EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2008-0061 **Date: 27 March 2008**

No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holder's Name :	**Type/Model designation(s) :**
EUROCOPTER DEUTSCHLAND	MBB-BK 117 C-1 and C-2 helicopters

TCDS Number : EASA R.010

Foreign AD : Not applicable

Supersedure: This Airworthiness Directive (AD) supersedes EASA Emergency AD No. 2006-0331-E dated 25 October 2006 and the 'Correction' thereof dated 26 October 2006.

ATA 11	**Placards & Markings – Pressure Altitude (PA) – Limitation** **&** **Rotorcraft Flight Manual – Amendment** **&** **Power Plant – Engine 'MAX N1' – Check**
Manufacturer(s):	Eurocopter Deutschland
Applicability:	All MBB-BK 117 C-1 and MBB-BK 117 C-2 helicopters, all serial numbers, except those on which both engines Fuel Control Units (FCU) have been modified in accordance with Turboméca Modification TU358.
Reason:	Prior to delivery of each helicopter, Eurocopter Deutschland performs the "MAX N1 Check" at a pressure altitude (PA) of about 10 000 feet. During supplementary testing the "MAX N1 CHECK" at maximum certification altitude, a few MBB-BK 117 C-2 helicopters could not reach the specified N1 power threshold value. The cause was identified as an engine acceleration limitation due to a delivered fuel flow lower than the engine fuel flow demand to achieve the OEI rating at high altitude. The fuel flow is limited by the FCU acceleration law in those cases. This limitation could potentially occur at altitudes exceeding 10 000 feet, depending on the engine and FCU characteristics. As a conservative measure, TURBOMECA and EUROCOPTER decided that take-off, landing and HIGE (Hover In Ground Effect) and/or HOGE (Hover Out of Ground Effect) operations above 10 000 feet or level flight above 13 000 feet require a dedicated mandatory check. EASA concurred with this decision and Emergency AD 2006-0331-E was issued to require each operator that intends to perform flights at altitudes exceeding the above-mentioned values, to install a placard, amend the flight manual and accomplish a "MAX N1 CHECK". Turboméca has now developed a modification (TU358) that will, when accomplished on both engines installed on the helicopter, cancel the required

	checks and allow the removal of the placard and flight manual changes. For the reasons stated above, this EASA AD retains the requirements of Emergency AD 2006-0331-E, which is superseded, adds a repetitive MAX N1 check and excludes those helicopters from the applicability on which the referenced modification TU358 has been accomplished on both engines.
Effective Date:	10 April 2008
Compliance:	Required as indicated, unless accomplished previously: (1) For all affected helicopters, before next flight after 26 October 2006 [the effective date Emergency AD 2006-0331-E], affix the selected placard and amend the Flight Manual (FLM) in accordance with the instructions of the referenced Alert Service Bulletin, as applicable; (2) For helicopters that are about to perform starting, landing and hovering procedures in or out of ground effect at pressure altitudes above 10 000 feet and/or flights at pressure altitudes above 13 000 feet, before the next such mission after the effective date of this AD, accomplish the ”MAX N1 CHECK” to establish the OEI rating of the engines in accordance with the instructions of the referenced Alert Service Bulletin, as applicable; (3) Within 600 Flight Hours (FH) after the effective date of this AD and thereafter at intervals not to exceed 600 FH, repeat the “MAX N1 CHECK” to establish the OEI rating of the engines in accordance with the instructions of the referenced Alert Service Bulletin, as applicable; (4) If the OEI rating is not reached, only operations at pressure altitudes up to a maximum of 10 000 feet and mission flights at pressure altitudes up to a maximum of 13 000 feet may be conducted. Amend the placard and FLM accordingly; (5) When, after failing to reach the OEI rating, either the engine, the FCU, engine module 2 and/or engine module 3 is replaced, repeat the “MAX N1 CHECK” to establish the OEI rating of the engines in accordance with the instructions of the referenced Alert Service Bulletin, as applicable; (6) After modification of both FCUs in accordance with Turboméca modification TU358, the placard and FLM changes must be removed from the helicopter and the ”MAX N1 CHECK” is no longer required; (7) After 10 April 2009, no person shall install a spare FCU on any helicopter as a replacement part unless it has been modified in accordance with Turboméca modification TU358.
Ref. Publications:	Eurocopter Deutschland Alert Service Bulletin (ASB) No. ASB-MBB-BK117-60-121 Revision 4; or ASB No. MBB BK117 C-2-71A-003 Revision 3, as applicable, both dated 11 December 2007. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can accept Alternative Method of Compliance for this AD. 2. This AD was posted on 26 February 2008 as PAD 08-027 for consultation until 18 March 2008. The Comment Response Document can be found at http://ad.easa.europa.eu/. 3. Enquiries regarding this AD should be referred to the AD Focal Point, Certification Directorate, EASA; E-mail: ADs@easa.europa.eu . 4. For any questions concerning the technical content of the requirements in this AD, please contact: Eurocopter Deutschland GmbH, Industriestraße 4, 86607 Donauwörth, Federal Republic of Germany; telephone: + 49 (0) 906 71-4922; facsimile: + 49 (0) 906 71-2196