

TEST LIGHTS

Test lights are commonly used to check a circuit for the presence of voltage. There are two kinds of test lights. Unpowered test lights consist of a simple light bulb with two leads. Self-powered test lights have an internal battery to check circuit continuity.

Figure 1:

Here a test light is useful in finding opens in the wiring harness of the lighting system.

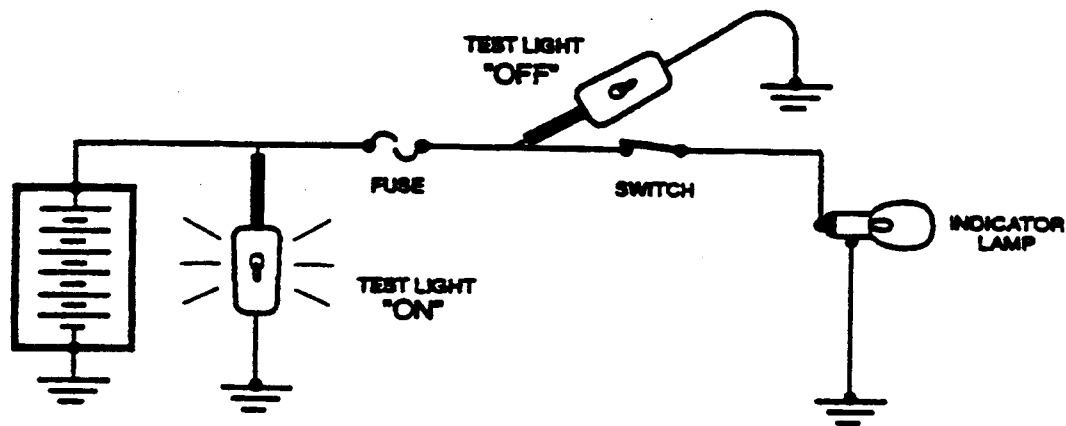


Fig. 1

On the voltage side of the fuse the test light glows. On the other side of the fuse the test light is off. In between is the open fuse.

With the advent of electronics in the truck and heavy duty industry the use of test lights must be discouraged. Test lights draw enough current during operation to damage many electronic circuits being tested. If a service technician accidentally probes a computer wire in a vehicle harness there is a reasonable chance that current drawn from the computer circuit to operate the test light could exceed the current handling capability of the circuit and damage the computer.

Figure 2:

Here the test light is checking for voltage from the computer to power up the relay. The test light will demand current from the computer since it has a path to ground. The computer has to supply current to the relay winding and the test light at the same time. This could damage the computer if it cannot handle the additional current of the test light.

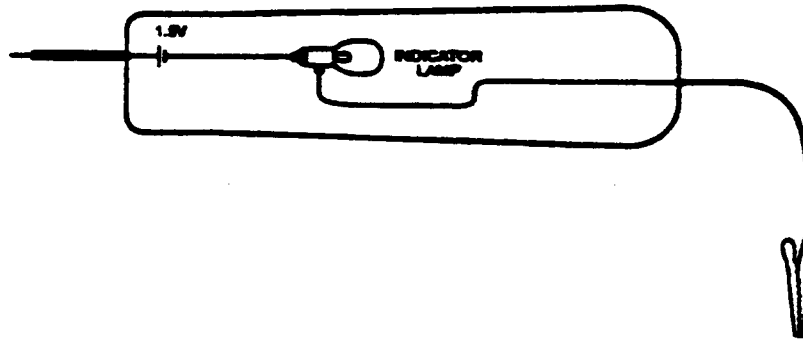


Fig. 2

Figure 3:

Here a self-powered test light schematic is shown. The battery is usually 1.5 volts. The self-powered test light can send enough current through a computer circuit to damage its sensitive electronic circuits.

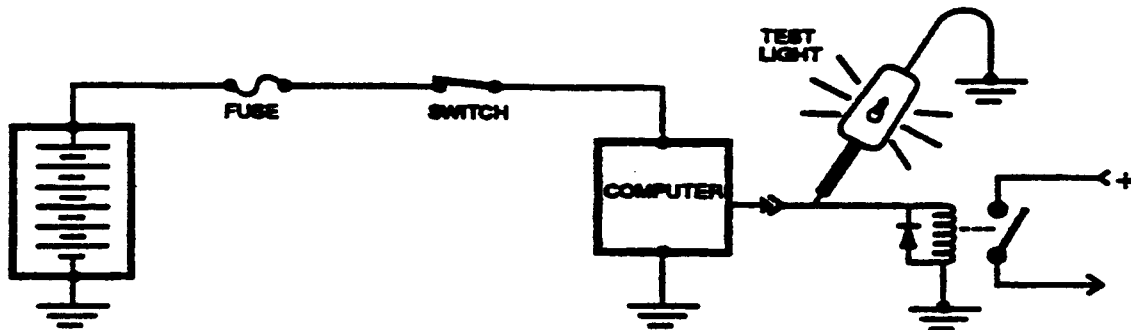


Fig. 3

Do not use test lights around computer circuits. When in doubt about a circuit just don't use a test light. It is not worth smoking a computer.