


EASA	AIRWORTHINESS DIRECTIVE	
	AD No.: 2013-0082	
	Date: 02 April 2013	
<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>		
Design Approval Holder's Name:	Type/Model designation(s):	
TURBOMECA	ARRIUS 2 engines	
TCDS Number:	EASA.E.029	
Foreign AD:	Not applicable	
Supersedure:	None	
ATA 73	Engine Fuel & Control – Hydro-mechanical Metering Unit / Drive-Link Splines – Inspection	
Manufacturer(s):	TURBOMECA	
Applicability:	<p>ARRIUS 2B1, 2B1A, 2B2, 2K1, 2K2 and 2G1 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Eurocopter Deutschland EC135, Agusta A109 and KAMOV 226T twin-engine helicopters.</p>	
Reason:	<p>A number of in-flight shutdown occurrences have been reported for ARRIUS 2 engines. The results of the technical investigations concluded that these events were caused by deterioration of the splines on the High Pressure (HP) / Low Pressure (LP) pump assembly drive shaft of the Hydro-mechanical Metering Unit (HMU), which eventually interrupted the fuel supply to the engine.</p> <p>This condition, if not detected and corrected, could lead to further cases of engine in-flight shutdown, possibly resulting in forced landing.</p> <p>To address these occurrences, TURBOMECA published Service Bulletin (SB) N° 319 73 2825, which provides inspection instructions. After that SB was issued, further similar occurrences prompted TURBOMECA to perform a new assessment of the issue. As a result, it was determined that repetitive inspections of the HMU, including an additional inspection of the sleeve assembly, was necessary to address the issue. Those instructions are provided in TURBOMECA Mandatory SB (MSB) N° 319 73 2825 version G.</p> <p>For the reasons described above, this AD requires repetitive inspections of drive gear shaft splines of the HP pump, and depending on findings, accomplishment of applicable corrective actions.</p>	

Effective Date:	16 April 2013												
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within the compliance time specified in Table 1 or Table 2 of this AD, as applicable, depending on HMU condition, and, thereafter, at intervals not to exceed 500 HMU operating hours, accomplish a visual inspection of the drive gear shaft splines of the HP pump and, clean and inspect the sleeve assembly splines in accordance with the instructions of TURBOMECA MSB N° 319 73 2825 version G.</p> <p>Note: a maximum of 10 % tolerance can be applied to the defined inspection interval. This tolerance cannot be used accumulatively during two successive inspections.</p> <p>Table 1 - Initial inspection for HMU that have previously been inspected in accordance with TURBOMECA SB N° 319 73 2825 (at any version)</p> <table border="1" data-bbox="568 678 1425 1005"> <thead> <tr> <th>HMU condition</th> <th>Compliance Time</th> </tr> </thead> <tbody> <tr> <td>HMU has accumulated 500 operating hours or more since last inspection</td> <td>Within 200 HMU operating hours after the effective date of this AD</td> </tr> <tr> <td>HMU has accumulated less than 500 operating hours since last inspection</td> <td>Before exceeding 500 HMU operating hours since the last inspection in accordance with TURBOMECA SB N° 319 73 2825 (any version)</td> </tr> </tbody> </table> <p>Table 2 – Initial inspection for HMU that have never been inspected in accordance with TURBOMECA SB N° 319 73 2825 (at any version)</p> <table border="1" data-bbox="568 1146 1425 1413"> <thead> <tr> <th>HMU condition</th> <th>Compliance Time</th> </tr> </thead> <tbody> <tr> <td>HMU has accumulated 200 operating hours or more since new or since last overhaul</td> <td>Within 50 HMU operating hours after the effective date of this AD</td> </tr> <tr> <td>HMU has accumulated less than 200 operating hours since new or since last overhaul</td> <td>Before exceeding 200 HMU operating hours since new or since last overhaul</td> </tr> </tbody> </table> <p>(2) If, during any inspection as required by paragraph(1) of this AD, a discrepancy is detected, before next flight, replace the sleeve assembly on the affected HP pump drive gear shaft, or replace the affected HMU in accordance with the instructions of TURBOMECA MSB N° 319 73 2825 version G.</p> <p>(3) Replacement of a sleeve assembly or an HMU, as required by paragraph (2) of this AD, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that engine.</p> <p>(4) From the effective date of this AD, installation of an HMU on an engine, or an engine on a helicopter, is allowed, provided that the HMU is inspected and, depending on findings, corrected, as required by paragraphs (1) and (2) of this AD.</p>	HMU condition	Compliance Time	HMU has accumulated 500 operating hours or more since last inspection	Within 200 HMU operating hours after the effective date of this AD	HMU has accumulated less than 500 operating hours since last inspection	Before exceeding 500 HMU operating hours since the last inspection in accordance with TURBOMECA SB N° 319 73 2825 (any version)	HMU condition	Compliance Time	HMU has accumulated 200 operating hours or more since new or since last overhaul	Within 50 HMU operating hours after the effective date of this AD	HMU has accumulated less than 200 operating hours since new or since last overhaul	Before exceeding 200 HMU operating hours since new or since last overhaul
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Ref. Publications:	<p>TURBOMECA MSB N° 319 73 2825 version G dated 24 January 2013.</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">1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.2. This AD was posted on 04 March 2013 as PAD 13-040 for consultation until 01 April 2013. No comments were received during the consultation period.3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.4. For any question concerning the technical content of the requirements in this AD, please contact: TURBOMECA, S.A., ARRIUS Customer Support, 40220 TARNOS, FRANCE. Fax: +33 5 59 74 45 15; or contact your nearest technical representative at www.turbomeca-support.com.
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