

Electrical Gremlins by Steve Logan

On June 21 the club had a well-attended tech session at Chequered Flag Automotive hosted by Scott Bohannon. The topic was electrical gremlins and installation of headlight and horn relays if anyone cared to bring the relays. The relay installation was such a popular idea that it was tackled first. The installation of relays in an MGB accomplishes two things.

1) It increases the voltage to the headlights or horn, thereby increasing their performance. The relay installation shortens the length of wire between the battery and headlights or horn and perhaps, increases the size of the wire. Both of these changes decrease the circuit resistance, thereby decreasing the voltage drop in the circuit. Remember Ohm's Law: $V=IR$?

2) It decreases the current through the headlight or horn switch from full load current down to milliamps. Factory installed MGB switches were just barely able to handle the designed load put on them. Aftermarket switches are less capable. Modern halogen headlights draw more current than the originals. Add a pair to the B and don't be surprised when the headlights don't work the second time you try to drive at night.

Two headlight relay kits were brought to the tech session by members. One was bought from an individual on the internet and included three relays (low beams, high beams and horn). The other one was bought from Victoria British. After inspecting both kits and visualizing the installation, neither kit was used as designed.

Scott thought that installing the relays on the radiator shroud brace, as instructed by the internet kit (and required by the wire lengths) exposed them unnecessarily to the elements. The relays were installed on the right inner fender well beside the existing ignition relay. The power was tapped at the starter terminal bolt and fused with a 20 amp blade type fuse positioned beside the fuse block. New wires were cut to length and the existing wiring was tapped as the instructions called for. The installation worked great with nice bright headlights. The car already had a horn relay.

The intended advantage of the Victoria British kit was that it was almost a plug-and-play installation. This was thwarted by the small holes in the fender well and headlight buckets. The connectors wouldn't fit through the holes. The kit would have to be cut apart, installed and spliced back together. Enlarging the holes would have left the interior of the headlight bucket exposed to water and dirt. The kit was not installed, but could have been using the same approach as the first kit. By the way: The headlight trim rings are removed by prying carefully as close to the bottom of the ring as possible. The retaining spring clip is at the bottom and the two non-springy attachment points are at the top.

One member was having driveability issues with his B. The timing was adjusted and the twin SUs were adjusted. After a test drive it was all smiles. While adjusting the SUs, Scott made a comment that made me think immediately of the famous movie line from "Quiggly Down Under". "I said that I didn't have much use for the Colt revolver not that I didn't know how to use it". Scott prefers Weber to SU carburetors.