



EASA Safety Information Notice

No.: 2007 - 08
Issued: 13 April 2007

Subject: Starting Procedure using External Power

Ref. Publication: Diamond Aircraft Industries Service Information SI 42-040.

Introduction: An accident occurred recently when a DA-42 experienced a total electrical power loss immediately after take-off during undercarriage retraction; the DA42 has electrically-operated retractable undercarriage. As a result both engines failed and the propellers feathered. Before the flight the engines had both been started using ground power as the main battery was empty and not connected to the aircraft relay bus. The engines of the DA-42 are FADEC-controlled and these require uninterrupted electrical power at all times.

The DA42 Aircraft Flight Manual addresses this issue under 4B.7 'Starting engines with external power' and makes it clear that only one of the two engines may be started using external power to ensure that the main battery has recovered sufficiently for at least a safe VFR flight.

Applicability: Diamond DA-42.

Recommendation: Diamond Aircraft Industries Service Information SI 42-040 addresses this issue and makes it clear that the correct procedures must be followed. It is attached to this Safety Information Note and must be followed. DAI and Thielert are working together to identify a more robust system to avoid recurrence even in the event that the correct procedures are not adhered to. This will be the subject of a future Service Bulletin which may be mandated by EASA.

This Safety Information Notice is for information only. No AD action by NAAs is required.

Contact: For further information contact the Section Airworthiness Directives, Certification Directorate, EASA.
E-mail: ADs@easa.europa.eu.

SERVICE INFORMATION NO. SI 42-040

NOTE: SI's are used **only**:

- 1) To distribute information from DAI to our customers.
- 2) To distribute applicable information / documents from our suppliers to our customers with additional information.

Typically there is no revision service for SI's. Each new information or change of that will be send along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 42

1.2 Subject:

Starting Engine with external power
ATA-Code: 72-00

1.3 Reason:

Importance of using the right procedure to start the engine on ground if external power is required.

1.4 Information:

The DA42 main battery is used as a backup in case of a total loss of electrical power generation. If no power from the alternators is available, all avionics and electrical equipment on board of the airplane are supplied by the lead acid battery also used for engine start. This is the reason for the operating limitation stated in the DA42 AFM Limitation Section allowing no NVFR or IFR flight with a depleted airplane battery or using an external power supply to start the engine if the subsequent flight is intended to be a Night VFR or IFR flight.

Under 4B.7 STARTING ENGINE WITH EXTERNAL POWER, Abnormal Operating Procedures of the DA42 AFM the appropriate procedure for the use of external electric power is published. **It is very important to carefully follow this procedure.** In particular that **just one of the two engines** is started using external electric power. The opposite engine **MUST** be started using the normal procedure **without the external power supply connected.** This ensures that the main battery recovered sufficiently for at least a safe VFR flight.

II. OTHERS

In case of doubt contact Diamond Aircraft Industries GmbH.