

OVERDRIVE WARNING LIGHT

By Steve Byers

The BMC Workshop Manual for the Austin-Healey 100 and 3000 has a caution against backing the car up with the overdrive engaged. However, anyone who has driven a Big Healey with overdrive for any length of time has done just that, without any apparent problems, so why the warning?

The circuitry of the overdrive is designed to disable the overdrive electrically when the gearshift lever is moved to reverse. There is a switch operated by the gearshift lever that will only allow the overdrive to be engaged when 3rd or 4th gear has been selected, and no other gear, including reverse. But, if it should happen that the gearshift switch should fail with its internal contacts closed, then it is functioning to apply power to the overdrive solenoid regardless of the position of the gearshift lever. Then, the overdrive could still be powered when the attempt was made to back up. This could seriously damage the internals of the overdrive, and this is the reason for the warning.

Long before I had any understanding of the mechanical or electrical operation of the overdrive, I found myself frequently forgetting to turn off the overdrive dash switch before reversing the car. Because of the warning in the manual, this concerned me. I decided to do something to remind me to turn the switch off, and that was to install an overdrive warning light.

In those days, I had no qualms about drilling another hole in my BJ8 center dash to accommodate the light, so that is what I did, and I mounted the light just above the overdrive dash switch (see photo). Today, I might find another convenient location for the light that did not involve adding new holes to the car. At least I know that the light could be removed and the center dash recovered with vinyl to obscure the hole, if that should ever be desired.



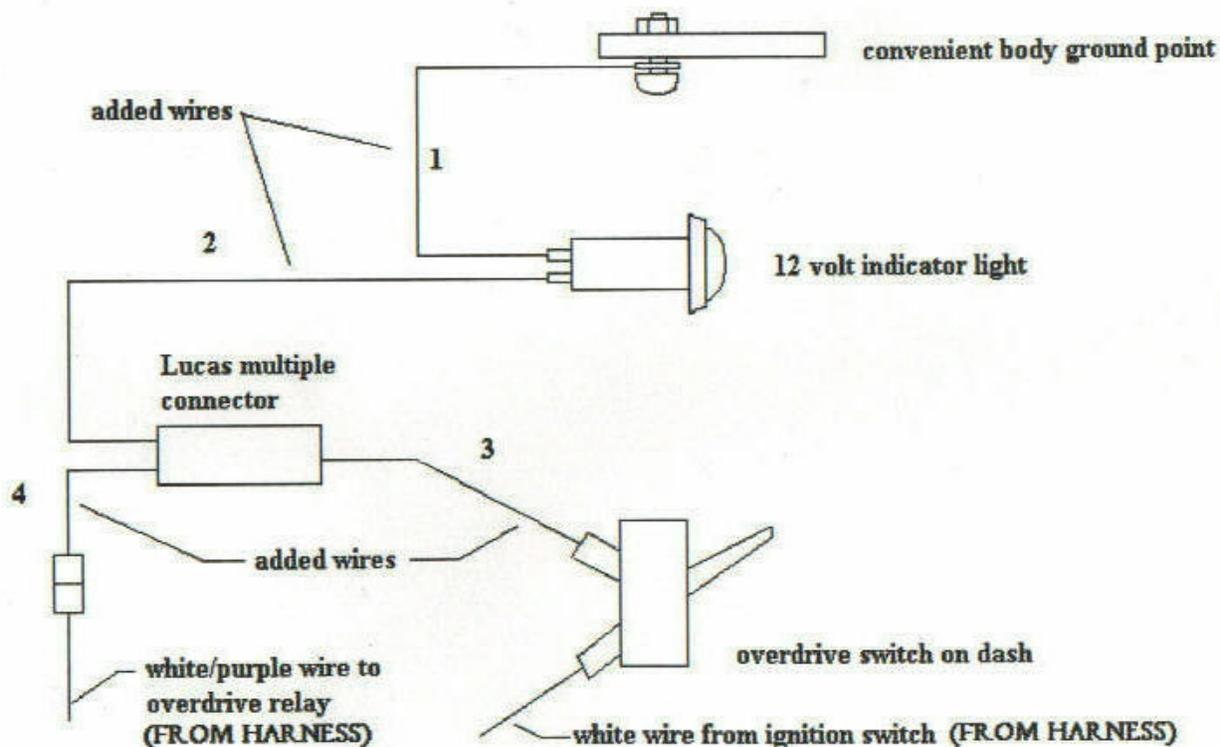
Recently, I discovered another benefit of the light. After cruising for a while with the overdrive operating normally, I stopped for gas. When I started off again, the overdrive would not engage. I noticed that the warning light also would not come on when the dash switch was flipped to the O/DRIVE position. This told me that the problem was not with either the electrical or hydraulic operation of the overdrive unit itself, or in the overdrive solenoid or the gearshift switch, but was an electrical problem "upstream" of the overdrive. This knowledge directed me first to check the dash switch. I discovered that one of the terminals had somehow broken itself off the dash switch, and I found the terminal still attached to the wire connector. A new dash switch purchased from a vendor at the car show I was heading for got my overdrive quickly back in normal operation. The light will also show proper functioning and adjustment of the throttle switch, since if everything is operating normally the light will stay on when the dash switch is turned to NORMAL, until you step on the accelerator, then it will go out. I find that the slightest pressure on the accelerator will turn off the light.

The information below is provided for anyone who might be interested in adding such a warning light (see the accompanying wiring diagram for how the parts are connected. This can be done without cutting or modifying any of the original wiring harness).

Any 12-volt DC indicator light can be used, such as those available at Radio Shack or Autozone. Mount the light in a convenient location and run a wire from one terminal of the light to a convenient ground point (I used one of the screws that attach the upper flange of the BJ8 console to the underside of the metal central dash panel). The other terminal of the light is connected to the overdrive dash switch and to the white/purple wire that normally goes to the dash switch and the overdrive relay. To connect these wires, I used one of the Lucas double connectors that are so commonly used in British wiring harnesses.

A simple wiring diagram of the warning light circuit is given below:

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It is not necessary to cut any of the wires that are original to the electrical harness.

Simply unplug the white/purple wire from the overdrive switch and connect it as shown in the diagram. I made up the three additional wires as shown in the diagram of a convenient length to make the connections easily, but not so much as to have a lot of excess wire to deal with. I obtained all of the necessary materials at my local Autozone auto parts store. All wires are 14 gauge.

Wire 1 has a ring terminal on one end and a terminal on the other to match the 12-volt indicator light.

Wire 2 has a Lucas bullet connector on one end and a terminal on the other to match the 12-volt indicator light.

Wire 3 has a Lucas bullet connector on one end and a terminal on the other to match the O/D dash switch.

Wire 4 has a male blade terminal on one end to match the female terminal of the white/purple wire, and a bullet connector on the other end.