



TClinic

REWIRING THE MGTC OR

“IT’S GOT TO BE DONE SOMETIME, SO LET’S GET ON WITH IT”

Doug Wimer

The job of rewiring the TC would seem to be an almost impossible task if one were to look at the mess behind the dash. In every man's life comes a time when he must make a decision to stop putting things off. If your TC has not been rewired, you stand a chance of short circuits, causing fires or other less costly inconveniences of faulty wiring. Having successfully rewired three TCs in the past few years, this writer is now an “expert” . . . ; all kidding aside, the job is not as hard as it may seem to be.

Included is a wiring diagram that is very similar to one found in the Owner's Manual. For the most part the same numbering system is used. Also included is a nomenclature chart showing the length of cable, the numbering system, the type of cable (wire size), and the designation. Lastly, is a jig board layout for the wiring harness. It is suggested that you take a quiet evening sometime soon and go through each to get a clear picture in your mind as to how you will attack the problem. It is at this time that you can adjust the wiring diagram, if at all necessary, to meet any peculiar requirements you may have, such as two fog lamps, no horn, no turn indicators, multiple stop lights, special gadgetry on the dash, etc.

The lengths shown should allow enough length for some error. Purchase 250 feet of automobile wire. (70' of #12, 170' of #14, 10' of #16). It is suggested that you purchase several different colored rolls of wire to make it a little easier for you to perform the task. (It also looks better coming through the firewall to the regulator). You will need at least three, 3-way connector bodies for headlamps and side lamps, and at least one, 4-way connector body for the wiring to the rear. Supply yourself with a good number of insulated splices and wire terminals, the insulated ring tongue type. Check existing terminals to determine size and number required. It would also pay you to invest in a terminal crimper, wire cutters and strippers. Also buy some self-adhesive wire markers. If you are fortunate enough to have available to you some of the new shrinkable plastic tubing that is on the market, acquire some which will help sheath your wire as you make the harness; otherwise, buy several rolls of black plastic tape.

Following is a rough outline, step-by-step procedure, for rewiring.

1. Assemble materials.
2. Referring to the designation sheet, cut all wire to the lengths indicated and label each end with the markers. It will pay you to refer to the jig board layout so that you can vary the cable color in your harness. A neater package

of wiring can be made if you want to use two 3-conductor, neoprene sheathed cables to the rear for wire numbers 18, 21, 22, 24 and 41. The sixth wire can be tied into #57 at the regulator for a good ground. If you use this option, buy 18 feet of type fourteen 3-conductor cable and delete that amount from the single conductor cable for those numbers.

3. Referring to the harness layout, commence assembling the wire, starting from the dash end and working down to the regulator, then continue on, taping at each intersection. It would be ideal if a full size line drawing could be made from the included jig harness layout diagram, then the cable could be laid out and taped at the appropriate intersections. If not, just work down from the dash, taping as you go. This is not as hard as it looks, believe me!

On cable numbers 2, 4 and 41 that go to the headlamps and side lamps from the connector bodies under the left front axle, it is suggested that you cut those at a later time when you can verify the dimensions shown on the layout diagram to suit your particular wishes.

Set harness aside when completed.

4. Approach car - uttering a fervent prayer!

Disconnect battery cables - remove steering wheel - remove speedo and tach remove oil gauge line. If you have a water gauge, remove water from the radiator, disconnect temperature-sensing element from radiator and pull line back to dash. Remove dash and lay it outward.

Next, take a heavy set of wire cutters and cut all wire leading to the dash. (Have a big handkerchief ready for tears that are sure to come.) Take care not to cut the dash wire harness that goes from instrument to instrument. Inspect windshield washer wiring at this time and if in good condition, save as much as possible.

Dash complete should now be removed from the car and laid on table. Raise bonnet and continue the removal of all wiring. Loosen cable clips along frame members on left side and pull wire through, or cut wire into short lengths in order to remove completely from the car. Be sure to form a mental picture of how all the wiring is run along the frame, etc.

Save the armored conduit at the firewall and, if at all possible, the armored conduit at the front fender braces. This is a good time to check and clean the stop switch down near the bottom of the brake pedal.

Remove headlamp elements and cut approximately three inches from the end of the headlamp connector body. (You will use wire splices when running new wire.)

Continue removing all wire until everything is completely out and in the trash can. (I felt like a doctor in the operating room performing technical surgery, having flunked pre-med. But don't despair, it will turn out okay.)

5. With all wiring removed, clamps loosened or removed, it is a good idea to clean the frame and other areas where new cable is to be installed.

6. Take the new harness and feed through the firewall in two locations. Insert or slip on the large armored conduit and feed wire to the points as shown on the jig layout. After feeding wire as shown, attach 3-way connector bodies underneath front axle, measure cable lengths again to headlamps and turn indicators, and attach connector bodies. Attach 4-way connector body for cable #22 at rear axle location.

7. Examine dash wiring and determine condition of existing wire harness at the dash, after having removed all of the extraneous wiring that went through the firewall before. If in good condition do not replace; if in poor condition or you wish to replace it, refer to the designation sheet labeled, "Dash Wiring." Lengths and wire size are not shown; however, after inspecting your existing you can use it as a pattern to cut and install new dash wiring.

8. This is the fun step!

Take the dash and, armed with a large pillow, seat yourself in the TC with pillow on lap and dash upside down on pillow. Start connecting wires, referring constantly to the enclosed schematic wiring diagram. After completing the wiring on the dash, lay up dash and secure with two screws, loosely. Then proceed with connecting all of the wiring as shown on the schematic wiring diagram.

When complete, it is suggested that the first step would be to reconnect the battery and turn on headlamp switch. If headlamps work this is the greatest morale builder that you will experience, and will give you courage to continue. If headlamps do not work, check battery connections, headlamp connections, 3-way connectors, and switch to see if there is a malfunction or a loose connection. If it still doesn't work, you have really got problems - sell the car as is and forget the author of this article!!

9. Having checked the headlamps you may now proceed to check all other wiring switches.

Let me say at this time that I approached my first rewiring job with some reservations, never having tried anything like it before. I received great satisfaction in wiring the car, especially when everything worked fine. Having gone through it twice again since that time, and each time with success, I feel that anyone with average intelligence, who follows these instructions and diagrams, can successfully accomplish what appears to be a major task.

Good luck, and if you do fail, just look at all the experience you have gained.

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2002 Update

If you are making up your own loom this is a perfect time to add extra ground wires (see TClinics #2 and 46), and extra circuits for a supplemental stop lamp, added horns or any accessories you may want.

**M.G. MIDGET (Series "TC") 1948
R.H.D. and L.H.D. (Export)**

Cable Number	Length Inches	Type Number	DESIGNATION
2	96	12	Dash (Bright Switch) to High Beam 3-Way Connector Body
2	42	12	Connector Body (Under Front Axle) to Left Headlamp
2	56	12	Connector Body (Under Front Axle) to Right Headlamp
4	96	12	Dash (Dim Switch) to Low Beam 3-Way Connector Body
4	42	12	Connector Body (Under Front Axle) to Left Headlamp
4	56	12	Connector Body (Under Front Axle) to Right Headlamp
9	41	12	Dash (Ignition IG) to Regulator (A-3)
9	32	12	Regulator (A-3) to Coil (-) (SW)
9	11	16	Coil (-)(SW) to Fuel Pump (Armature)
16	63	12	Coil (+)(CB) to Distributor
17	41	14	Dash (Fog Lamp Switch) to Regulator (A-4)
17 *	60	16	Regulator (A-4) to Windscreen Wiper (See 57)
17	41	14	Regulator (A-4) to Dash (Flasher Unit "X")
17	42	14	Regulator (A-4) to Brake Light Switch
18	140	14	Dash (Direction Indicator Switch) to Left Front Directional Light
18	168	14	Dash (Direction Indicator Switch) to Left Rear Directional Light
21	154	14	Dash (Direction Indicator Switch) to Right Front Directional Light
21	206	14	Dash (Direction Indicator Switch) to Right Rear Directional Light
22	111	14	Brake Light Switch to Brake Light 4-Way Connector Body
22	20	16	4-Way Connector Body to Rear Stop Light
22	28	16	4-Way Connector Body to Left Stop Light (Near Top & Side of Petrol Tank)
22	64	16	4-Way Connector Body to Right Stop Light (Near Top & Side of Petro Tank)
24	180	14	Dash (Fuel Warning Light) to Fuel Tank Switch
25	41	14	Dash (Ignition Warning Light) to Regulator (D)
25	73	12	Regulator (D) to Generator (Armature)
29	73	12	Regulator (F) to Generator (Field)
33	75	12	Dash (Ammeter B) to Starter
36	41	14	Dash (Ignition A) to Regulator (A-I)
37	41	14	Dash (Ammeter A) to Regulator (A)
41	96	14	Dash (Ignition T) to Front Side Lamps 3-Way Connector Body
41	160	14	Dash (Ignition T) to Rear Tail Light (Note: This may be tied in with 41 above. A 3-Way connector can be used at the bottom of the Armored Section to save space and 68" of wire.)
41	46	14	Connector Body (Under Front Axle) to Left Side Lamp
41	60	14	Connector Body (Under Front Axle) to Right Side Lamp
42	132	14	Dash (Fog Lamp Switch) to Fog Lamp
49	91	14	Regulator (A-2) to Horn
56	116	14	Dash (Horn Button) to Horn
57 *	60	16	Regulator (E) to Windscreen Wiper
57	41	14	Dash (Horn Button) to Regulator (E)
57	39	14	Regulator (E) to Fuel Pump Ground

* Use Duplex #16 AWG Stranded Cable for these to run to wiper motor up through windscreen frame.

DASH WIRING

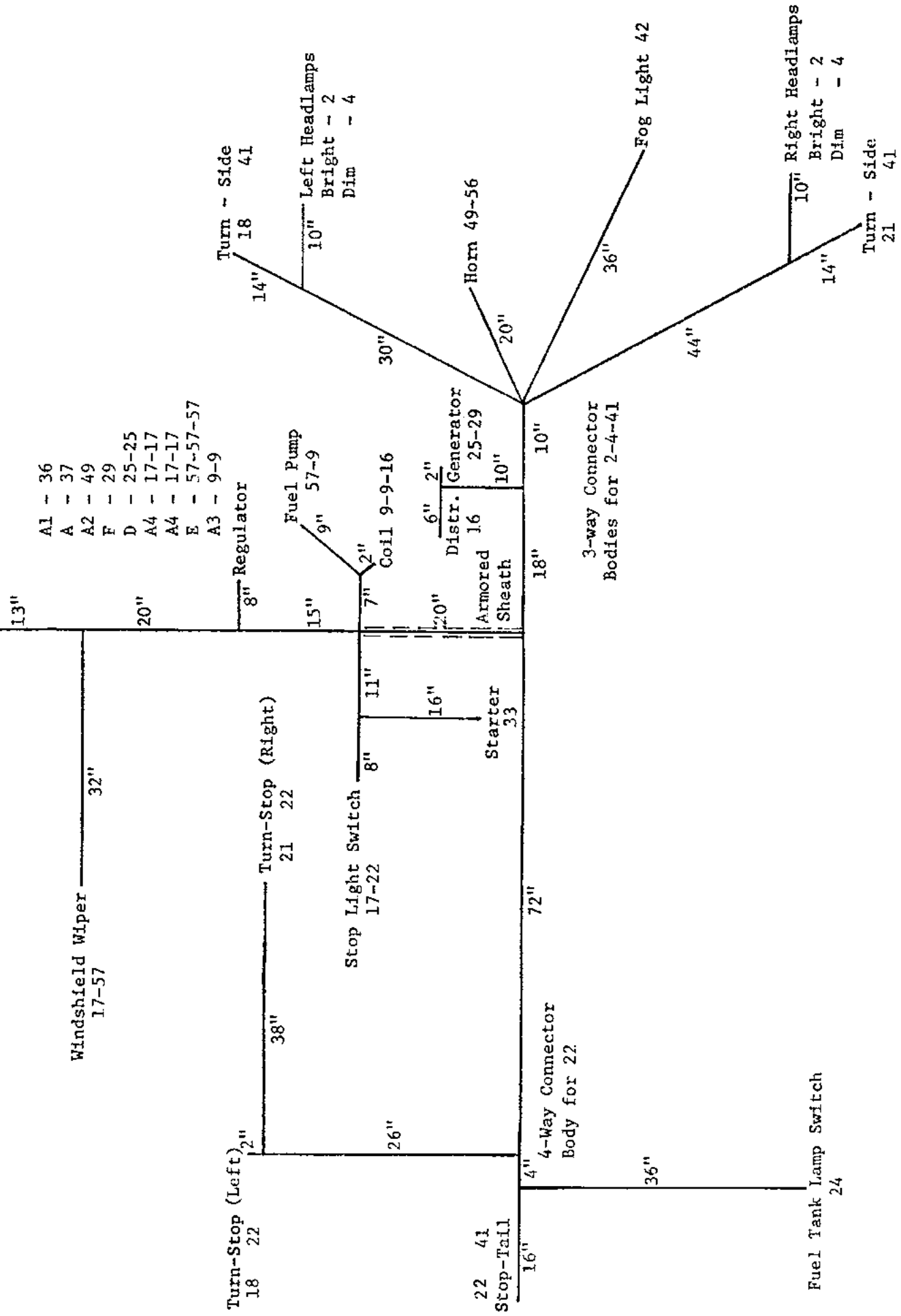
NOTE THAT LENGTHS AND WIRE SIZE ARE NOT SHOWN.
IF EXISTING LOOM NEEDS REPLACING USE THIS WIRE
SCHEDULE, MEASURING THE LENGTHS REQUIRED.
USE 16 OR 18 GAUGE WIRE.

Cable Number	DESIGNATION
1	Dipper Switch to Ignition (H)
9	Ignition (IG) to Ignition Warning Lamp
17	Fog Lamp Switch to Petrol Warning Lamp
19	Indicator Flasher Unit (P) to Direction Indicator Light
20	Indicator Flasher Unit (L) to Direction. Indicator Light
33	Ammeter (B) to Map Reading Lamp (2 required)
33	Ammeter (B) to Hot Inspection Socket
33	Hot Inspection Socket to Electric Clock
41	Panel Lamps Switch to ignition (T)
44	Panel Lamps Switch to Panel Lamps (2 required)
44	Panel Lamp to Panel Lamp/Dash Lamp (4 required)
57	Inspection Socket (Ground) to Horn Button
57	Inspection Socket (Ground) to Dash Lamp/Panel Lamp (2 required)
57	Inspection Socket (Ground) to Map Reading Lamp (2 required)
57	Dash Lamp to Dash Lamp (2 required)
57	Dash Lamp to Direction Warning Lamp
57	Dash Lamp to Clock

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2-4-9-17
 17-18-18-21-21
 24-25-33-36-37
 41-41-42-56-57

Dash



- A1 - 36
- A - 37
- A2 - 49
- F - 29
- D - 25-25
- A4 - 17-17
- A4 - 17-17
- E - 57-57-57
- A3 - 9-9

Regulator

Fuel Pump

Coil 9-9-16

Distr. Generator 25-29

Armored Sheath

3-way Connector Bodies for 2-4-41

4-Way Connector Body for 22

Fuel Tank Lamp Switch 24

Turn-Stop (Left) 18 22

Turn-Stop (Right) 21 22

Stop Light Switch 17-22

Starter 33

Stop-Tail 22 41

Turn - Side 18 41

Left Headlamps Bright - 2 Dim - 4

Horn 49-56

Fog Light 42

Right Headlamps Bright - 2 Dim - 4

Turn - Side 21 41

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