


EASA	AIRWORTHINESS DIRECTIVE	
	<p>AD No.: 2013-0224</p> <p>Date: 19 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: DIAMOND AIRCRAFT INDUSTRIES GmbH</p>	<p>Type/Model designation(s): DA 42 aeroplanes</p>	
<p>TCDS Numbers: EASA.A.005 and EASA.A.513</p>		
<p>Foreign AD: Not applicable</p>		
<p>Supersedure: None</p>		
ATA 24	Electrical Power – Alternator Fail Indication – Modification	
<p>Manufacturer(s):</p>	<p>Diamond Aircraft Industries GmbH (Austria), Diamond Aircraft Industries Inc. (Canada)</p>	
<p>Applicability:</p>	<p>DA 42 NG aeroplanes, all serial numbers (S/N), and DA 42 M-NG aeroplanes (both Normal and Restricted category), all S/N.</p>	
<p>Reason:</p>	<p>During maintenance troubleshooting of the DA 42 NG alternator indication system it has been discovered that, with one alternator inoperative, the system did not give a warning indication as described in the Airplane Flight Manual.</p> <p>Subsequent investigation results showed that the voltage regulator warning circuit, which is part of the engine, monitors Bus Voltage and is the only trigger for the alternator fail annunciation. As a result, one alternator may fail but the related voltage regulator does not trigger the alternator fail annunciation as the voltage is being held at the regular level by the second alternator on board.</p> <p>The remaining generating system indication for the pilot is unaffected. The ampere-meter is indicating a load on each alternator and in case of a Low Voltage condition a caution message will be displayed.</p> <p>This condition, if not corrected, could lead to an undetected loss of one engine alternator and reduced capability of the electrical generating power system, possibly impairing safe continuation of the flight.</p> <p>Prompted by this event, Diamond Aircraft Industries (DAI) introduced at airframe level an additional independent alternator fail caution trigger by using the G1000 ampere-meter signals. The trigger is set once an alternator provides less than 5A and thus indicates electrical power supply failure to the ship system.</p>	

	<p>DAI issued Mandatory Service Bulletin (MSB) 42NG-003/12 providing instructions for installation of the Secondary Configuration Card Part Number (P/N) 010-12074-02 "Additional ALTN FAIL trigger" with system software P/N 010-00670-10 applicable for all DA 42 NG and DA 42 M-NG aeroplanes.</p> <p>In addition, model DA 42 M-NG now incorporates an output of the GEA 71 to activate the alternator fail relay. DAI issued Mandatory Service Bulletin (MSB) 42MNG-006 to provide instructions for installation of that additional control cable P/N D62-2510-97-00-SB.</p> <p>For the reasons described above, this AD requires installation of the Secondary Configuration Card P/N 010-12074-02 "Additional ALTN FAIL trigger" and System Software P/N 010-00670-10 for all DA 42 NG and DA 42 M-NG aeroplanes and installation of GEA Alternator fail control cable P/N D62-2510-97-00-SB on certain model DA 42 M-NG aeroplanes.</p> <p>This AD also prohibits installation of System Software prior to P/N 010-00670-10.</p>
Effective Date:	03 October 2013
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> (1) For DA 42 NG aeroplanes, within 12 months after the effective date of this AD, install Secondary Configuration Card P/N 010-12074-02 "Additional ALTN FAIL trigger" and System Software P/N 010-00670-10 in accordance with the instructions of DAI MSB 42NG-003/12. (2) For DA 42 M-NG aeroplanes, S/N 42.339, from S/N 42MN001 to S/N 42.MN0026 inclusive and all DA 42 M-NG aeroplanes modified through Optional Service Bulletin (OSB) 42-081, using Work Instruction (WI) OSB-42-081 up to Revision 1 inclusive, within 100 flight hours or 12 months after the effective date of this AD, whichever occurs first, install GEA Alternator fail control cable P/N D62-2510-97-00-SB in accordance with the instructions of DAI MSB 42MNG-006 / WI-MSB 42MNG-006 (single document) and install Secondary Configuration Card P/N 010-12074-02 "Additional ALTN FAIL trigger" and System Software P/N 010-00670-10 in accordance with the instructions of DAI MSB 42NG-003/12. (3) From the effective date of this AD, do not install on any aeroplane System Software prior to P/N 010-00670-10.
Ref. Publications:	<p>DAI MSB 42NG-003/12 dated 08 July 2013.</p> <p>DAI MSB 42MNG-006 / WI-MSB 42MNG-006 dated 08 July 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. This AD was posted on 26 July 2013 as PAD 13-107 for consultation until 23 August 2013. No comments were received during the consultation period. 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: Diamond Aircraft Industries GmbH, Austria. Telephone: +43 2622 26700, Fax: +43 2622 26700 1369, E-mail: airworthiness@diamond-air.at.