



MG Car Club
Washington, D.C. Centre

It's the Idiot light, you Genius

by Jim Lunson

Ever been driving your trusty MG happily down the road and suddenly, for no apparent reason, have it suddenly shut off? No warning lights, no sputter, no missing, just suddenly dead. It's not a good feeling, and it's an even worse feeling when you immediately crank up the starter to get it going again, and there is nothing, not a light, groan nor even a click; only silence. You are stuck. And it get even worse when you get someone to give you a jump from another vehicle, the car starts and runs fine, only to have it die again in about 5 minutes. Talk about a car dead on the road, this is it. It happened to me once (on the beltway just before the old Woodrow Wilson Bridge), and I saw it occur last summer at the MGB convention in Valley Forge.

Odds are when this type of shut-off happens, there has been a failure of the alternator or generator to provide electrical current, and the car has been running on the battery until it has drained its charge completely. Then there is no running, no starting, and no nothing because the car is completely dead. A jump of the battery will get it started, but it will only last until the small charge imparted into the battery during the jumping process is used up. Then it's totally dead again.

The way the automobile electrical system works is that the battery stores an electrical charge which is used to spin the starter motor to get the car started. Once started, the alternator or generator produces electricity that recharges the battery so it is ready to start the car again next time you need it. In the meantime, the alternator/generator provides electricity to run everything else in the car, including spark plugs, lights, wipers, blower, radio, and in the case of late MGBs, even the radiator cooling fans. The system works.

The problem which allows the scenario described above to occur is due to the method utilized to keep the driver informed of problems with the charging mechanism. This system uses either a red warning (idiot) light or ammeter gauge on the dashboard to indicate what is happening electrically. Both work, but both are susceptible to providing misinformation which can lead to disaster. The early idea was to use an ammeter gauge, where the driver could look at the gauge and see if the system was charging (alternator providing juice) or discharging (draining the battery). The normal reading for this gauge is about zero, or the needle about centered in the gauge, which means the battery is fully charged, and the alternator is

providing just enough electricity to run whatever electrical juice is needed for the accessories and ignition system; simple enough. The problem comes in that this delicate balance can unknowingly be upset by either a faulty gauge that fails to move when something goes amiss, when the voltage regulator fails to enter a charging mode, or when the driver simply fails to notice the needle swinging hard to the discharge system and not returning (who can watch a gauge continuously when trying to watch where one is going?). Problems sneak up on the driver who cannot study the gauge for some period to see if it corrects itself.

This system was replaced on later MGs by the famous red idiot light. This system was easier to notice as it is wired up to flash a big red light right in front of the driver whenever there is an imbalance in the charging/discharging between the battery and generator. If it lights, the driver is immediately aware something is amiss. The problem here is when either the little red bulb burns out, the alternator/generator shorts out, or the wires become disconnected. These effectively disconnect this light, making it totally useless. Then serious battery discharging (draining) occurs and the driver is totally oblivious.



This is what happened last summer at the MGB convention. On our club members' car, the wires from the alternator got pushed up against the engine block. The insulation melted from the heat, the wires shorted out on the block and broke apart, effectively disconnecting the alternator. The drivers only indication of a problem was the little red light, but of course, when the wires fried, they effectively unhooked the red light so there was no way it was going to come on and show something amiss. On the driver continued until the car went totally dead.

The way to check and head off this problem before getting stranded out on the road somewhere is very easy, but usually skipped. Check the gauge or light BEFORE starting the car. It is so easy to get in the car, pull the choke, turn the key or push the start button and listen for the roar of a happy engine; and once the engine is purring, check all the gauges and take off. But that is too late. What needs to happen is to turn on the ignition, look at the red idiot light (make sure it is burning brightly) or look at the ammeter gauge (make sure it is discharging strongly); then start the car. Then when the gauges are checked, did the red light go out or did the ammeter

needle swing from strong discharge to strong charging? If so, then are you sure everything is working, and it is safe to drive off.

This step is simple to do, but so easy to forget, and so unforgiving if there is a problem. I confess I often forget to check myself and only remember after everything is up and running - and that's too late. What I have done to compensate for my forgetfulness is to check the gauge or light when stopping. The first thing when arriving at wherever is to grab the key and turn the engine off. I have gotten into the habit of going back as soon as I have done this and turn the ignition back on (only the ignition and not the starter). The engine remains off and I look to see if the red light comes on or the ammeter pegs to the discharge side. If these occur, I know things are working, and can more or less safely assume that the next time I start the car, it will not die on me (from the alternator/generator failure system anyway). Checking before starting is surer, but so hard to remember. This step applies to modern cars as well. The very same incident happened to my friends 2001 Acura recently. And it is a step that can save a big problem on the road. So get in the habit of checking that idiot light, not only to see that it is not on, but to make sure it actually does come on when it is supposed to. Then you know of one disaster you have probably avoided.