EASA

AIRWORTHINESS DIRECTIVE



AD No.: 2009-0199

Date: 08 September 2009

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 EC 1702/2003, Part 21A.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].

Type Approval Holder's Name :

Eurocopter Deutschland GmbH

Type/Model designation(s) :

MBB-BK 117 helicopters

TCDS Number : EASA.R.010

Foreign AD : Not applicable

Supersedure :

This AD supersedes EASA AD 2008-0156 dated 19 August 2008.

ATA 62	Main Rotor – Main Rotor (MR) Blades – Inspection / Replacement
Manufacturer(s):	Eurocopter Deutschland GmbH; Eurocopter Hubschrauber GmbH; Messerschmitt-Bölkow-Blohm GmbH
Applicability:	MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2 and MBB-BK 117 C-1 helicopters, all serial numbers, if equipped with MR Blades as identified by Part Number (P/N) in Eurocopter Deutschland GmbH (ECD) Alert Service Bulletin (ASB) ASB-MBB-BK117-10-108 Revision 4.
Reason:	In 1994, reports were received of two flight incidents whereby, in each case, a balance weight detached itself from the MR blade structure and was swept past the blade trailing edge. Although the rotor imbalance created by such an incident does not degrade the structural integrity, it does cause very severe vibrations. The centrifugal force on the blades can bring about creep deformation of the lead balance weight, which causes bulging of the upper and lower blade skin. The size of such bulges is the criterion for assessing the extent of possible damage to the structure around the lead balance weight and, consequently, the possibility of an impending blade failure. To address and correct this unsafe condition, LBA issued AD 94-280, later revised and replaced by AD 94-280/2 in December 1994 and ultimately replaced with AD D-1994-280R3 (EASA approval 2005-6229). That AD required repetitive inspections of all MR blades and, in case damage is found, corrective action before further flight. In addition, the inspections and procedures have been
	incorporated in the ECD MBB-BK117 Maintenance Manual since revision no. 24 (for MBB-BK117 A-1 thru B-2) and revision no. 5 (for MBB-BK117 C-1). Since AD D-1994-280R3 was issued, new MR blades have become available, not

	fitted with lead balance weights. Only MR blades equipped with a lead balance				
	weight are affected by this unsafe condition.				
	For the reasons described above, EASA AD 2008-0156 was issued, retaining the requirements of LBA AD D-1994-280R3, which was superseded, and limiting the applicability to those P/N MR blades which are fitted with lead balance weights.				
	This AD retains the requirements of EASA AD 2008-0156, which is superseded, extends the repetitive inspection interval from 50 flight hours (FH) to 300 FH and, where AD 2008-0156 required the operator to contact ECD Customer Service to request approved instructions for corrective action, this AD requires replacement of blades, depending on findings. In addition, based on new technical substantiation which allows more flexibility, paragraph (5) of AD 2008-0156 has been deleted. This prohibited the reinstallation of MR blades with lead balance weight after a complete replacement of the MR blades that are not fitted with lead balance weights (having a P/N not listed in ECD ASB-MBB-BK117-10-108).				
Effective Date:	22 September 2009				
	Required as indicated, unless accomplished previously:				
	(1) Initially, within the compliance time indicated in Table 1 of this AD, as applicable to MR blade, and thereafter at intervals not to exceed 300 FH, inspect the affected MR blades in accordance with the instructions of ECD ASB-MBB-BK117-10-108.				
Required Action(s) and Compliance Time(s):	Table 1				
		MR Blade Accumulated Flight Hours (on the effective date)	Initial compliance time		
		Less than 1 800 FH time since new (TSN)	Within 300 FH after the effective date of this AD, but not later than upon accumulation of 1 800 FH of the MR blade, whichever occurs first.		
		1 800 FH or more TSN	Within 300 FH after the effective date of this AD, or within 300 FH since the last inspection as required by EASA AD 2008-0156, whichever occurs first.		
	(2)	Inspections and corrective actions accomplished prior to the effective date of this AD, in accordance with ECD ASB-MBB-BK117-10-108 at original issue or Revision 1 or Revision 2 or Revision 3, are acceptable to comply with the initial requirements of paragraph (1) of this AD. After the effective date of this AD, repetitive inspections and corrective actions must be accomplished in accordance with ECD ASB-MBB-BK117-10-108 at Revision 4.			
	(3)	When, during any inspection as required is outside the allowable limits as specifie before further flight, replace each affecte	by this AD, damage is detected that in ECD ASB-MBB-BK117-10-108, ad MR blade with a serviceable blade.		
	(4)	Replacement of MR blades does not constitute terminating action for the repetitive inspection requirements of this AD, except when all MR blades installed on a helicopter are MR blades that have a P/N not listed in ECD ASB-MBB-BK117-10-108. In that case, this AD no longer applies to that helicopter.			

Ref. Publications:	Eurocopter Deutschland GmbH Alert Service Bulletin ASB-MBB-BK117-10-108 Revision 4 dated 17 August 2009.		
	The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.		
Remarks :	 If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 		
	 The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 		
	 Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA; E-mail <u>ADs@easa.europa.eu</u> 		
	 For any question concerning the technical content of the requirements in this AD, please contact: Eurocopter Deutschland GmbH, P.O. Box 80 11 40, 81663 München, Federal Republic of Germany Telephone: + 49 (0) 151 14 22 89 76; Facsimile: + 49 (0) 906 71-4111 		