


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<p><b>AD No.: 2015-0096</b></p> <p><b>Date: 29 May 2015</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 EU 1321/2014 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 [EU 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
<b>Design Approval Holder's Name:</b> AGUSTAWESTLAND S.p.A.		<b>Type/Model designation(s):</b> A109 and A119 helicopters
TCDS Number:	EASA.R.005	
Foreign AD:	Not applicable	
Supersedure:	This AD supersedes EASA AD 2013-0118 dated 03 June 2013.	
<b>ATA 63</b>	<b>Main Rotor Drive – Main Gear Box / Gleason Crown – Inspection / Replacement</b>	
Manufacturer(s):	AgustaWestland S.p.A (formerly Agusta S.p.A.), AgustaWestland Philadelphia Corporation (formerly Agusta Aerospace Corporation).	
Applicability:	A109E, A109K2, A119 and AW119MKII helicopters, all serial numbers.	
Reason:	<p>During the overhaul of an A119 helicopter main transmission, Part Number (P/N) 109-0400-05-103, a crack on Gleason crown P/N 109-0403-07-103 was found.</p> <p>The investigation of this occurrence carried out by AgustaWestland revealed that the crack originated from the bottom of one of 40 threaded holes in the Gleason crown. Gleason crown P/N 109-0403-07-103 is also eligible for installation on A109 helicopters.</p> <p>This condition, if not detected and corrected, could cause damage to, or loss of, the main rotor drive, possibly resulting in loss of control of the helicopter.</p> <p>To address this potential unsafe condition, AgustaWestland published Bollettino Tecnico (BT) 109EP-128 Rev. A, BT 109K-57 Rev A. and BT 119-058 Rev. A to provide instructions for additional inspections of the Gleason crown and, depending on findings, replacement of the affected part with a new support assembly Gleason crown (welded to the mast support, which does not have the 40 threaded holes).</p> <p>Consequently, EASA issued AD 2013-0118 to require repetitive inspections of the Gleason crown and, depending on findings, accomplishment of the applicable corrective actions.</p> <p>Since that AD was issued, it was determined that additional main transmission serial numbers (S/N) could be equipped with affected Gleason crowns P/N 109-0403-07-103 and AgustaWestland issued Rev. B (later Rev. C) of the applicable BT introducing an inspection to determine the presence of the affected Gleason crowns on all main transmission S/N.</p>	

	For the reasons described above, this AD retains the requirements of EASA AD 2013-0118, which is superseded, and extends the inspections to all main transmission S/N.																										
Effective Date:	12 June 2015																										
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, review the helicopter maintenance records to determine if a Gleason crown P/N 109-0403-07-103 or a Gleason crown assembly P/N 109-0401-27-101 or P/N 109-0401-27-109 is installed on the helicopter main transmission.</p> <p>If it is not possible to determine the Gleason crown P/N from the maintenance records, perform an endoscopic inspection in accordance with the instructions of AgustaWestland BT 109EP-128, BT 109K-57 or BT 119-058, all at Rev. C, as applicable to helicopter model (hereafter referred to as “the applicable AgustaWestland BT”).</p> <p>Note 1: For the purpose of this AD, the affected main transmission P/N and S/N are listed in Table 1 of this AD.</p> <p style="text-align: center;">Table 1 – Affected Main Transmissions</p> <table border="1"> <thead> <tr> <th>Helicopter Model(s)</th> <th>P/N</th> <th>S/N</th> </tr> </thead> <tbody> <tr> <td>A109K2</td> <td>109-0400-03-103</td> <td>All</td> </tr> <tr> <td>A119 and AW119MKII</td> <td>109-0400-05-103</td> <td>Up to S/N V96</td> </tr> <tr> <td>A109E</td> <td>109-0400-03-109</td> <td>UP to S/N Q192</td> </tr> </tbody> </table> <p>(2) If, during the review as required by paragraph (1) of this AD, it is determined that a Gleason crown P/N 109-0403-07-103 or a Gleason crown assembly P/N 109-0401-27-101 or P/N 109-0401-27-109 is installed, within the compliance time as specified in Table 2 of this AD, as applicable, accomplish a magnetic particle inspection of the Gleason crown in accordance with the instructions of the applicable AgustaWestland BT.</p> <p>After the first inspection as required by paragraph (2) of this AD, accomplish all subsequent inspections as listed in Table 2 below.</p> <p>After the last inspection as listed in Table 2 below (i.e. upon reaching the overhaul limit of 4 800 FH), accomplish a magnetic particle inspection at intervals not to exceed 1 600 FH.</p> <p style="text-align: center;">Table 2 – Magnetic Particle Inspections</p> <table border="1"> <thead> <tr> <th>FH accumulated by the transmission (on the effective date of this AD)</th> <th>Compliance Time</th> </tr> </thead> <tbody> <tr> <td>2 400 FH or less</td> <td>Before exceeding 2 600 FH</td> </tr> <tr> <td>More than 2 400 FH, but less than 3 000 FH</td> <td>Within 200 FH after the determination of FH accumulated by the transmission</td> </tr> <tr> <td>3 000 FH or more, but less than or equal to 3 200 FH</td> <td>Before exceeding 3 200 FH (as scheduled per Maintenance Manual)</td> </tr> <tr> <td>More than 3 200 FH, but less than 4 000 FH</td> <td>Before exceeding 4 200 FH</td> </tr> <tr> <td>4 000 FH or more, but less than 4 600 FH</td> <td>Within 200 FH after the determination of FH accumulated by the transmission</td> </tr> <tr> <td>4 600 FH or more</td> <td>Before exceeding 4 800 FH (as scheduled per Maintenance Manual)</td> </tr> </tbody> </table>	Helicopter Model(s)	P/N	S/N	A109K2	109-0400-03-103	All	A119 and AW119MKII	109-0400-05-103	Up to S/N V96	A109E	109-0400-03-109	UP to S/N Q192	FH accumulated by the transmission (on the effective date of this AD)	Compliance Time	2 400 FH or less	Before exceeding 2 600 FH	More than 2 400 FH, but less than 3 000 FH	Within 200 FH after the determination of FH accumulated by the transmission	3 000 FH or more, but less than or equal to 3 200 FH	Before exceeding 3 200 FH (as scheduled per Maintenance Manual)	More than 3 200 FH, but less than 4 000 FH	Before exceeding 4 200 FH	4 000 FH or more, but less than 4 600 FH	Within 200 FH after the determination of FH accumulated by the transmission	4 600 FH or more	Before exceeding 4 800 FH (as scheduled per Maintenance Manual)
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	<p>(3) If, during any inspection as required by paragraph (2) of this AD, any crack is identified, before next flight, replace the affected Gleason crown with an improved part in accordance with the instructions of the applicable AgustaWestland BT at Rev. C.</p> <p>(4) Inspections and replacements, accomplished before the effective date of this AD in accordance with the instructions of the applicable AgustaWestland BT at original issue or at Rev. A or at Rev. B, are acceptable to comply with the requirements of paragraph (2) or (3) of this AD.</p> <p>(5) Replacement of a Gleason crown as required by paragraph (3) of this AD constitutes terminating action for the repetitive inspections as required by paragraph (2) of this AD.</p> <p>Note 2: Accomplishment of this AD does not affect any inspections of the main transmission in accordance with the Maintenance Manual.</p> <p>(6) From 17 June 2013 [the effective date of EASA AD 2013-0118], do not install on any helicopter a Gleason crown P/N 109-0403-07-103 or a Gleason crown assembly P/N 109-0401-27-101 or P/N 109-0401-27-109 (Gleason crown P/N 109-0403-07-103 is part of these assemblies).</p>
Ref. Publications:	<p>AgustaWestland BT 109EP-128 Rev. A dated 28 May 2013 or Rev. B dated 20 May 2015 or Rev. C dated 26 May 2015.</p> <p>AgustaWestland BT 109-K-57 Rev. A dated 28 May 2013 or Rev. B dated 20 May 2015 or Rev. C dated 26 May 2015.</p> <p>AgustaWestland BT 119-058 Rev. A dated 28 May 2013 or Rev. B dated 20 May 2015 or Rev. C dated 26 May 2015.</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, 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:  AgustaWestland S.p.A., Customer Support &amp; Services – Italy,  Product Support Engineering DPT, via Indipendenza, 2  21018 Sesto Calende (VA) – Italy  Tel.: +39 0331 915874, Fax: +39 0331 664680  E-mail: <a href="mailto:custserv@agustawestland.com">custserv@agustawestland.com</a>.</li> </ol>