

MGB Ignition System Feedback

A problem was introduced to the MGB's electrical system in the 1977 Model Year that has spooked many technicians and car owners over the years. This is the tendency for this year car to stay running for several seconds after turning the key off. This is not the classic "Dieseling" that is caused by hot spots continuing to burn fuel after shutting off the ignition, rather it is the engine just running normally for a short time after turning the key off, then eventually shutting off. Over the years because of a misunderstanding of the cause of the problem, many shops and individual car owners have blamed this on the Lucas alternator, or other gremlins, and found that by adding an additional diode to the warning light circuit, this could be prevented. Also many alternator repair shops have been blamed for poor workmanship if this problem seemed to start after working on a suspect unit. See figure a:



Fig. a
Diode added to warning light.

Adding diodes, or other means of repair for this are time-consuming, and if not done properly can cause diagnostic nightmares for the professional that comes along at a later date. The above example shows this clearly. If the repair shop is not aware of this added-in component, a faulty diagnosis of a charging system problem is possible.

The correct repair is actually accomplished in a matter of 5 minutes, and is quite permanent *and* visible. A clue can be found in the following two photographs.

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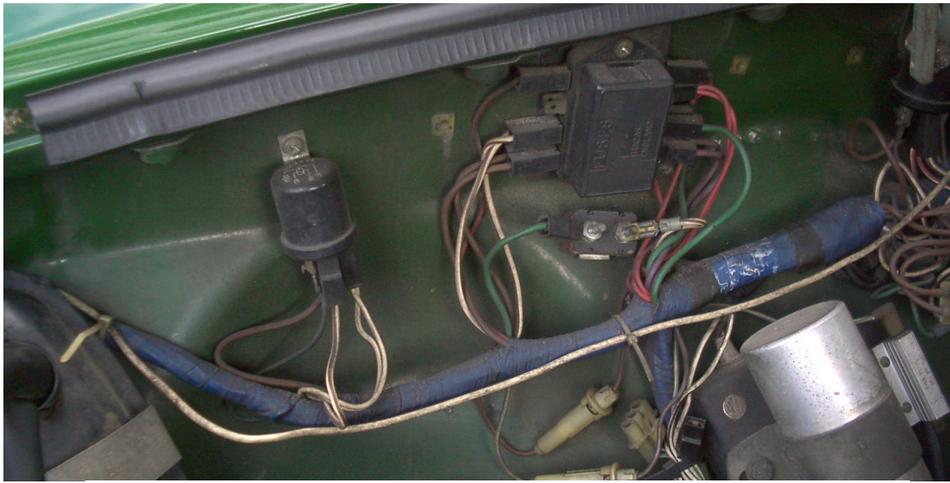


Original fuse box and ignition relay layout, 1977 MGB

It is clearly seen in the above photograph that there are three white-with-brown tracer wires on the fusebox at the second circuit from the bottom, left side. This is the circuit that feeds the “green” circuit; (wipers, turn signals, brake lights, and similar “key-on” components). Notice that the ignition relay on the left has a large white/brown wire in the center, and a small white wire at the right. The small white wire is the feed from the ignition switch. The white/brown is the output of the relay. This relay was installed for one reason only; it would reduce the load on the ignition switch of the twin electric radiator cooling fans. That is why this problem started in 1977, the first year of those fans use. However, this white/brown circuit was also used to supply power to the ignition coil, and that is where the problem starts. After shutting off the key, there is enough residual power feedback in this circuit to keep the relay from de-energizing and the coil stays live. After a few moments, this is bled off to ground through the alternator, and the relay shuts off, thus shutting off the engine.

The factory did discover this problem, for in the following year, a subtle wiring change was made which can be seen in the next photograph.

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Original fuse box and ignition relay layout, 1978 and on MGB

Now you will notice that the fuse box has only two white/brown wires, and the third wire has been moved over to the ignition relay where it has been doubled up with the feed from the ignition switch, as well as had its color changed to white/no tracer. This has changed the coil supply source to be the ignition switch itself. This simple and easily accomplished change is all it takes to cure this problem.



1977 MGB Fusebox after modification

One of the connectors at the fuse box has two white/brown wires incorporated in it. Simply cut the *smaller* of the doubled white/brown wires and bring it over to the relay, doubling it with the solid white wire. Quick, simple, painless. Throw away the diodes, and stop blaming Lucas.

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