


<b>EASA</b>	<b>EMERGENCY AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2009-0245-E</b></p> <p><b>Date: 10 November 2009</b></p> <p>Note: This Emergency 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 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].</p>	
<p><b>Type Approval Holder's Name :</b></p> <p>Turboméca</p>	<p><b>Type/Model designation(s) :</b></p> <p>ARRIEL 1 series turboshaft engines</p>
<p>TCDS Number : EASA.E.073</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : This AD supersedes EASA AD 2009-0117-E, dated 02 June 2009.</p>	
<b>ATA 72</b>	<b>Engine - Module M05 (Reduction Gear Box) Lubrication Duct – Inspection / Repair</b>
Manufacturer(s):	Turboméca S.A.
Applicability:	<p>Arriel 1A1, 1A2, 1B, 1C, 1C1, 1C2, 1D, 1D1, 1E2, 1K, 1K1, 1S and 1S1 turbo-shaft engines, all serial numbers if modified by TU332 and fitted with Modules M05 (Reduction Gear Box) as identified in figure 1 of Turboméca Mandatory Service Bulletin (MSB) A292 72 0825 version B.</p> <p>These engines are known to be installed on, but not limited to, the following helicopters: Eurocopter AS350B/BA/BB/B1/B2, EC145/MBB-BK117-C1 and AS365N, Agusta A109K2, Sikorsky S-76A+ and S-76A++.</p>
Reason:	<p>Non compliant lubrication ducts, located in Module M05 (Reduction Gear Box) front casing, may have been installed during production and repair. Non-compliant lubrication ducts are potentially located in modules M05 listed in the Mandatory Service Bulletin A292 72 0825 version B.</p> <p>This non compliance may lead to a loss of the lubrication duct plug, followed by a quick draining of the oil tank without indication to the cockpit through low oil pressure warning. This could lead to an uncommanded in-flight shut down. On a single-engine helicopter, the result may be an emergency autorotation landing.</p> <p>In addition, an oil leak following the loss of the lubrication duct plug could lead to an engine fire.</p>

	<p>Since the issuance of EASA AD 2009-0117-E the following new information is available:</p> <ul style="list-style-type: none"> <li>- Six additional M05 Modules have been found affected by the non compliant lubrication ducts.</li> <li>- An alternative repair using a steel plug has been developed.</li> </ul> <p>This AD supersedes AD 2009-0117-E by referring to version B of Turboméca MSB A292 72 0825 which includes the six additional modules and allows the alternative repair as a terminating action.</p>
Effective Date:	12 November 2009
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Before next flight, inspect the M05 lubrication duct for presence of oil leakage, as instructed in paragraphs 1.C.(1)(a), 2.A and figure 2 of Turboméca MSB A292 72 0825 version B. Note: Inspection in accordance with Turboméca MSB A292 72 0825 version A is an acceptable compliance.</p> <p><u>If oil leakage is found:</u></p> <p>(1.1) Apply one of the following repair procedures:</p> <ul style="list-style-type: none"> <li>- Repair with elastomer as defined in paragraph 2.B.(1)(a) and figures 3 and 4 of Turboméca MSB A292 72 0825 version B.</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>- Installation of a steel plug as defined in paragraph 2.B.(1)(b) and figure 5 of Turboméca MSB A292 72 0825 version B.</li> </ul> <p>These are the terminating actions of this AD.</p> <p><u>If no oil leakage is found:</u></p> <p>(1.2) During the next 75 flight hours repeat the inspection every 4 flight hours or after the last flight of the day, whichever comes first.</p> <p>(1.3) After 75 flight hours, perform the regular oil leakage check after the last flight of the day, as defined in Chapter 05-20 of the applicable Arriel 1 Engine Maintenance Manual, paying particular attention to the M05 lubrication duct per figure 2 of Turboméca MSB A292 72 0825 version B.</p> <p>(2) The repair procedures defined in (1.1) are the terminating actions of this AD and one must be applied within 3 months of the effective date of this AD.</p> <p>Note: Serial numbers of Modules M05 affected by this AD are listed in figure 1 of Turboméca MSB A292 72 0825 version B. The engine serial numbers are also provided for information when available. In case of conflicts between serial numbers Turboméca should be contacted for resolution.</p>
Ref. Publications:	<p>Turboméca Mandatory Service Bulletin (MSB) A292 72 0825 - version B, dated 6 October 2009.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>

Remarks :	<ol style="list-style-type: none"><li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li><li>2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification.</li><li>3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management &amp; Research Section, Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li><li>4. For any question concerning the technical content of the requirements in this AD, please contact:  Turboméca, S.A., ARRIEL 1 Customer Support, 40220 TARNOS, FRANCE. Fax: +33 5 59 74 45 15 or contact your nearest technical representative at <a href="http://www.turbomeca-support.com">www.turbomeca-support.com</a>.</li></ol>
-----------	--