NOTES ON THE NEW WIRING SYSTEM

The new wiring harness was purchased from *ADVANCE AUTO-WIRE* (Dan Masters). It is a relay based system in that all major loads are switched off the relay contacts. Control switches only bring in the relay coil – this takes the load off of the contacts in the control switches. In my opinion the reason that Lucas gained such a poor reputation is because of the original British wiring harness designs that switched loads directly through the control switches. This was a cheap way out but over time proved to be a bad design as contacts burned out and switches over heated. My other complaint with the original British wiring systems was the grounding. Many grounds were "daisy- chained" together and then just terminated at a sheet metal screw. This resulted in many "Bounced" grounds and shorts in the electrical system. To remedy this I installed 3 ground bus bars. These are marine quality, tin plated copper bus bars. Each device that required grounding has a ground connection directly to one of the bus bars.

ADVANCE AUTO-WIRE does not provide a specific instruction for the GT6 so they sent me a manual for a 1969-1972 Triumph TR6 and also a manual for spitfire 1500. This complicated the installation as the GT6 is actually half-way between the two. I ended up making my own wiring diagram based, in part, on the original GT6 wiring (the diagram used with the original owners manual was my key). All-in-all it was fairly easy to figure out this little puzzle. After all I am an electrical engineer with over 30 years of experience as a control systems design engineer for Utility sized power plants. Even so I haven't really worked on a car since I sold my original GT6 in 1979 or a 1966 Jag that I only owned for a few months in 1982 so this was a fun challenge and at times a little humbling.

Now that the car is operating on the new electrics I can say without any hesitation that it was a great thing to do and the car is so much better for it !!! I recommend this type of change for any old LBC that still has original wiring that is giving the owner troubles.

The Electrical drawings section for details of the overall car wiring and also for the bus bars.

Now – on to the notes:

1). For the heater motor the Slate wire is for Fast speed and the Green/White wire is for slow speed. The ground is under bonnet woven braid that goes to the heater box mounting bolt on the engine side of the firewall. This ground terminates on the front of Ground bus bar #1.

2). The auxiliary engine cooling fan is not installed yet so the Black/Green wire for the switches and the yellow/brown wire for fan power are not used. These wires have been pulled through the fire wall and are coiled and "Spared" next to the brake and clutch master cylinders. The Light green/red wire for the indicator lamp is not used and is coiled and spared near the Power Block.

3). The fuel pump and inertia switch and cut-out switches are not used at this time so the Black/yellow wire is terminated directly to ground bus #1. I'll probably connect this BY wire to my Kill Switch on the toggle panel.

Note that extra slack has been left in the Yellow/red wire and is coiled near the power block in case a future cut-out switch is to be installed. This would Make and Break power directly to the fuel pump. I would not recommend this (if done this way use a high quality switch with a 20 amp. Contact rating. – but if I use the BY wire for my kill switch this will be unessary). The Slate wire for the fuel pump warning buzzer is not used, it is coiled and spared with the yellow/red wire.

4). Ground bus bars are installed at the Front, Middle and rear of the car. See the ground bus bar sketches and termination schedules.

5). There is no provision in the power block for powering the rear window demister. From visual examination the heater grid doesn't look intact so I'll do this circuit later. I have purchased a new Auxiliary Relay panel from Advance Auto Wire and this panel will be used for the rear window demister, and a set of future driving lamps. This panel also has a relay output for another auxiliary load but I haven't thought of anything yet. I plan to install this relay panel over the winter (need to get the car back from ACS first !!!).

6). I did not wire out the hazard switch on the dash. It is installed as a "Dummy" to fill the hole and to appear stock. I used the switch supplied with the harness kit as it is a much more robust switch.

I used a similar switch for the horn as for the hazard. My plan is to install both switches on a veneer blank that will be installed where the original radio was installed. I also plan to include 3 additional toggle switches on this blank. These will include a kill switch (hidden out in the open, a switch for the future driving lamps and a switch for the future electric aux. cooling fan.

My plan is to install a new sound system under the deck behind the seats and use a remote controller to operate the radio. A medium green 12 gauge wire is run from the ACC terminal on the ignition switch to the back of the car for radio power and a black 12 gauge ground wire is run from ground bus #1 to the back of the car for the radio ground.

7). There is a Purple 12 gauge wire that is supplied that is intended for the cigar lighter. This wire is coiled and spared near the power block. I'm not sure what I'll use this for (if ever).

8). The Light green/purple wire for the turn signal indicator is not used. It is coiled and spared near the power block. The turn signal indicator is wired across the outputs (green/red and green/white wires) of the hazard switch. This works fine.

9). The Black/white wire for the “Anti-Theft Cutout Switch” is not wired at this time. It is terminated to the main ground bus bar at terminal 7.

That’s about it for now. I know that it seems that I have “Spared” quite a few useful features but I have a plan!! I’d like to wait until I have the new interior completely installed so that I can find locations for the various manual switches that will look good, be convenient and not obstruct anything. Look for future updates.