

**MANDATORY SERVICE BULLETIN NO. MSB 40NG-066 REV. 2**  
**SUPERSEDES MSB 40NG-066 REV. 1**

**I TECHNICAL DETAILS**

**I.1 Category**

Mandatory.

**I.2 Airplanes Affected**

Type: DA 40 NG

Serial Numbers: 40.N019, 40.N052, 40.N375 through 40.N377, 40.N382 through 40.N392,  
40.N408, 40. N409, and 40.N411  
40.NC015 through 40.NC034

Prior compliance with FC 40N-101, or the accomplishment of OÄM 40-1015 precludes compliance with this service bulletin.

**I.3 Date of Effectivity**

09 October 2020

**I.4 Time of Compliance**

At owner's discretion, but no later than 31 December 2020.

**I.5 Subject**

Cowling lightning protection.

ATA code: 51-80.

**I.6 Reason**

During the production process, deviations to the type design have been recognized on the cowlings. For consistency reasons, an additional connection of the cowlings to the lightning protection system in accordance with the standard design practices are applied.

**I.7 Concurrent Documents**

N/A

**I.8 Approval**

The technical information and instructions contained in this document relate to Design Change Advisory No. OÄM 40-1015 and are approved as part of the type design.

**I.9 Accomplishment/Instructions**

See WI-MSB 40NG-066, latest revision.

**II PLANNING INFORMATION**

**II.1 Material and Availability**

See WI-MSB 40NG-066, latest revision.

**II.2 Special Tools**

None.

**II.3 Labour Effort**

Appr. 4 hours.

*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**

4 hours labour. Parts to be supplied by Diamond Aircraft Industries at no charge.

**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 completed by the appropriate authorized personnel.
2. All work, particular that, 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.

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  
MSB 40NG-066 REV. 2**

**AIRPLANE DATA**

Airplane serial number \_\_\_\_\_

Airplane registration \_\_\_\_\_

Airplane operator \_\_\_\_\_

Hours of operation airplane (TSN) \_\_\_\_\_

Typical operation of airplane private, club, training, other: \_\_\_\_\_

**MAINTENANCE DATA:**

Date of inspection \_\_\_\_\_

Inspection carried out by \_\_\_\_\_

Did the aircraft already have the lightning protection installed? \_\_\_\_\_

Did the aircraft already have OÄM 40-1015 incorporated? \_\_\_\_\_

Date \_\_\_\_\_

---

Name \_\_\_\_\_ Signature \_\_\_\_\_

Please e-mail the completed form to [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com)

---

**WORK INSTRUCTION WI-MSB 40NG-066 REV. 1**  
**SUPERSEDES WI-MSB 40NG-066 REV. 0**

**I GENERAL INFORMATION**

**I.1 Subject**

Installation of improved cowling lightning protection.

**I.2 Reference Documents**

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

**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 if not 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. 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	Quantity	Part Number	Description
1	1	D44-7116-03-01-FC	Bonding strip
2	2	D44-7116-04-02-FC	Cowling bonding strip
3	1	D44-7136-00-01-FC	Bonding sheet to cowling
4	3	D67-1127-20-02	Placard, lightning protection
5	3	DIN 7337-A4.0x7.0-A2	Blind rivet
6	9	DIN 7337-B4.0x8-A2	Blind rivet, countersunk 120°
7	As required	-	Bonderite M-CR 1201 (Alodine 1201)
8	As required	7-11 Blue	Nycote
9	As required	MS9380	Terostat MS 9380 WH
10	As required	CS 1900	Firewall Sealant
11	As required	-	Cleco temporary fasteners - black (4.0 mm)

**NOTE:** the original camlocks may not be long enough to complete the installation of the bonding strips. Longer camlocks are available from Diamond Aircraft Industries.

### **III INSTRUCTIONS**

#### **III.1 Lower Cowling, Bond**

1. Verify that the lightning protection has not been installed, and that OÄM 40-1015 has not been incorporated. If either of the above has been accomplished, no further work is required. Submit the execution report to Techpubs@diamondaircraft.com.
2. Align the camlock hole in the bonding strip (item 1) with the camlock hole in the lower cowling as shown in Figure 1.

**NOTE:** leave a 2 mm (minimum) gap away from the cowling's edges to allow for a proper fit.



Figure 1. Left: position of item 1 on the left-hand side of the lower cowling. Right: zoomed view. Not shown: apply Nycote to the rivet shanks on the inside of the cowling after the sealant has cured (step 22).

3. Clamp item 1 to the cowling. Take care not to damage the paint on the cowling.
4. From the inside of the cowling, match drill rivet holes (4 mm diameter) in the cowl surface. Use a suitable drill bit.

**NOTE:** take care not to damage the external surface of the cowling.

5. Remove the clamps, and prepare item 1 for bonding:
  - A. Sand the inner surface of the cowling where item 1 will be bonded.
  - B. Sand the surface of item 1 that will be in contact with the cowling.
  - C. Apply Terostat MS 9380 WH to the sanded surface of item 1. Cover the surface completely.
  - D. Clamp item 1 to the cowling. Use multiple clamps to ensure sufficient contact. Take care not to damage the paint on cowling.
  - E. Install clecos into the three rivet holes from the outside in.
  - F. Allow 24 hours to cure.

### III.2 Fuselage, Bond

6. Align the camlock hole in the bonding sheet (item 3) with the camlock hole in the fuselage as shown in Figure 2.



Figure 2. Position of item 3 on the left-hand side of the aircraft. Not shown: also apply Nycote around the edges of item 3 where it contacts the firewall (step 30).

7. Clamp item 3 to the fuselage. Take care not to damage the paint on the fuselage.
8. Using a suitable drill bit and a 90° angle head drill, match drill item 3 to the firewall. The holes are 4 mm diameter.

**CAUTION:** DRILL THROUGH THE STAINLESS STEEL FIREWALL SKIN ONLY (0.4 MILLIMETERS THICK). DO NOT DRILL THROUGH THE ENTIRE FIREWALL.

9. Remove the clamps, and prepare item 3 for bonding:
  - A. Sand the inner surface of the cowling where item 3 will be bonded to the fuselage.
  - B. Sand the surface of item 3 that will be in contact with the fuselage.
  - C. Apply Terostat MS 9380 WH to the sanded surface of item 3. Cover the surface completely.
  - D. Clamp item 3 to the fuselage. Use multiple clamps to ensure sufficient contact. Take care not to damage the paint on the fuselage.
  - E. Install clecos into the three rivet holes.
  - F. Allow 24 hours to cure.



### III.3 Upper Cowling Bond

10. Using a suitable tool, cut a slot into the fire bulkhead to allow the installation of the cowling bonding strip (item 2). Keep the size of the slot to a minimum. See Figure 3.



Figure 3. Left: installation of item 2 (x2) on the top cowling. Right: zoomed view. Not shown: apply Nycote to the rivet shanks on the inside of the cowling after the sealant has cured (step 38).

11. Align the camlock hole in the bonding strip (item 2) with the camlock hole in the cowling as shown in Figure 3.
12. Clamp item 2 to the cowling. Take care not to damage the paint on the cowling.
13. From the inside of the cowling, match drill rivet holes (4 mm diameter) in the cowl surface. Use a suitable drill bit.

**NOTE:** take care to prevent damage to the external surface of the cowling.

14. Remove the clamps, and prepare item 2 for bonding:
  - A. Sand the surface of the upper cowling that will be in contact with item 2.
  - B. Sand the surface of item 2 that will be in contact with the upper cowling.
  - C. Apply Terostat MS 9380 WH to the sanded surface of item 2. Cover the surface completely.
  - D. Position item 2 as shown in Figure 3.
  - E. Clamp item 2 to the upper cowling. Use multiple clamps to ensure sufficient contact. Take care not to damage the paint on the cowling.
  - F. Install clecos into the three rivet holes from the outside in.
  - G. Seal item 2 into the fire bulkhead using CS 1900 firewall sealant.
  - H. Allow 24 hours to cure.

15. Repeat steps 11 through 14 for the other cowling bonding strip (item 2).

CONTINUE AFTER ALL THE SEALANT ON ALL THE PARTS HAS CURED.

#### **III.4 Lower Cowling, Countersink**

16. Remove clamps.
17. Clean around item 1 by scraping away excess Terostat MS 9380 WH. Use a plastic scraper.
18. Remove clecos.
19. Remove the surface protection from item 1 around the rivet holes (approximately 5 mm around the holes). Use Scotch-Brite or another suitable material.
20. On the outside of the cowling, counter sink holes (2 mm) for flush head rivet installation.

#### **III.5 Lower Cowling, Rivet**

21. Install countersunk rivets (item 6).

**NOTE:** make sure to keep the rivets perpendicular to the surface.

22. Apply Nycote to the rivet shanks and the bonding strip on the inside of the cowling, to seal the connection between the rivets and the bonding strip.

#### **III.6 Lower Cowling, Sealant**

23. Apply Terostat MS 9380 WH sealant to the rivet heads on the outside of the cowling, and wipe off the excess.
24. Allow time for the sealant to cure (24 hr) prior to placard application.

#### **III.7 Firewall, Rivet**

25. Remove clamps.
26. Clean around item 3 by scraping away excess Terostat MS 9380 WH. Use a plastic scraper.
27. Remove clecos.
28. Remove the surface protection from item 3 around the rivet holes (approximately 5 mm around the holes). Use Scotch-Brite or another suitable material.
29. Attach item 3 to the firewall with blind rivets (item 5).

**NOTE:** make sure to keep the rivets perpendicular to the surface.

30. Apply Nycote to the rivet heads, and to the edges of item 3 that are in contact with the firewall, to seal the connections between the rivets, the bonding strip, and the firewall.

### **III.8 Upper Cowling, Countersink**

31. Remove clamps.
32. Clean around item 2 by scraping away excess Terostat MS 9380 WH and CS 1900. Use a plastic scraper.
33. Remove clecos.
34. Remove the surface protection from item 2 around the rivet holes (approximately 5 mm around the holes). Use Scotch-Brite or another suitable material.
35. On the outside of the cowling, counter sink holes (2 mm) for flush head rivet installation.
36. Repeat steps 31 through 35 for the other cowling bonding strip (item 2).

### **III.9 Upper Cowling, Rivet**

37. Install countersunk rivets (item 6).
- NOTE:** make sure to keep the rivets perpendicular to the surface.
38. Apply Nycote to the rivet shanks on the inside of the cowling, to seal the connection between the rivets and the bonding strip.
  39. Repeat steps 37 and 38 for the other cowling bonding strip (item 2).

### **III.10 Upper Cowling, Sealant**

40. Apply Terostat MS 9380 WH sealant to the rivet heads on the outside of the cowling, and wipe off the excess.
41. Repeat step 40 for the other cowling bonding strip (item 2).
42. Allow time for the sealant to cure (24 hr) prior to placard application.

CONTINUE AFTER ALL THE SEALANT ON ALL THE PARTS HAS CURED.

### **III.11 Apply Placards**

43. Wipe the surface free of excess sealant/dirt/grease.
44. Apply placards (item 4) over rivet heads on the external surface of items 1 and 2. Ensure each placard covers all three rivet heads.

**III.12 Inspection and Wrap-Up**

45. Inspect installation of all components on the lower cowling.
46. Inspect installation of all components on the upper cowling.
47. Inspect installation of all components on the fuselage.
48. Inspect camlock function after installation of cowl set onto nacelles.
49. Clean working areas, and check for foreign objects.
50. Make all necessary entries in the airplane logs.
51. Fill in the execution report, and submit it to [Techpubs@diamondaircraft.com](mailto: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.

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](mailto:support-canada@diamondaircraft.com)

Technical Publications:  
E-mail: [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com)