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| EASA | AIRWORTHINESS DIRECTIVE | |
|  | <p>AD No.: 2012-0237R1</p> <p>Date: 14 November 2012</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>Design Approval Holder's Name: ROLLS-ROYCE plc</p> | <p>Type/Model designation(s): RB211 Trent 500 engines</p> | |
| TCDS Number: | EASA.E.060 | |
| Foreign AD: | Not applicable | |
| Revision: | This AD revises EASA AD 2012-0237 dated 09 November 2012, which superseded EASA AD 2011-0243 dated 20 December 2011. | |
| ATA 73 | Engine – Low Pressure Fuel Tubes, Clips and Fuel Oil Heat Exchanger Mounts – Inspection | |
| Manufacturer(s): | Rolls-Royce plc | |
| Applicability: | <p>RB211 Trent 500 Models 553-61, 553A2-61, 556-61, 556A2-61, 556B-61, 556B2-61, 560-61 and 560A2-61 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Airbus A340-500 and Airbus A340-600 series aeroplanes.</p> | |
| Reason: | <p>Fuel leaks from the low pressure (LP) fuel tubes, which run between the LP fuel pumps and high pressure (HP) fuel pumps, occurred in-service. The results of subsequent technical investigations showed that these were caused by fretting between the securing clips and the LP fuel tube outer surface, which reduces the fuel tube thickness, leading to fracture of the fuel tube and consequent fuel leak.</p> <p>This condition, if not detected early enough or if not correctly managed, could lead to critical fuel unbalance or in-flight fuel starvation. Fuel leak detection and the associated aeroplane procedures can be complex, leading to some flight crews failing to detect and/or address such situations.</p> <p>To address this potential unsafe condition, as a precautionary measure to mitigate the risk of in-flight fuel starvation, EASA issued AD 2011-0243 to require a one-time on-wing inspection of the LP fuel tubes and the associated clips and, depending on findings, replacement of the affected parts with serviceable parts.</p> <p>Since that AD was issued, further engineering evaluation based on the results of the inspections carried out as required by AD 2011-0243 showed</p> | |

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| | <p>the need for repetitive inspections.</p> <p>For the reasons described above, this AD retains the requirements of EASA AD 2011-0243, which is superseded, and requires additional repetitive inspections of LP fuel tubes, clips and fuel-to-oil heat exchanger (FOHE) mounts and, depending on findings, accomplishment of applicable corrective action(s).</p> <p>This AD is revised to add a Note, specifying that an on-wing inspection may be substituted by an in-shop inspection.</p> |
| Effective Date: | <p>Revision 1: 28 November 2012</p> <p>Original issue: 23 November 2012</p> |
| Required Action(s) and Compliance Time(s): | <p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) Within 1 600 engine flight hours (EFH) after 03 January 2012 [the effective date of EASA AD 2011-0243], inspect the LP fuel tubes and clips in accordance with the instructions of Section 3, paragraph A of Rolls-Royce (RR) Trent 500 Series Propulsion Systems Non-Modification Service Bulletin (NMSB) RB.211-73-AG948. (2) If, during the inspections as required by paragraph (1) of this AD, any discrepancy is identified, before next flight, replace the affected parts with serviceable parts in accordance with the instructions of Section 3, Paragraph A or B, as applicable, of RR NMSB RB.211-73-AG948. (3) Inspections and corrective actions, accomplished before 23 November 2012 [the effective date of the original issue of this AD], in accordance with the instructions of RR NMSB RB.211-73-G723 or of RR NMSB RB.211-73-AG797 (at any revision), are acceptable to comply with the requirement of paragraph (1) of this AD. (4) Within 6 000 EFH after the inspection as required by paragraph (1) of this AD, and thereafter, at intervals not to exceed 6 000 EFH, accomplish an on-wing inspection of the LP fuel tubes, clips and FOHE mounts in accordance with the instructions of Section 3, Paragraph A of RR NMSB RB.211-73-AG948. (5) From 23 November 2012 [the effective date of the original issue of this AD], during each engine shop visit and during each engine overhaul, inspect the LP fuel tubes, clips and FOHE mounts in accordance with the instructions of Section 3, Paragraph B of RR NMSB RB.211-73-AG948 and, depending on findings, accomplish all applicable corrective actions before release to service of the engine. <p>Note: Accomplishment of a shop visit inspection as required by paragraph (5) of this AD may substitute the accomplishment of an on-wing inspection as required by paragraph (4) of this AD.</p> <ol style="list-style-type: none"> (6) If, on 23 November 2012 [the effective date of the original issue of this AD], the engine is in shop, before release to service of the engine, inspect the LP fuel tubes, clips and FOHE mounts in accordance with the instructions of Section 3, Paragraph B of RR NMSB RB.211-73-AG948, to the extent where the affected parts are exposed and, depending on findings, accomplish all applicable corrective actions before release to service of the engine. |
| Ref. Publications: | <p>Rolls-Royce NMSB RB.211-73-AG948 dated 28 September 2012.</p> <p>Rolls-Royce NMSB RB.211-73-G723 Revision 1 dated 31 January 2012.</p> <p>Rolls-Royce NMSB RB.211-73-AG797 Revision 2 dated 13 June 2012.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p> |

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| Remarks: | <ol style="list-style-type: none">1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.2. The original issue of this AD was posted on 02 October 2012 as PAD 12-126 for consultation until 30 October 2012. The Comment Response Document can be found at http://ad.easa.europa.eu.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 your designated Rolls-Royce representative or download the publication from your Aeromanager account at www.aeromanager.com. <p>If you do not have a designated representative or Aeromanager account, please contact Corporate Communications at Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, The United Kingdom, Telephone: +44 (0) 1332 242424, or send an e-mail through http://www.rolls-royce.com/contact/civil_team.jsp identifying the correspondence as being related to Airworthiness Directives.</p> |
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