

EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2014-0230
	Date: 21 October 2014 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.
This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].	
Design Approval Holder's Name: AIRBUS HELICOPTERS DEUTSCHLAND GmbH	Type/Model designation(s): BO105 helicopters
TCDS Number : EASA.R.011	
Foreign AD : Not applicable	
Supersedure: This AD supersedes EASA AD 2011-0091R2 dated 08 November 2012.	
ATA 63	Main Rotor Drive – Main Gearbox – Inspection
Manufacturer(s):	Eurocopter Deutschland GmbH (ECD), Eurocopter Hubschrauber GmbH, Messerschmitt-Bölkow-Blohm GmbH
Applicability:	BO105 A, BO105 C, BO105 D and BO105 S helicopters, all variants, all serial numbers.
Reason:	In 2010, an accident occurred with a BO105 helicopter and the initial findings indicated that the event was linked with a deterioration of the Main Gearbox (MGB), due to a contaminated oil supply. This condition, if not detected and corrected, could lead to MGB failure and consequent loss of control of the helicopter. ECD developed measures to correct this unsafe condition and published these instructions in Alert Service Bulletin (ASB) BO105-10-125. EASA issued AD 2010-0223 to require a one-time inspection of the MGB magnetic plug or electric chip detector (as applicable) and of the MGB oil filter and, depending on findings, corrective action(s). That AD also required implementation of new corrective action criteria for later (scheduled and unscheduled) MGB inspections, to be applied each time there is a particle identification. Since that AD was issued, it was determined that repetitive inspections of the magnetic plug and oil filter at reduced intervals are necessary to ensure that any discrepancy is detected and corrected, and ASB BO105-10-125 was revised accordingly. Consequently, EASA issued AD 2011-0091 (later revised), retaining the initial requirements of AD 2010-0223, which was superseded, and requiring implementation of repetitive inspections of the magnetic plug and oil filter, as well as corrective actions depending on findings.

	Since EASA AD 2011-0091R2 was issued, Airbus Helicopters Deutschland (AHD) issued SB BO105-10-126, which introduces an improved oil filter, PUROLATOR Part Number (P/N) 1740001-13. For the reasons described above, this AD retains the requirements of EASA AD 2011-0091R2, which is superseded, provides information concerning the optional modification to install the new oil filter, and introduces the related inspection intervals.						
Effective Date:	04 November 2014						
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Within the compliance times as specified in Table 1 of this AD, as applicable, inspect the MGB magnetic plugs for chips in accordance with the instructions of ASB BO105-10-125 Revision 3 and the BO105 MM. Table 1 – MGB Magnetic Plug Inspection Threshold and Intervals <table border="1"> <thead> <tr> <th>Oil Filter</th><th>Compliance Times</th></tr> </thead> <tbody> <tr> <td>MANN P/N 6140063321</td><td>Within 10 FH after the last inspection in accordance with ASB BO105-10-125 Revision 1 or Revision 2, as applicable, and, thereafter, at intervals not to exceed 10 FH</td></tr> <tr> <td>PUROLATOR P/N 1740001-13</td><td>Within 50 FH after installation of the oil filter on a helicopter and, thereafter, at intervals not to exceed 50 FH</td></tr> </tbody> </table> (2) For helicopters equipped with a MANN oil filter P/N 6140063321, within 100 FH after the last inspection in accordance with ASB BO105-10-125 Revision 1 or Revision 2, as applicable, and, thereafter, at intervals not to exceed 100 FH, inspect the oil filter for particles in accordance with the instructions of ASB BO105-10-125 Revision 3 and the BO105 MM. Note: A non-cumulative tolerance of 10 FH may be applied to the inspection interval specified in paragraph (2) of this AD. (3) If, during any inspection as required by paragraph (1) or (2) of this AD, contamination is found, accomplish the applicable corrective actions in accordance with the instructions of, and within the compliance time as specified in, ASB BO105-10-125 Revision 3 and the BO105 MM. (4) Compliance with the requirements of paragraphs (1), (2) and (3) of this AD can be demonstrated by: (4.1) Revising as follows the approved aircraft maintenance programme on the basis of which the Operator or the Owner ensures the continuing airworthiness of each operated helicopter: Incorporate the repetitive inspections as specified in paragraphs (1) and (2) of this AD, as applicable to oil filter installation, as well as the revised instructions contained in Table 11-2 on pages 4 and 5, and picture 11-14 on page 6, of ASB BO105-10-125 Revision 3, and (4.2) Complying with the approved aircraft maintenance programme described in paragraph (4.1) of this AD. (5) Optional modification of a helicopter by installation of a PUROLATOR P/N 1740001-13 oil filter can be accomplished in accordance with the instructions of SB BO105-10-126. After modification, the applicable RFM Revision must be used as defined in Appendix 1 of this AD. (6) After installation of a PUROLATOR oil filter P/N 174001-13 on a helicopter, do not install a MANN oil filter P/N 6140063321 on that helicopter.	Oil Filter	Compliance Times	MANN P/N 6140063321	Within 10 FH after the last inspection in accordance with ASB BO105-10-125 Revision 1 or Revision 2, as applicable, and, thereafter, at intervals not to exceed 10 FH	PUROLATOR P/N 1740001-13	Within 50 FH after installation of the oil filter on a helicopter and, thereafter, at intervals not to exceed 50 FH
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Ref. Publications:	ECD ASB BO105-10-125 dated 02 September 2010, or Revision 1 dated 04 April 2011, or Revision 2 dated 23 May 2012, or AHD ASB BO105-10-125 Revision 3 dated 27 May 2014. AHD SB BO105-10-126 dated 19 June 2013, or Revision 1 dated 6 August 2013. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD. BO105 Maintenance Manual, Chapter 11, Sections 11-12 through 11-19, including revised Table 11-2 (pages 4 and 5 of ASB BO105-10-125 Revision 3) and picture 11-14 (page 6 of ASB BO105-10-125 Revision 3).
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. This AD was posted on 19 September 2014 as PAD 14-142 for consultation until 17 October 2014. No comments were received during the consultation period. 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, Federal Republic of Germany. Telephone: + 49 (0) 151 14 22 89 76, Facsimile: + 49 (0) 906 71-4111.

Appendix 1 – Applicable RFM Revisions

Model	RFM	Revision
BO105 C (Variant C23) BO105 S (Variant CS)	BO105 C/CS Fourth Issue	Revision 7.1 dated 25 July 2013
BO105 C (Variant CB and CB-4) BO105 S (Variant CBS and CBS-4)	BO105 CB/CBS Fourth Issue	Revision 10.1 dated 25 July 2013
BO105 C (Variant CB-5) BO105 S (Variant CBS-5)	BO105 CB-5/CBS-5 Second Issue	Revision 9.1 dated 25 July 2013
BO105 D (Variant DB, DB-4, DBS and DBS-4)	BO105 DB/DBS Third Issue	Revision 6.1 dated 25 July 2013
BO105 D (Variant DBS-5)	BO105 DBS-5 First Issue	Revision 6.1 dated 25 July 2013
BO105 C (Variant CB and CB-4) BO105 S (Variant CBS and CBS-4)	BO105 CB/CBS Vierte Ausgabe	Änderung 4 vom 5. September 2005
BO105 A	BO105 A	Any Revision approved after the effective date of this AD which includes the check of the transmission oil filter clogging indicator pin in the normal procedures