

EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2006 – 0331-E [Corrected]</p> <p>Date: 25 October 2006</p>
<p>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 Registration.</p>	
<p>Type Approval Holder's Name :</p> <p>EUROCOPTER DEUTSCHLAND</p>	<p>Type/Model designation(s) :</p> <p>MBB-BK 117 C-1, MBB-BK 117 C-2</p>
<p>TCDS Number : Germany (LBA) Kennblatt No. 3049</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : Not applicable</p>	
<p>ATA 11</p>	<p>Placards & Markings – Pressure Altitude (PA) – Limitation & Rotorcraft Flight Manual – Amendment & Power Plant – Engine 'MAX N1' – Check</p>
<p>Manufacturer(s):</p>	<p>Eurocopter Deutschland</p>
<p>Applicability:</p>	<p>All MBB-BK 117 C-1 and MBB-BK 117 C-2 helicopters, all Serial Numbers</p> <p>Components affected: Engine - Turbomeca Arriel 1E2 FCU - Turbomeca Arriel 1E2</p> <p>Spare Parts affected: Engine - Turbomeca Arriel 1E2 FCU - Turbomeca Arriel 1E2</p>
<p>Reason:</p>	<p>EUROCOPTER performs the "MAX N1 Check" prior to delivery on each helicopter at a pressure altitude (PA) of about 10,000 feet. This test was successful for every delivered helicopter.</p> <p>During supplementary testing the "MAX N1 CHECK" at EUROCOPTER at maximum certification altitude, a few MBB-BK 117 C-2 helicopters could not reach the specified N1 power threshold value.</p> <p>After a first analysis, the suspected root cause is 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 Fuel Control Unit (FCU) acceleration law in those cases.</p>

	<p>Therefore it is anticipated, that this limitation could potentially occur at altitudes higher than 10,000 feet depending on the engine and FCU characteristics.</p> <p>As a conservative measure, TURBOMECA and EUROCOPTER have decided that take-off, landing and HIGE/HOGE higher than 10,000 feet or level flight above 13,000 feet require a dedicated mandatory check.</p> <p>EASA concurs with this recommendation. If an operator intends to perform flights in altitudes higher than the above mentioned values, a "MAX N1 CHECK" in accordance with directive must be accomplished.</p> <p>The above mentioned measures are considered to be temporary until the reason why the OEI rating was not reached at higher altitudes has been identified and a corrective action developed.</p>
Effective Date:	26 October 2006
Compliance:	<ol style="list-style-type: none"> (1) For all affected helicopters, before next flight, amend 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, 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) 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. (4) When the engine and the FCU is replaced after failing to reach the OEI rating, the "MAX N1 CHECK" as required by paragraph (2) of this directive must be repeated.
Ref. Publications:	Eurocopter Deutschland Alert Service Bulletin No. ASB-MBB-BK117-60-111, or Alert Service Bulletin No. MBB BK117 C-2-71A-003, as applicable, both dated 14 October 2006, or later approved revisions.
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Method of Compliance (AMOCs) for this AD. 2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 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