


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<p><b>AD No.: 2014-0059</b></p> <p><b>Date: 10 March 2014</b></p> <p>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.</p>	
<p>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].</p>		
<p><b>Design Approval Holder's Name:</b> TURBOMECA</p>		<p><b>Type/Model designation(s):</b> MAKILA 2 engines</p>
TCDS Number:	EASA.E.006	
Foreign AD:	Not applicable	
Supersedure:	None	
<b>ATA 77</b>		
<b>Fuel System – High Pressure Fuel Pump Drive Splines – Inspection</b>		
Manufacturer(s):	Turbomeca, S.A.	
Applicability:	<p>MAKILA 2A and MAKILA 2A1 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter) EC 225 LP helicopters.</p>	
Reason:	<p>Two uncommanded in-flight shutdowns on MAKILA 2A/2A1 engines have been reported. The results of the technical investigations concluded that these events were caused by deterioration of the splines on the High Pressure (HP) fuel pump drive link, which eventually interrupted the fuel supply to the engine.</p> <p>This condition, if not detected and corrected, could lead to further cases of uncommanded engine in-flight shutdown, and may ultimately lead to an emergency landing.</p> <p>To address these occurrences, Turbomeca published Service Bulletin (SB) N° 298 73 2818 (Versions A through D), to recommend inspection of the specific spline coupling area and reporting any damage. Turbomeca's understanding of the damage of HP fuel pump drive link splines improved and, consequently, a new fuel pump drive shaft was developed (Turbomeca modification TU 59). This modification, available for in-service application via SB N° 298 73 2059, improves lubrication and limits axial displacement of the HP pump drive shaft in the Module 01 drive gear. Turbomeca subsequently published Mandatory Service Bulletin (MSB) N° 298 73 2818 version E, applicable to engines fitted with pre-mod TU 59 fuel pumps, to repetitively inspect the HP fuel pump drive links.</p> <p>For the reasons described above, this AD requires repetitive inspections of</p>	

	engines equipped with HP fuel pump with part number (P/N) 0 298 91 806 0 and P/N 0 298 91 805 0, and, depending on findings, accomplishment of the applicable corrective actions.
Effective Date:	24 March 2014
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) For engines equipped with an HP fuel pump with P/N 0 298 91 806 0 or P/N 0 298 91 805 0, within 25 flight hours (FH) or 6 months, whichever occurs first after the effective date of this AD, and thereafter, at intervals not to exceed 100 FH, inspect the HP fuel pump/metering valve and the module M01 drive gear in accordance with the instructions of Turbomeca MSB N° 298 73 2818 Version E.</p> <p>Note: A non-cumulative tolerance as defined in Turbomeca MSB N° 298 73 2818 may be applied to the actions specified in paragraph (1) of this AD.</p> <p>(2) If, during any inspection as required by paragraph (1) of this AD, any discrepancy (as defined in MSB N° 298 73 2818) is detected, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Turbomeca MSB N° 298 73 2818 Version E.</p> <p>(3) Inspections and corrective actions, accomplished before the effective date of this AD in accordance with the instructions of Turbomeca SB N° 298 73 2818 (all previous versions until Version D inclusive) are acceptable to comply with the initial requirements of paragraphs (1) and (2), as applicable.</p> <p>(4) From the effective date of this AD, for an engine equipped with an HP fuel pump with P/N 0 298 91 806 0 or P/N 0 298 91 805 0, installation on an engine of an HP fuel pump drive shaft or an HP fuel pump or a module 01 or a module 01 77-tooth gear is allowed, provided that upon installation of one of these parts, that engine passes the inspection of the HP pump/metering valve and the module M01 drive gear, and thereafter, it is inspected as required by paragraph (1) of this AD.</p> <p>(5) From the effective date of this AD, do not install an HP fuel pump on an engine, or an engine on a helicopter, unless it is in compliance with the requirements of this AD.</p>
Ref. Publications:	<p>Turbomeca MSB N° 298 73 2818 Version E dated 11 February 2014.</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>If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>This AD was posted on 14 February 2014 as PAD 14-040 for consultation until 28 February 2014. No comments were received during the consultation period.</li> <li>Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>For any question concerning the technical content of the requirements in this AD, please contact: Turboméca, S.A., MAKILA Customer Support, 40220 TARNOS, FRANCE. Fax: +33 5 59 74 45 16; or contact your nearest technical representative at <a href="http://www.turbomeca-support.com">www.turbomeca-support.com</a>.</li> </ol>

**Referenced Publications:**

**Turbomeca MSB N° 298 73 2818, Version E**

**The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.**