RECOMMENDED SERVICE BULLETIN
RSB D4-084

I TECHNICAL DETAILS

I.1 Category

Recommended.

I.2 Airplanes affected

Type: DA 40 D

Serial numbers: 40.080, 40.084, D4.001 through D4.353, D4.355 through D4.361, D4.363 through D4.378, D4.381, D4.382, D4.392, D4.399

40.DS001 through 40.DS069

I.3 Date of effectivity

22-Nov-2011

I.4 Time of Compliance

At owner's discretion.

I.5 Subject

Installation of a stiffener on the alternator cable.

ATA-Code: 24-00

I.6 Reason

In some cases cracks on the alternator ring terminal due to high cycle fatigue were observed. This could possibly lead to failure of the cable and continuous discharging of the main battery during flight if not corrected. Diamond has developed a retrofitable stiffener which reinforces the ring terminal to prevent cracks. This Service Bulletin describes the installation of this stiffener.

I.7 Concurrent Documents

None.

I.8 Approval

The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 40-452/a, which has been approved under the authority of EASA Design Organization Approval ref. EASA.21J.052.

The technical content of this document has been approved under the authority of DOA ref. EASA.21J.052.

I.9 Accomplishments / Instructions

Comply with WI-RSB D4-084, latest effective issue.

I.10 Mass (Weight) and CG

The change in mass and CG is negligible.

II PLANNING INFORMATION

II.1 Material and Availability

See WI-RSB D4-084, latest effective issue.

WI-RSB D4-084 is attached to this Service Bulletin.

II.2 Special Tools

None.

II.3 Labour Effort

Approx. 1 hours.

II.4 Credit

None.

II.5 Reference Documents

Diamond Aircraft DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, particular those that are not especially described in this Service Bulletin, must be done in accordance with the referenced Maintenance Manual.
3. Completion of all work must be recorded in the log book.
4. In case of doubt contact Diamond Aircraft Industries GmbH.

EXECUTION REPORT
SERVICE BULLETIN
RSB D4-084

AIRPLANE DATA

Airplane Serial Number: _____

Airplane Registration: _____

Airplane Operator: _____

Hours of operation of airplane: _____

No. of landings: _____

Hours of operation-engine _____

Typical operation of airplane: private, club, training, other _____

_____
Date, Name, Sign

Please fax the completed form to Fax No. +43-2622-26700-1369 or e-mail to airworthiness@diamond-air.at

WORK INSTRUCTION

WI-RSB D4-084

Installation of an Alternator Cable Stiffener

I GENERAL INFORMATION

I.1 Subject

Installation of a stiffener that supports the ring terminal of the alternator cable.

I.2 Reference Documents

Diamond Aircraft DA 40 Series Airplane Maintenance Manual (AMM), Doc. No. 6.02.01, latest effective revision.

I.3 Remarks

a) All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.

b) All work, particular that is not especially described in this work instruction, must be done in accordance with the referenced maintenance manual.

c) For conversion factors between SI units and US/Imperial units refer to AMM Chapter 02.

d) It is recommended to print this Work Instruction in color.

e) In case of doubt, contact Diamond Aircraft Industries GmbH.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

None.

II.2 Special Tools

None.

II.3 Material

Quantity	Part Number	Description
1	D4D-2406-25-01	Stiffener
2	PLT1MM30	Cable Tie
50 mm	KT-0116354127	Heat shrink
1*	D4D-2406-25-00_1	Alternator Cable

* for replacement only
Material is available from Diamond Aircraft Industries.

III INSTRUCTIONS

WARNING	**Incorrect maintenance work on the electrical system of the aircraft and disrespect of commonly preassumed skills of certified maintenance personnel can cause severe damage of components or even fire.**
Note	Always follow the usual safety practices for work on electrical equipment. Maintenance work must be of good workmanship, strictly considering the guidelines of AC 43-13.1B. It is important that maintenance is done in accordance with the best available techniques and properly trained maintenance personnel in order to eliminate possible mistakes.
1	Remove the upper and lower cowling (refer to AMM Chapter 71).
2	Disconnect the airplane main battery in accordance with AMM Section 24-33.
3	Disconnect the alternator cable 24007A4 from the alternator.
4	Move the insulating boot from the alternator cable back and inspect the ring terminal for cracks. • If cracks are found, replace the alternator cable by P/N D4D-2406-25-00_1 and proceed with item 6. • If there is no crack, install the stiffener acc. to item 5.

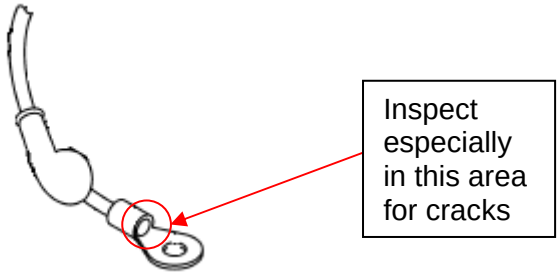
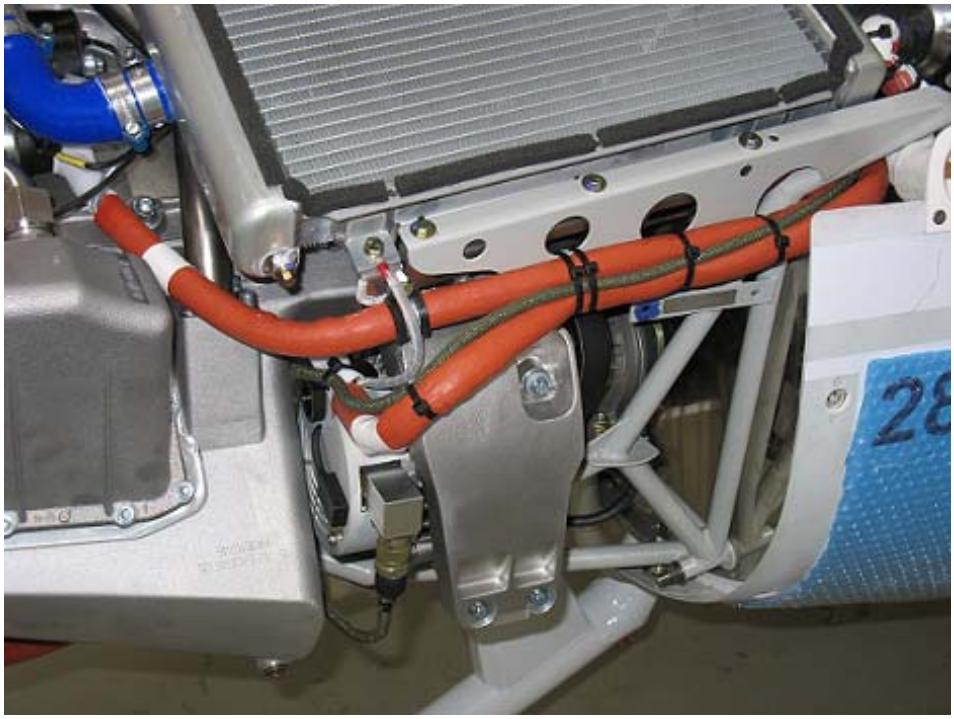


Figure 1

5	Install the ring terminal stiffener. **NOTE:** If necessary bend the stiffener for an optimized installation of the alternator ring terminal. Make sure that the cable has no contact to the cowling or engine mount within 150 mm of the ring terminal. Mount the stiffener onto the ring terminal with 2 cable ties and install a heat shrink with a length of 50 mm acc. to figures 2 and 3.  Figure 2  Figure 3
6	Connect the alternator cable to the alternator and install the insulating boot. Ensure that the alternator cable routing and the cable tie positioning are carried out as shown in the picture below.  **NOTE**: Make sure that there is no tension on the alternator cable and enough flexibility for the relative movement of the engine. **CAUTION:** When installing the alternator cable to the alternator it is not allowed to bend the ring terminal of the alternator cable. Bending the ring terminal may lead to its breakage during operation.

7	Install the lower cowling and check the clearance between the alternator cable and the cowling.
8	Connect the airplane main battery in accordance with AMM Section 24-33.
9	Install the upper cowling (refer to AMM Chapter 71).
10	Clean working areas and check for foreign objects.
11	Check all altered, replaced, repaired parts for proper function.
12	Test all systems in working area for function.
13	Make all necessary entries in the airplane logs.