


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<p><b>AD No.: 2014-0037</b></p> <p><b>Date: 14 February 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></p> <p>AGUSTAWESTLAND S.p.A.</p>	<p><b>Type/Model designation(s) :</b></p> <p>A109 and AW109 helicopters</p>	
<p>TCDS Number:</p>	<p>EASA.R.005</p>	
<p>Foreign AD:</p>	<p>Not applicable</p>	
<p>Supersedure:</p>	<p>None</p>	
<p><b>ATA 63</b></p>	<p><b>Main Rotor Drive – Engine to Transmission Drive Shaft Nuts – Inspection / Replacement</b></p>	
<p>Manufacturer(s):</p>	<p>AgustaWestland S.p.A (formerly Agusta S.p.A.).</p>	
<p>Applicability:</p>	<p>A109E helicopters, all serial numbers (S/N) up to S/N 11811 inclusive, except S/N 11796;</p> <p>A109K2 helicopters, all S/N;</p> <p>A109LUH helicopters, all S/N;</p> <p>A109S helicopters, all S/N;</p> <p>AW109SP helicopters, all S/N up to S/N 22327 inclusive, except S/N 22284, S/N 22286, S/N 22307, S/N 22321, S/N 22323 and S/N 22326.</p>	
<p>Reason:</p>	<p>Some occurrences were reported of in-service A109 helicopters, where during scheduled inspection of the engine - transmission drive shaft assembly Part Number P/N 109-0415-06-103, one nut P/N MS21042L4 that connects the engine shaft coupling to engine output shaft flange was found cracked.</p> <p>The subsequent technical investigation identified that the reported cracks of the nuts are the results of a production deficiency (causing hydrogen embrittlement) at the nut supplier.</p> <p>This condition, if not detected and corrected, could lead to disconnection of the engine from the transmission drive shaft, with the consequent complete loss of power to the main rotor thus resulting, if occurring on the two engines, in reduced control of the helicopter.</p> <p>To address this unsafe condition, AgustaWestland issued five Bollettino Tecnico (BT), BT 109EP-133, BT 109K-60, BT 109L-070, BT 109S-057 and</p>	

	<p>BT 109SP-073 for all helicopters that are potentially affected.</p> <p>For the reasons described above, this AD requires repetitive inspections of each nut P/N MS21042L4 connecting the engine shaft coupling to engine output shaft flange and replacement of each affected nut with a serviceable part having a different P/N (MS21043-4).</p>
Effective Date:	28 February 2014
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within 25 Flight Hours (FH) after the effective date of this AD, and, thereafter, at intervals not to exceed 25 FH, inspect each nut P/N MS21042L4 for cracks in accordance with the instructions of the applicable BT.</p> <p>Note: For the purpose of this AD, the applicable BT is the one mentioned in Ref. Publications of this AD for the affected helicopter model.</p> <p>(2) If, during any inspection as required by paragraph (1) of this AD, a nut is found cracked, before next flight, replace each nut with a serviceable part in accordance with the instructions of the applicable BT.</p> <p>(3) Unless each nut P/N MS21042L4 was replaced with a serviceable nut as required by paragraph (2) of this AD, within 6 months after the effective date of this AD, replace each nut P/N MS21042L4 with a serviceable part in accordance with the instructions of the applicable BT.</p> <p>(4) Replacement of each nut as required by paragraph (2) or (3), as applicable, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD.</p> <p>(5) From the effective date of this AD, do not install a nut having a P/N MS21042L4 for connecting the engine shaft coupling to engine output shaft flange on an helicopter.</p>
Ref. Publications:	<p>AgustaWestland BT 109EP-133 dated 13 February 2014.</p> <p>AgustaWestland BT 109K-60 dated 13 February 2014.</p> <p>AgustaWestland BT 109L-070 dated 13 February 2014.</p> <p>AgustaWestland BT 109S-057 dated 13 February 2014.</p> <p>AgustaWestland BT 109SP-073 dated 13 February 2014.</p> <p>The use of later approved revisions of these documents 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.</li> <li>3. 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>4. For any question concerning the technical content of the requirements in this AD, please contact: AgustaWestland S.p.A. Customer Support Via del Gregge, 100 - 21015 Lonate Pozzolo (VA) – Italy Telephone + 39 0331 664600 ; Fax: + 39 0331 664684 E-mail: <a href="mailto:custserv@agustawestland.com">custserv@agustawestland.com</a>.</li> </ol>