


EASA	PROPOSED AIRWORTHINESS DIRECTIVE	
	PAD No : 07-074	
	Date: 04 May 2007	
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.		
Type Approval Holder's Name : Diamond Aircraft Industries GmbH		Type/Model designation(s) : DA 42
TCDS Number : EASA.A.005		
Foreign AD : not applicable		
Supersedure : not applicable		
ATA 24 & 73	Engine fuel & control - Engine control unit back up batteries - Installation	
Manufacturer:	Diamond Aircraft Industries GmbH	
Applicability:	DA 42 airplanes all serial numbers.	
Reason:	<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 Airplane Flight Manual procedures (taking-off with an insufficiently charged main aircraft battery) and momentary low voltage in the electrical system of the aircraft when retracting the main landing gear. 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 TAE125-01 engines are FADEC (Full Authority Digital Engine Control) controlled and are not totally independent from the aircraft electrical power supply. A significant drop of the voltage causes simultaneously a reset of the FADEC on both engines with subsequent feathering of the propeller blades. In the case of an empty battery this scenario may be considered as catastrophic at the aircraft level.</p> <p>Revision 1 to the Thielert Aircraft Engines (TAE) Installation Manual IM-02-01 Issue 4 addressed this issue and is also the subject of EASA Airworthiness Directive (AD) 2007-TBD [referring to PAD 07-073]</p>	

	<p>The present AD, regarding the new specifications introduced by the TAE Installation Manual IM-02-01 Issue 4 revision 1, mandates installation of additional Engine Control Unit (ECU) Backup Batteries to supply electrical power to the ECU so as to cater for high transient power drains causing a short-term voltage drop when an insufficient power from the main battery might exist.</p>
Effective Date:	[Proposed: 14 days after final AD issue date]
Compliance:	<p>At the next scheduled Inspection or within the next 100 Flight Hours, whichever occurs first, after the effective date of this AD, and no later than 31 August 2007:</p> <ol style="list-style-type: none"> 1. Modify the engine electrical system of the DA 42 and install ECU backup batteries as instructed in the Diamond Aircraft Industries (DAI) Mandatory Service Bulletin (MSB) 42-042. 2. after accomplishment of the paragraph 1. of this AD, Insert into the DA 42 Maintenance Manual the AMM-TR-MÄM-42-240 Temporary Revision and update accordingly the operator's maintenance programme.
Ref. Publications:	<p>Diamond Aircraft Industries Mandatory Service Bulletin MSB 42-042 or later approved revisions.</p> <p>DAI Service Information SI 42-040</p> <p>TAE Installation Manual IM-02-01 Issue 4, Revision 1.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOCs) for this AD. 2. Closing date for comments is 18 May 2007 3. Enquiries regarding this Airworthiness Directive should be addressed to the AD Focal Point - Certification Directorate, EASA. E-mail: ADs@easa.europa.eu 4. For any question concerning the technical content of the requirements in this AD, please contact Diamond Aircraft Industries GmbH, Austria. Ph.: +43 2622 26700 ; Fax: +43 2622 26780 E-mail: office@diamond-air.at