


EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2013-0151R2</p> <p>Date: 02 September 2013</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:</p> <p>Rolls-Royce Deutschland Ltd & Co KG</p>	<p>Type/Model designation(s):</p> <p>Tay 620, Tay 650 and Tay 651 engines</p>
TCDS Number:	EASA.E.063
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2013-0151R1 dated 30 July 2013.
ATA 72	Engine – Low Pressure Compressor / Fan Blade – Inspection / Replacement
Manufacturer(s):	Rolls-Royce plc
Applicability:	<p>Tay 620-15, Tay 620-15/20, Tay 650-15, Tay 650-15/10 and Tay 651-54 engines, all serial numbers.</p> <p>These engines are known to be installed on, but not limited to, Fokker F28 Mark 0070 and Mark 0100, and on Boeing 727 (STC-modified) series aeroplanes.</p>
Reason:	<p>The Tay 650-15 engines suffered a number of in-service multiple low pressure compressor (LPC) fan blade off events. In addition, a set of Tay 650-15 LPC fan blades were found during inspection having cracking at the fan blade root. Subsequent investigation revealed that fan blades failed due to cracking initiated in the fan blade root, most likely induced by a fan flutter.</p> <p>To address this unsafe condition Rolls Royce plc, and after transfer of the type certificate for the Tay engines to Rolls-Royce Deutschland Ltd & Co KG (RRD) in 2002, RRD issued Alert Non Modification Service Bulletin (NMSB) TAY-72-A1442 (at various revisions) to provide instructions for LPC fan blade root inspections to early detect fan blade crack initiation.</p> <p>Consequently, EASA issued AD 2007-0113 to require ultrasonic inspections of LPC fan blades for Tay 650-15 and 651-54 engines and corrective action, depending on findings.</p> <p>Since that AD was issued, a Tay 620-15 engine suffered a multiple fan blade off event, where flutter was considered as a failure cause mechanism. Prompted by this event, RRD issued Alert NMSB TAY-72-A1442 at Revision 5 and EASA issued EASA AD 2013-0151 to make the LPC fan blade inspection instructions</p>

	<p>mandatory also for Tay 620-15 engines, later revised to AD 2013-0151R1.</p> <p>Since EASA AD 2013-0151R1 was issued, the requirement of ultrasonic inspection mandated to be accomplished before a re-installation of LPC fan blades on the same engine, was reassessed and found not required to assure safety.</p> <p>For the reasons described above, Revision 2 of this AD is issued to require ultrasonic inspection of LPC fan blades before re-installation on different engines only.</p>
Effective Date:	<p>Revision 2: 02 September 2013</p> <p>Original issue and Revision 1: 30 July 2013</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>Tay 650-15, Tay 650-15/10 and Tay 651-54 engines:</p> <p>(1) From 10 May 2007 [the effective date of AD 2007-0113], whenever the LPC fan blades are removed from an engine, before re-installation on a different engine, inspect the LPC fan blades and accomplish an ultrasonic inspection of the LPC fan blades in accordance with the instructions of RRD Alert NMSB TAY-72-A1442 at Revision 5 or Revision 6.</p> <p>[Deleted]</p> <p>(2) From 10 May 2007 [the effective date of AD 2007-0113], during each engine shop visit, before release to service of the engine, inspect the LPC fan blades and accomplish an ultrasonic inspection of the LPC fan blades in accordance with the instructions of RRD Alert NMSB TAY-72-A1442 at Revision 5 or Revision 6.</p> <p>Tay 620-15 and Tay 620-15/20 engines:</p> <p>(3) From 30 July 2013 [the effective date of AD 2013-0151R1], before release to service of an engine after every mid-life, or every calendar life, or every overhaul shop visit, inspect the LPC fan blades and accomplish an ultrasonic inspection of the LPC fan blades in accordance with the instructions of RRD Alert NMSB TAY-72-A1442 at Revision 5 or Revision 6.</p> <p>Note: Engine mid-life shop visit is an engine shop visit accomplished before accumulation of 12 000 engine (flight) cycles since new or the last engine mid-life shop visit; calendar life shop visit is an engine shop visit accomplished within 10 years since new or the last engine calendar life shop visit; overhaul shop visit is an engine shop visit accomplished before accumulation of 22 000 engine (flight) cycles since new or last engine overhaul shop visit.</p> <p>All models:</p> <p>(4) If, during any inspection as required by paragraph (1), (2) or (3) of this AD, any LPC fan blade is found cracked, before next flight or release to service of the engine, replace the complete set of the LPC fan blades and the LPC rotor disc with a serviceable set of the LPC fan blades and LPC rotor disc.</p> <p>(5) Inspections and LPC fan blade replacements, accomplished before 30 July 2013 [the effective date of AD 2013-0151R1] in accordance with the instructions of RRD Alert NMSB TAY-72-A1442 from Initial issue up to Revision 4, are acceptable to comply with the requirements of paragraphs (1) or (2) or (3) of this AD, as applicable.</p> <p>(6) From the effective date of this AD, do not install a LPC fan blades on an engine, or an engine on an aeroplane, unless in compliance with the requirements of this AD.</p>
Ref. Publications:	RRD Alert NMSB TAY-72-A1442 Revision 05, dated 31 May 2013 or

	<p>Revision 06 dated 26 August 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"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 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. 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: Rolls-Royce Deutschland Ltd & Co KG Eschenweg 11 – 15827 Dahlewitz – Germany Tel. + 49 3370861200, Fax + 49 3370861212. rrd.techhelp@rolls-royce.com.