


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2012-0161R1</b></p> <p><b>Date: 19 September 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>ROLLS-ROYCE DEUTSCHLAND Ltd &amp; Co KG</p>	<p><b>Type/Model designation(s):</b></p> <p>BR700-710 engines</p>
<p>TCDS Number: EASA.E.018</p>	
<p>Foreign AD: Not applicable</p>	
<p>Revision: This AD revises EASA AD 2012-0161 dated 24 August 2012.</p>	
<b>ATA 72</b>	<b>Engine – Accessory Gearbox Module – Replacement of the Fuel Pump Splined Coupling</b>
<p>Manufacturer(s): Rolls-Royce Deutschland Ltd &amp; Co KG (RRD)</p>	
<p><b>Applicability:</b></p>	<p>BR700-710A1-10 and BR700-710A2-20 engines, all manufacturer serial numbers, except those which have embodied RRD Service Bulletin (SB) SB-BR-700-73-101833.</p> <p>BR700-710C4-11 engines, all manufacturer serial numbers which:</p> <ul style="list-style-type: none"> <li>(a) have hardware configuration standard 710C4-11 engraved on the engine data plate (RRD SB SB-BR700-72-101466 standard not incorporated), or</li> <li>(b) have hardware configuration standard 710C4-11/10 engraved on the engine data plate (RRD SB SB-BR700-72-101466 standard incorporated),</li> </ul> <p>except those which have embodied RRD SB-BR-700-73-101833.</p> <p>These engines are known to be installed on, but not limited to, Gulfstream GV, GV-SP (G500, G550) and Bombardier BD-700-1A10, BD-700-1A11 series aeroplanes.</p>
<p><b>Reason:</b></p>	<p>In-service experience of RRD BR700-710 fuel pump installed on the rear face of the accessory gearbox identified premature wear of the splined coupling, which caused damage to the splined coupling.</p> <p>This condition, if not corrected, could lead to failure of engine fuel supply, likely resulting in an uncommanded in-flight shut down and consequent reduced control of the aeroplane.</p>

	<p>To address this potential unsafe condition, RRD issued Alert Non-Modification Service Bulletin (NMSB) BR700-72-A900509, providing instructions to replace the affected fuel pump splined couplings.</p> <p>Prompted by these findings, EASA issued AD 2012-0161 to require repetitive replacements of the affected fuel pump splined couplings.</p> <p>Since that AD was issued, RRD developed a new design of fuel pump drive shaft connection with a higher load capability which is not susceptible to premature wear of the splined coupling. This modification is available for production and in-service application through RRD SB-BR-700-73-101833</p> <p>This AD is revised to recognise that engines modified to incorporate a new design of fuel pump drive shaft connection are excluded from the Applicability of this AD.</p>						
Effective Date:	<p>Revision 1: 19 September 2014</p> <p>Original issue: 07 September 2012</p>						
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Initially, within the compliance time as specified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 4 000 engine hours (EH), replace each engine fuel pump splined coupling with a serviceable part in accordance with the instructions of RRD NMSB-BR700-72-A900509 at Revision 2 (or later approved revisions).</p> <p style="text-align: center;">Table 1 Initial replacement thresholds</p> <table border="1"> <tr> <th>EH accumulated since new, on 07 September 2012 [the effective date of original issue of this AD]</th><th>Compliance time</th></tr> <tr> <td>Equal to or more than 3 750 EH</td><td>250 EH after 07 September 2012 [the effective date of original issue of this AD]</td></tr> <tr> <td>Less than 3 750 EH</td><td>Before exceeding 4 000 EH</td></tr> </table> <p>(2) Fuel coupling replacements, accomplished before 07 September 2012 [the effective date of original issue of this AD] in accordance with the instructions of RRD NMSB-BR700-72-A900509 at original issue or Revision 1, are acceptable to comply with the initial requirements of this AD. After 07 September 2012 [the effective date of original issue of this AD], the instructions of RRD NMSB-BR700-72-A900509 at Revision 2 (or later approved revision) must be used.</p> <p>(3) From 07 September 2012 [the effective date of original issue of this AD], do not install on any engine a fuel pump with an affected splined coupling, and do not install an engine equipped with an affected fuel pump splined coupling on an aeroplane, unless in accordance with the requirements of this AD.</p> <p>(4) Compliance with the requirements of paragraphs (1) and (3) of this AD can be demonstrated by:</p> <p>(4.1) Revising as follows, unless accomplished previously, the approved Aircraft Maintenance Programme (AMP) on the basis of which the operator or the owner ensures the continuing airworthiness of each operated aeroplane:</p> <p style="padding-left: 40px;">Incorporate the fuel pump splined coupling 4 000 EH replacement interval as specified in RRD Alert NMSB SB-72-A900509 Revision 2,</p> <p style="padding-left: 40px;">and</p>	EH accumulated since new, on 07 September 2012 [the effective date of original issue of this AD]	Compliance time	Equal to or more than 3 750 EH	250 EH after 07 September 2012 [the effective date of original issue of this AD]	Less than 3 750 EH	Before exceeding 4 000 EH
EH accumulated since new, on 07 September 2012 [the effective date of original issue of this AD]	Compliance time						
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	(4.2) Complying with the approved AMP as described in paragraph (4.1) of this AD.
Ref. Publications:	<p>RRD Alert NMSB-BR700-72-A900509 original issue dated 28 February 2012, or Revision 1 dated 27 March 2012, or Revision 2 dated 17 July 2012, or Revision 3 dated 02 August 2012 or Revision 4 dated 25 August 2014.</p> <p>RRD SB-BR-700-73-101833 original issue dated 01 August 2013, or Revision 1 dated 06 December 2013.</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. The original issue of this AD was posted on 23 July 2012 as PAD 12-086 for consultation until 20 August 2012. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</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 your designated Rolls-Royce representative, or download the publication from your Aeromanager account at <a href="http://www.aeromanager.com">www.aeromanager.com</a>.</li> </ol> <p>If you do not have a designated representative or Aeromanager account, please contact Rolls-Royce Deutschland Ltd &amp; Co KG, Eschenweg 11, Dahlewitz, 15827 Blankenfelde-Mahlow, Germany  Telephone: +49 (0) 33 7086 1200 Fax: +49 (0) 33 7086 1212  E-mail: <a href="mailto:RRDTechnicalHelpdesk@Rolls-Royce.com">RRDTechnicalHelpdesk@Rolls-Royce.com</a>, or  send an email through <a href="http://www.rolls-royce.com/contact/civil_team.jsp">http://www.rolls-royce.com/contact/civil_team.jsp</a> identifying the correspondence as being related to <b>airworthiness directives</b>.</p>