

Injectronics

TECHNICAL BULLETIN

VARIOUS

#T0073

Make: Various

Model: Various

Subject: Diagnosing fuel pump problems

Checking for a problem with the fuel pump when you have a faulty vehicle seems like an obvious thing to do, but if it is not done correctly or you do not test all aspects (such as flow rate), a fault may be missed and hours wasted chasing the fault elsewhere in the vehicle.

The first basic check is regulated fuel pressure; make sure it is within manufacturer's specifications. Check that the fuel pressure holds over a specified period of time, as not holding fuel pressure can point to a problem elsewhere in the fuel system, such as leaking injectors or a faulty fuel pressure regulator.

The second test is fuel flow; disconnect the return line and allowing fuel to flow into a measuring container. The return line is used because the pump is then working against the pressure regulator and this gives a better indication of fuel flow than checking on the inlet side, as some faulty pumps will flow fine with no resistance, but fail when a resistance is applied. Fuel flow should match manufacturers specifications and is generally measured over a minute

The third test is maximum fuel pressure; briefly restricting the return line and checking for a rise in fuel pressure test this. Depending on the system the pressure will either rise slightly or on other systems the pressure can almost double, with experience you will learn what is acceptable, but a rise in pressure should occur.

By carrying out these 3 tests every time you can accurately test the fuel pump on a majority of vehicles, also don't forget to use your ears, as a noisy pump is generally a sign of an empty tank or faulty pump. Injectronics is now carrying a range of fuel pumps to suit a wide variety of vehicles.

Always refer to manufacturers procedures for bridging out pump supplies and other test procedures. And beware when working with fuel.