


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2007-0182</b></p> <p><b>Date: 02 July 2007</b></p>
<b>Type Approval Holder's Name:</b>	<b>Type/Model designation(s):</b>
Thielert Aircraft Engines	TAE125-01 and TAE125-02-99 engines
TCDS Numbers: EASA E.055	
Foreign AD: Not applicable	
Supersedure: Not applicable	
<b>ATA 71</b>	<b>Power Plant – Engine Installation – Inspection</b>
<b>Manufacturer:</b>	Thielert Aircraft Engines
<b>Applicability:</b>	TAE125-01 and TAE125-02-99 engines, all serial numbers, installed in Diamond Aircraft Industries DA42 aircraft.
<b>Reason:</b>	<p>Recently, a double in-flight engine shut down incident occurred on a DA42 aircraft equipped with TAE125-01 engines. The BFU (German Accident Investigation Body) found the root cause to be a violation of the AFM procedures (take-off with an insufficiently charged main aircraft battery) and momentary low voltage in the electric system of the aircraft. This situation can occur when the aircraft electrical system is not in the certified condition (battery failure or other failure case) and significant electric loads (for example the hydraulic motor of the landing gear) are switched on the aircraft system. This has been the subject of Diamond Service Information (SI) 42-040 and a subsequent EASA Safety Information Notice, SIN 2007-08, issued on 18 April 2007.</p> <p>The TAE125 engines are FADEC controlled and are not totally independent from the aircraft electrical power supply. A significant drop of the voltage causes a reset of the FADEC on both engines, automatically moving the propeller blades into the feathered position. This condition, if not corrected, could lead to further cases of in-flight engine shutdown and subsequent loss of control of the aircraft.</p> <p>Following the described incident, the Engine TC holder, Thielert Aircraft Engines (TAE), has reviewed and revised the Engine Installation Manuals IM-02-01 and IM-02-02, specifically Chapter 13 (02-IM-13-01 and 02-IM-13-02, respectively) dealing with the Electrical System and FDEC Installation. Since an unsafe condition has been identified that is likely to exist or develop on</p>

	<p>other engine installations of this type design, this Airworthiness Directive requires an inspection of the engines already installed.</p> <p><b>Note:</b> Concurrent with this AD, AD 2007-0183 has been issued to address the necessary modification on the Diamond DA42 aircraft, in accordance with Diamond Aircraft Industries GmbH Mandatory Service Bulletin MSB-42-042. It is recommended to accomplish both actions at the same time.</p>
Effective Date:	16 July 2007
Compliance	<p>(1) Not later than 31 October 2007, inspect the engine installation to verify that the electrical system conforms to the instructions contained in</p> <ul style="list-style-type: none"> <li>- Chapter 13 (02-IM-13-01) of TAE125-01 Installation Manual IM-02-01 Issue 4, Revision 1; or</li> <li>- Chapter 13 (02-IM-13-02) of TAE125-02 Installation Manual IM-02-02 Issue 1, Revision 3,</li> </ul> <p>as applicable to engine variant installed.</p> <p>(2) For engine installations that are found non-conforming as a result of the inspection as required by paragraph (1) of this directive, contact TAE, address indicated in the 'Remarks' section of this directive. The unsafe condition on the DA42 will be rectified by accomplishing MSB 42-042. See AD 2007-0183 which is an alternative method of compliance with the requirements of this AD for the TAE 125 installation in the DA42.</p>
Ref. Publications:	<p>TAE Installation Manual IM-02-01 Issue 4, Revision 1, Chapter 13 (02-IM-13-01); and</p> <p>TAE Installation Manual IM-02-02 Issue 1, Revision 3, Chapter 13 (02-IM-13-02).</p>
Remarks:	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOC) for this AD.</li> <li>2. This AD was posted on 04 May 2007 as PAD 07-073 for consultation until 18 May 2007. The Comment Response Document (CRD) can be found at <a href="http://ad.easa.europa.eu/">http://ad.easa.europa.eu/</a>.</li> <li>3. Enquiries regarding this Proposed Airworthiness Directive Cancellation should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a></li> <li>4. For any questions concerning the content of this Airworthiness Directive, please contact: Thielert Aircraft Engines Platanenstraße 14 D-09350 Lichtenstein Tel.: +49 (40) 696950 48 Fax: +49 (40) 696950 50 E-Mail: <a href="mailto:airworthiness@thielert.com">airworthiness@thielert.com</a></li> </ol>