires removal of the swashplate bellows and accomplishment of repetitive inspections and, depending on findings, corrective actions.</p> <p>This AD is considered an interim action and further AD action to implement the terminating action will follow.</p>								
Effective Date:	25 August 2015								
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>Partial re-statement of the requirements of EASA AD 2014-0180R1:</p> <p>Note 1: For the purpose of this AD, the affected clamps are identified by Part Number (P/N) MBB100-W3-5, P/N MBB270-W3-5, P/N NSA5528-100 and P/N NSA5528-250.</p> <p>(1) Within the compliance time as defined in Table 1 of this AD, replace each affected swashplate bellows clamp with cable ties in accordance with the instructions of the applicable ASB, at original issue or Revision 1.</p> <p style="text-align: center;">Table 1 – Replacement of Swashplate Clamps</p> <table border="1"> <thead> <tr> <th>Model(s)</th><th>Compliance Time (after 11 August 2014, the effective date of EASA AD 2014-0180 at original issue)</th></tr> </thead> <tbody> <tr> <td>BO 105, all variants</td><td>Within 300 flight hours (FH) after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first</td></tr> <tr> <td>MBB-BK 117 A-1, A-3, A-4, B-1, B-2 and C-1</td><td>Within 300 FH after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first</td></tr> <tr> <td>MBB-BK 117 C-2</td><td>During the next intermediate inspection (refer to MBB-BK 117 C-2 Aircraft Maintenance Manual (AMM))</td></tr> </tbody> </table> <p>(2) Do not install on any helicopter an affected swashplate bellows clamp, or any gearbox or swashplate equipped with an affected clamp, as required by paragraph (2.1) or (2.2), as applicable.</p> <p>(2.1) For a helicopter not equipped with affected clamps: From 11 August 2014 [the effective date of EASA AD 2014-0180 at original issue].</p> <p>(2.2) For a helicopter equipped with affected clamps: After modification of the helicopter as required by paragraph (1) of this AD.</p>	Model(s)	Compliance Time (after 11 August 2014, the effective date of EASA AD 2014-0180 at original issue)	BO 105, all variants	Within 300 flight hours (FH) after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first	MBB-BK 117 A-1, A-3, A-4, B-1, B-2 and C-1	Within 300 FH after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first	MBB-BK 117 C-2	During the next intermediate inspection (refer to MBB-BK 117 C-2 Aircraft Maintenance Manual (AMM))
Model(s)	Compliance Time (after 11 August 2014, the effective date of EASA AD 2014-0180 at original issue)								
BO 105, all variants	Within 300 flight hours (FH) after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first								
MBB-BK 117 A-1, A-3, A-4, B-1, B-2 and C-1	Within 300 FH after the last periodical inspection, or during the next periodical inspection, or within 6 months, whichever occurs first								
MBB-BK 117 C-2	During the next intermediate inspection (refer to MBB-BK 117 C-2 Aircraft Maintenance Manual (AMM))								

	<p>(3) Within 400 FH or during the next scheduled 12 month inspection, whichever occurs first after modification of a helicopter as required by paragraph (1) of this AD, and, thereafter, at intervals not to exceed 400 FH, or during each scheduled 12 month inspection, whichever occurs first, inspect the cable ties for loose fit in accordance with the instructions of the applicable ASB at original issue or Revision 1,</p> <p>(4) If, during any inspection as required by paragraph (3) of this AD, any cable tie is found loose, before next flight, replace the loose cable tie with a serviceable part in accordance with the instructions of the applicable ASB.</p> <p>New requirements of this AD:</p> <p>(5) Within 50 FH, or during the next periodical inspection, whichever occurs first after the effective date of this AD, remove the swashplate bellows and perform inspections, in accordance with the instructions of section 3.B.1 of the applicable ASB at Revision 2.</p> <p>Note 2: Removal of the swashplate bellows is adequate to show compliance with paragraphs (1) or (4) of this AD.</p> <p>Note 3: For the applicable periodical inspection intervals, refer to the AMM for the helicopter model.</p> <p>(6) Modification of an helicopter as required by paragraph (5) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (3) of this AD for that helicopter.</p> <p>(7) Within 100 FH after modification of an helicopter as required by paragraph (5) of this AD, and, thereafter, at intervals not to exceed 100 FH (see Note 4 of this AD), inspect the swashplate in accordance with the instructions of section 3.B.2 of the applicable ASB at Revision 2.</p> <p>(8) Within 400 FH after modification of an helicopter as required by paragraph (5) of this AD, and thereafter at intervals not to exceed 400 FH (see Note 4 of this AD), inspect the swashplate in accordance with the instructions of section 3.B.3 of the applicable ASB at Revision 2.</p> <p>Note 4: A non-cumulative tolerance of 10% may be applied to the compliance times specified in paragraph (7) and (8) of this AD to allow synchronization of the required inspections with other maintenance tasks for which a non-cumulative tolerance is already granted in the applicable Maintenance Manual.</p> <p>(9) If, during any inspection as required by paragraph (5), (7) or (8) of this AD, discrepancies are found, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the applicable ASB at Revision 2.</p> <p>(10) After the effective date of this AD, do not install on any helicopter a cable tie P/N E0043-6C0P.</p> <p>(11) After the effective date of this AD, do not install on any helicopter a swashplate bellows P/N 105-10113.05 or P/N 4638305043.</p>
Ref. Publications:	<p>AHD ASB MBB-BK117-40A-115 original issue dated 31 March 2014, or Revision 1 dated 04 August 2014, and Revision 2 dated 30 July 2015.</p> <p>AHD ASB MBB-BK117C-2-62A-007 original issue dated 31 March 2014, revision 01 dated 04 August 2014, and Revision 2 dated 30 July 2015.</p> <p>AHD ASB BO105-40A-107 original issue dated 31 March 2014, or Revision 1 dated 08 September 2014, and Revision 2 dated 30 July 2015.</p> <p>AHD ASB BO105LS-40A-12 original issue dated 31 March 2014, or Revision 1 dated 08 September 2014, and Revision 2 dated 30 July 2015.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>

Remarks:	<ol style="list-style-type: none">1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.3. Enquiries regarding this AD should be referred to the Safety Information Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu.4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters Deutschland GmbH, Industriestraße 4, 86607 Donauwörth, Germany Telephone: + 49 (0)151 1422 8976; Facsimile: + 49 (0)906 71 4111
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