THE ENSTROM HELICOPTER CORPORATION
TWIN COUNTY AIRPORT, P.O. BOX 490, MENOMINEE, MICHIGAN 49858

SERVICE INFORMATION LETTER

DATE: March 20, 2000

1. SUBJECT: Generator Control Unit Relocation

2. MODEL: 480

3. EFFECTIVITY: Serial numbers 5001 through 5036

4. BACKGROUND:

Field operators have reported a number of generator control unit (GCU) failures while operating their aircraft when ambient temperatures are high (95EF/35EC or higher). Inspection of the units by the manufacturer shows heat distress of the internal components as the cause for the premature failures. Starting with 480 serial number 5037, the GCU and terminal strip T9 are relocated to the right side of the keel assembly from beneath the oil cooler blower shelf.

5. COMPLIANCE:

At owner/operator option, relocate the GCU and terminal strip T9 in accordance with the instruction provided in Appendix A of this Service Information Letter.

5.1. PARTS:

Description	Part Number	Quantity
Generator Control Mounting Kit	4230019-1	1
Wire, 10 Gauge	M22759/16-10-9 or equivalent	As Required (1)
Wire, 16 Gauge	M22759/16-16-9 or equivalent	As Required (1)

5.1. PARTS: (cont.)

Description	Part Number	Quantity
Wire, 20 Gauge	M22759/16-20-9 or equivalent	As Required (1)
Wire, 22 Gauge	M22759/16-22-9 or equivalent	As Required (1)
Butt Connector (12-10 AWG)	CS-N-346 (2) or equivalent	1 (3)
Butt Connector (16-14 AWG)	BS-N-331 (2) or equivalent	12 (3)
Butt Connector (22-18 AWG)	AS-N-345 (2) or equivalent	7 (3)
Terminal (12-10 AWG, .25 Stud)	C-830-14 (2) or equivalent	1 (3)
Terminal (12-10 AWG, #6 Stud)	C-836-06 (2) or equivalent	1 (3)
Terminal (16-14 AWG, #6 Stud)	BB-837-06 (2) or equivalent	6 (3)
Terminal (22-18 AWG, #6 Stud)	AA-832-06 (2) or equivalent	6 (3)
Terminal	031-0554-161 (4)	13 (5)
Cable Tie	SST1.5I-MP (6) or equivalent	As Required
Cable Tie Anchors	ABMM-AT-C (6) or equivalent	As Required
Fiberglass Repair Kit with 6 ounce fiberglass cloth	Local Procurement	As Required (7)
Balsa wood (.125 in. thickness) or Foam sheet compatible with fiberglass resin.	Local Procurement	As Required (7)

5.1. PARTS: (cont.)

(1) Rerouting the wiring results with a number of wire runs that are too long and need to be shortened. The excess wire, as long as it is the same gauge, may be used to splice into wire runs that are too short.

(2) Molex/ETC Part Number

(3) The quantities shown for the terminals and butt splices reflect splicing of every wire run and replacement of all the terminals at the T9 terminal strip which is not necessarily required.

(4) ITT/Cannon Part Number

(5) Quantity reflects replacing all the terminals at the GCU connector which may be avoided by splicing the wire runs.

(6) Panduit Part Number

(7) Used during modification of keel access panel.

6. SPECIAL TOOLS:

Description	Tool Number
Pin Guide	226-1017-000 (8)
Pin Extractor	CET-16-4 (8) or equivalent
Crimping Tool	M22520/1-01 (9) or equivalent
Locator (10)	TH70-1 (9) or equivalent
Crimping Tool (12-10 AWG)	RHT-2200 (11) or equivalent
Crimping Tool (16-14 AWG)	RHT-2100 (11) or equivalent
Crimping Tool (22-18 AWG)	RHT-2000 (11) or equivalent

(8) ITT/Cannon Part Number

(9) Daniels Manufacturing Corp. Part Number

(10) Used with Crimping Tool, P/N M22520/1-01

6. SPECIAL TOOLS: (cont.)

[11] Molex/ETC Part Number

7. MAN-HOURS: 8 Man-hours

8. WARRANTY: None

9. WEIGHT CHANGE: See the weight and balance information provided in Appendix A.

10. LOG BOOK ENTRY: Enter compliance with this Service Information Letter.

11. REPETITIVE INSPECTIONS: None

GENERATOR CONTROL UNIT RELOCATION INSTRUCTIONS

NOTE

Perform maintenance procedures in accordance with the TH-28/480 Maintenance Manual.

1. Disconnect the battery.

2. Remove the keel access panels, bottom aft cowling, and open/remove the engine access panels

3. Disconnect the electrical connector from the generator control unit (GCU).

NOTE

Refer to the maintenance manual schematic diagrams 6-2, 6-4, 6-15, and 6-20 for wire location and identification information.

4. Identify and tag the wires at terminal strip T9 next to the GCU and remove the wires.

5. Remove the GCU and T9 from the oil cooler blower shelf.

6. Place the bracket assembly, P/N 4118893-1, into position according to the installation drawing. Drill a couple of holes with a #40 drill bit and secure the bracket with clecos. Using a #30 drill bit, drill the remaining holes. Remove the bracket assembly and open the #40 holes with the #30 drill bit. Deburr the holes. Fit the bracket assembly into position and install the rivets.

7. Install the GCU into position and secure with the washers and screws.

8. Remove the angle bracket from the T9.

9. Place the T9 into position according to the installation drawing and drill the mounting holes using a #28 drill bit. Remove the T9 and deburr the holes. Install the T9 into position and secure with the washers, screws, and nuts.

10. Disassemble the GCU electrical connector and using the socket extractor (CET-16-4) or other suitable device, remove the pins from the connector.

NOTE

Do not discard the sockets from the GCU connector, they may be reinstalled into the connector after modifying the lengths of the wire runs as required.

GENERATOR CONTROL UNIT RELOCATION INSTRUCTIONS

NOTE

The installation print for the mounting kit does not show all the wire runs terminated at the T9 terminal strip.

11. Remove the cable ties as required and reroute the wiring to the new GCU/T9 location. Adjust the lengths of the wire runs as required. If desired, new terminals can be installed on the T9/GCU end of the wire runs.

NOTE

Refer to the maintenance manual schematic diagrams 6-2, 6-4, 6-15, and 6-20 for wire location and identification information.

12. Insert the sockets into the GCU electrical connector and reassemble the connector. Connect the electrical connector to the GCU and lockwire the connector to one of the GCU mounting screws.

13. Reconnect the wiring to the T9 terminal strip.

14. Using cable ties and anchors, secure the wiring as required in accordance with AC 43.13-1B.

15. Using the fiberglass repair kit, modify the doubler on the right side keel access panel as shown in Figure 1.

    1. Mark the location for modifying the doubler and using a suitable device cut out the excess material.

    2. Using either .125" balsa wood or foam sheet, fabricate a filler block for the doubler and bond into place using a suitable adhesive.

    3. Apply two (2) layers of 6 ounce fiberglass cloth over the modification area using the fiberglass repair kit.

16. Connect the battery.

17. Ground run the aircraft in accordance with the Rotorcraft Flight Manual and check the operation of the GCU. Check/Adjust the voltage output of the GCU in accordance with paragraph 6-68 in the TH-28/480 Maintenance Manual.

18. Reinstall the cowling and access panels.

GENERATOR CONTROL UNIT RELOCATION INSTRUCTIONS

19. Recalculate the aircraft weight and balance using the following information:

Item	Weight	Arm	Moment
GCU Relocation Kit and Wiring	.30 lbs	101.0 in.	30.30
New GCU and T9 Location			-121.75

GENERATOR CONTROL UNIT RELOCATION INSTRUCTIONS

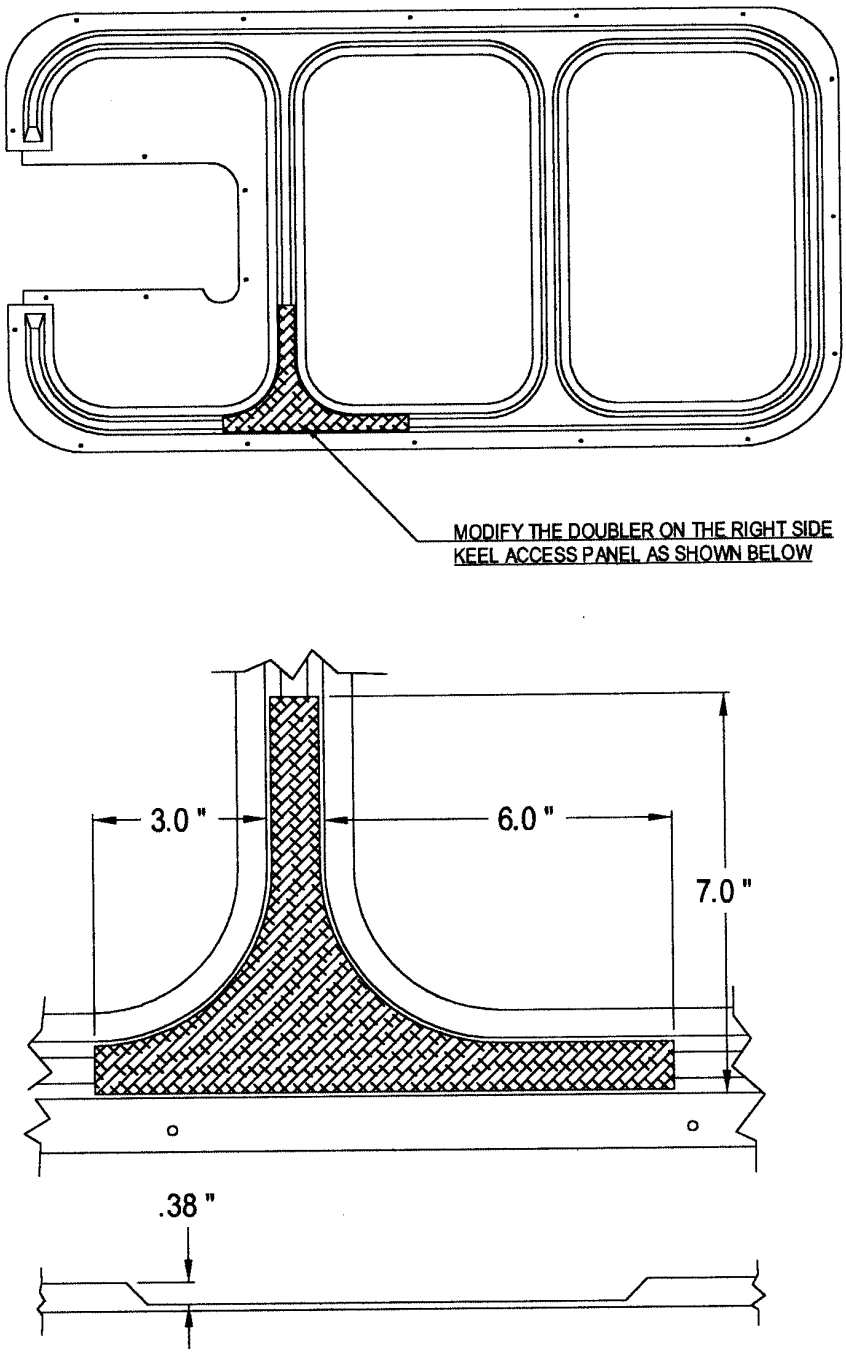

Figure 1. Keel Access Panel Modification