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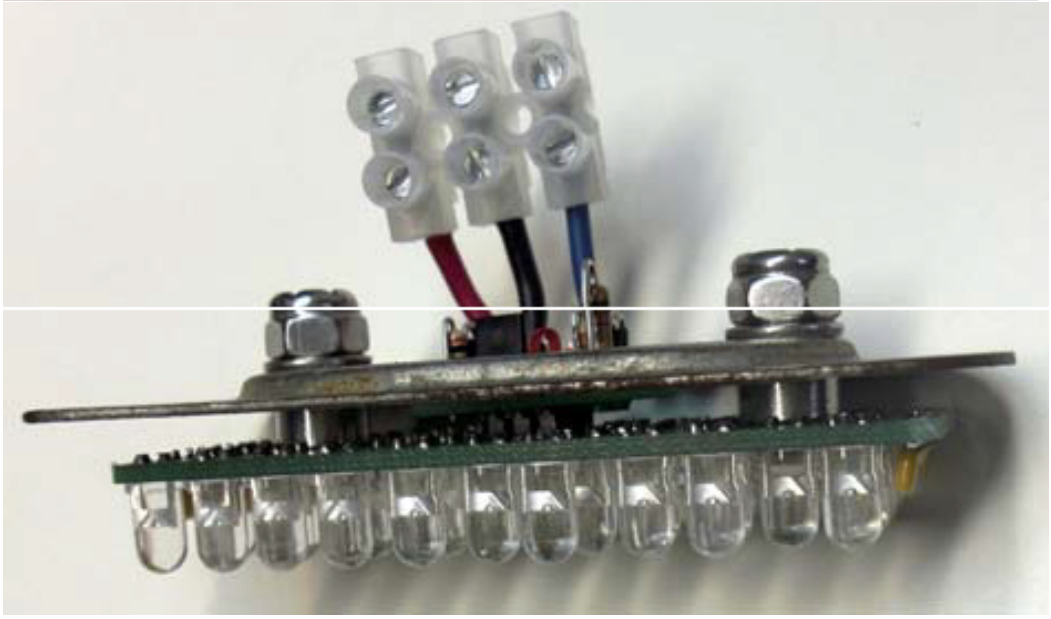
Lucas L471 Early MG TD, Triumph TR2, Morris Minor LED Rear Board Installation Instructions

Part # 1-064, 1-065

Parts Description	Quantity
LED Circuit Boards	2
10/32 x 3/4” Long SS Screws	4
#10 SS Flat Washers	4
10/32 SS Nylon Lock Nuts	4
1/4” SS Spacer	4



1) Refer to the parts list on the first page of these instructions and verify that the set is complete. These sets come in either positive (yellow earth wire) or negative (black earth wire) ground configuration. Check that you have the correct set before starting the installation. The boards do not include lenses. All pictures of lenses are for reference to insure verification that the LED lights are correct for your order.

Recommendations:

For BEST Results, we recommend that the tail light functions be verified to operate correctly before installing the LEDs. Measure the voltage levels for the running and brake lights at the tail lights. They should be within a few tenths of a volt compared to the battery voltage. If not you may have wiring issues that should be addressed. To perform this test, everything should remain constant. Perform the test with the key on, coil disconnected and all other battery drains disconnected to keep a constant.

Voltage at Battery: _____V.
Voltage at rear sidemarker tail lamp socket _____V. (parking lamp)
Voltage at Brake light tail lamp socket _____V.

If the voltages vary, the vehicle may need connections cleaned on the wiring loom, earth wires, or even switches such as the brake switch may have more internal resistance than they should have. If, for example, the battery voltage is at 12.2 volts, and the sidelamps/parking lamps are at 12.0 volts, the light output of these lights will be decent. However, if the power to the brake lights drops an additional 0.3 volts, then the difference between the brake and sidelamp output may not be as strong as desired. This holds true for ALL L.E.D. AND INCANDESCANT Lights! If you are unsure how to do this, a simple (non-voltage test) version of this test is to back the car up about 10 feet or more from a door (even FAR further than this with our lights!) and turn the sidelamps on to see the reflection on the door/surface, then activate the brake lights. The brake lights should give at a minimum Twice or three times as much brightness against the test surface. We prefer the voltage test as it is more accurate than the average person's eyes.

2) There have been aftermarket tail light lenses that were shaped differently on the inside from the original lens. Check that the circuit boards fit inside your lenses. If they do not fit, the circuit board sides can be filed down to fit or replace with the original style lenses.

3) LED tail light turn Indicators (signals) usually require an updated Electronic flasher unit to work properly. Negative earth cars can use an electronic or electromechanical flasher. Positive earth cars must use an electromechanical flasher or one produced exclusively for positive earth. *Alternately*, Load resistors (AKA Load Equalizers) can be installed. These are found at your favorite British car supplier, or local auto parts source.

4) Remove the lens then pull the tail light assembly from the rear wing (fender). Disconnect the three wires from the bulb socket.

5) With the provided stainless steel screws, washers, nyloc nuts, and spacers, mount one of the circuit boards to the flat plate as shown in the picture.

6) Pull the three wires out far enough from the bodywork that you can trim each wire back about 1/4" inch or enough to strip 1/4" of insulation off the wire ends.

7) The three wires on the back of the circuit board are connected to a three position wiring connector. The middle wire is the ground wire and will be either Black (negative earth) or Yellow (positive earth). The Red wire connects to parking lamps and the Blue wire operates the brake lamps. The TD Red wire should be park and the Green/Purple wire should be brake. Most other British cars of the era should be wired similarly. Connect the wires to the three position connector.

8) Pull the wiring back through the rubber boot until the new assembly is mounted on top of the boot.

9) Reinstall the lens. We suggest that you apply some silicon sealer to the back of the rubber boot where the wires pass through. This will help resist moisture build-up in the backside of the rubber boot.

10) Repeat this process for the other side.

11) Test the lights and you are done.