

RECOMMENDED SERVICE BULLETIN NO. RSB 40NG-079 REV. 0

I TECHNICAL DETAILS

I.1 Category

Recommended.

I.2 Airplanes Affected

Model: DA 40 NG
S/N: 40.N336 and prior
40.NS001 and 40.NS002
40.NC001 and 40.NC002

I.3 Date of Effectivity

30 March 2023

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 and instructions contained in this document relate to Design Change Advisory No. MÄM 40-869, which has been approved as part of the type design.

I.9 Accomplishment/Instructions

Comply with WI-RSB 40NG-079, 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 40NG-079, latest effective issue.

II.2 Special Tools

None.

II.3 Labour Effort

Approximately 1 hour will be required to accomplish this service bulletin.

This estimate is for direct labour performed by a technician, and it does not include setup, planning, familiarization, cure time, part fabrication, or tool acquisition.

II.4 Credit

None.

II.5 Reference Documents

DA 40 NG series Airplane Maintenance Manual, Doc. No. 6.02.15, 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, in particular which is 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 logbook.
4. In case of doubt, contact Diamond Aircraft Industries Inc.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner, and send the name of the current owner to Diamond Aircraft at the address below.

Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad, London, Ontario, Canada
N5V 1S2

Customer Support:
Phone: (519) 457-4041, Fax: (519) 457-4045
E-mail: support-canada@diamondaircraft.com

Technical Publications:
E-mail: Techpubs@diamondaircraft.com



**EXECUTION REPORT TO
SERVICE BULLETIN
RSB 40NG-079 REV. 0**

AIRPLANE DATA

Airplane serial number _____

Airplane registration _____

Airplane operator _____

Hours of operation of airplane (TSN) _____

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

MAINTENANCE DATA

Date of maintenance _____

Maintenance carried out by _____

During scheduled inspection? Yes No

Name _____ Signature _____ Date _____

Please e-mail the completed form to Techpubs@diamondaircraft.com.

WORK INSTRUCTION WI-RSB 40NG-079 REV. 0

I GENERAL INFORMATION

I.1 Subject

Installation of a stiffener on the alternator cable.

I.2 Reference Documents

DA 40 NG series Airplane Maintenance Manual, Doc. No. 6.02.15, latest effective revision.

I.3 Remarks

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular which is not especially described in this work instruction, must be done in accordance with the referenced maintenance manual.
3. For conversion factors between SI units and US/Imperial units refer to AMM Chapter 02.
4. It is recommended to print this Work Instruction in color.
5. In case of doubt, contact Diamond Aircraft Industries Inc.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

None.

II.2 Special Tools

None.

II.3 Material

Item	Part No.	Qty	Description
1	D4D-2406-25-01	1	Stiffener
2	PLT1MM30	2	Cable tie
3	KT-0116354127	50 mm	Heat shrink
4	D44-2406-15-00X02*	1	Alternator cable

* For replacement only, if required. Refer to steps 1 through 4 of paragraph III.
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. Disconnect the airplane main battery. Refer to AMM Section 24-31.
2. Remove the top and bottom cowlings. Refer to AMM Section 71-10.
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. Refer to Figure 1.
 - If cracks are found, replace the existing alternator cable with a new alternator cable (item 4) and proceed to step 6. Refer to AMM Section 24-30.
 - If there is no crack, proceed to step 5 to install the stiffener (item 1).

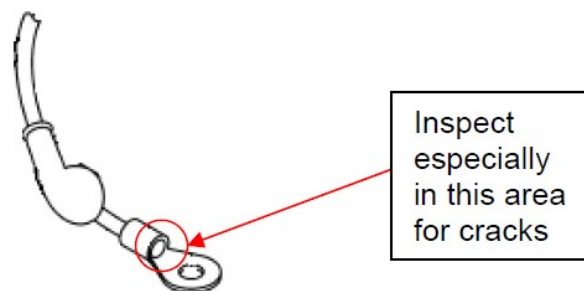


Figure 1. Ring terminal

5. Install the ring terminal stiffener as follows:

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.

- A. Mount the stiffener onto the ring terminal with 2 cable ties (item 2) and install a heat shrink (item 3) with a length of 50 mm. Refer to Figures 2 and 3.



Figure 2



Figure 3

6. Connect the alternator cable to the alternator and install the insulating boot. Make sure that the alternator cable routing and the cable tie positioning are carried out as shown in Figure 4.

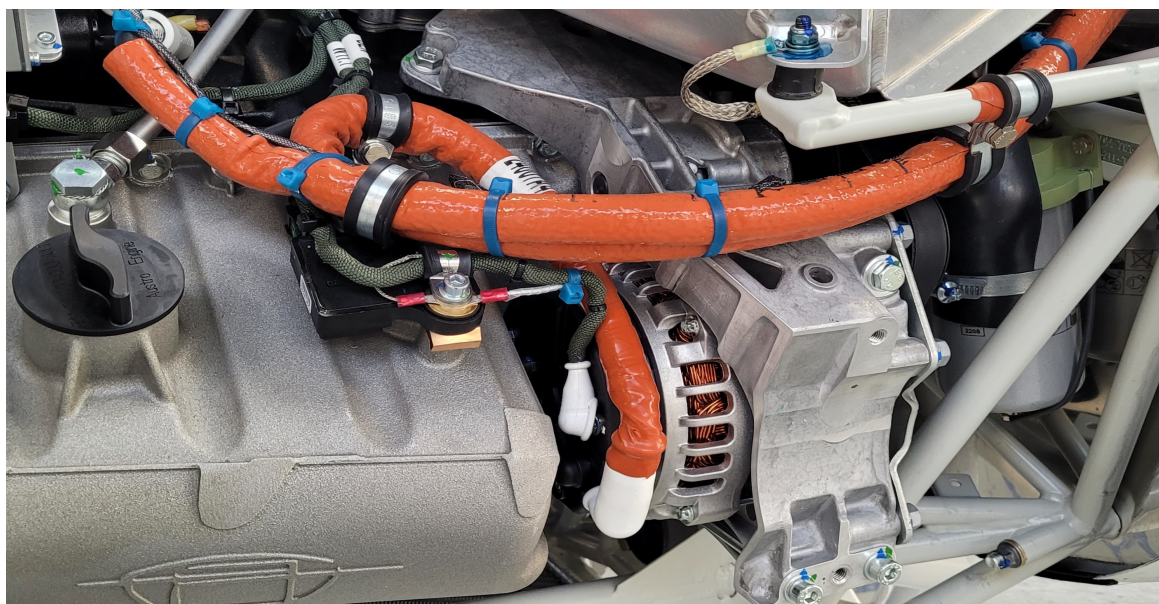


Figure 4

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.

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WORK INSTRUCTION
Model DA 40 NG



7. Install the bottom cowling and check the clearance between the alternator cable and the cowling. Refer to AMM Section 71-10.
8. Clean the working areas and check for foreign objects.
9. Install the top cowling. Refer to AMM Section 71-10.
10. Connect the airplane main battery. Refer to AMM Section 24-31.
11. Check all altered, replaced, repaired parts for proper function.
12. Test all systems in the working areas for proper function.
13. Make all necessary entries into the logbooks.
14. Submit the execution report to Techpubs@diamondaircraft.com.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

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