

## 31489500

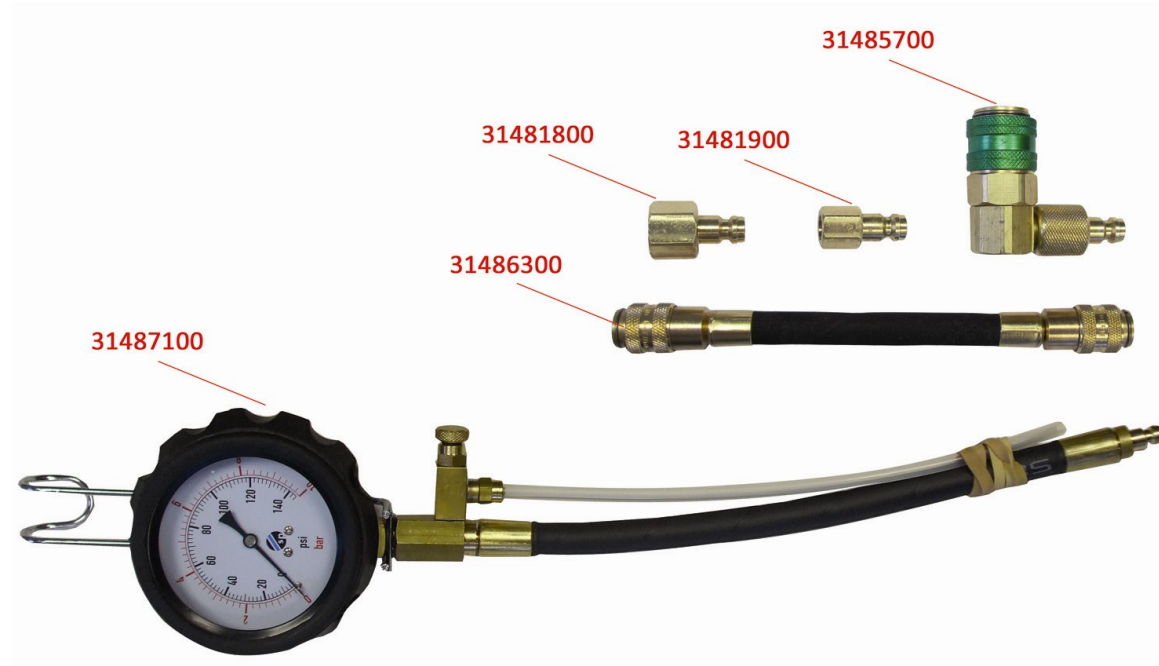
### Fuel Injection Pressure Test Kit for Schrader Test Ports

#### Safety Precautions

- The 31489500 kit is not designed for high pressure petrol (FSI type) or diesel systems
- Car exhaust and fuel vapour are harmful to your health
- Work in a well ventilated area and away from any ignition source
- Make sure the ignition is switched off before disconnecting fuel pipes and fittings
- The fuel system may hold a residual pressure. When disconnecting fuel lines etc release the fittings slowly
- Always wear gloves and safety glasses when working with pressurised systems
- When pressure test is completed, check for fuel leaks

The 31489500 kit is designed for use on modern petrol engines where there is access to a fuel pressure test port (Schrader type valve)

#### Kit Contents:



#### Pre Conditions

**Always observe safety precautions. Some fuel spillage is inevitable!**

There are many variations of electronic fuel systems and this is intended as a general guide to basic system testing. Always consult manufacturer's data if in doubt for more detailed information.

Always make sure all fuel hoses and vacuum pipes are in good condition and that pipe work and connections are tight.

Many fuel injection systems will not operate until a signal is received from the ignition system. The ignition should always be checked if no injection is found.

Ensure all relevant connections are good and that the battery is fully charged.

### 1. Depressurise the system

This can be done by disabling the fuel pump (remove the fuse or earth wire) and running the engine until it stops.

### 2. Checking Fuel Delivery Rate

Disconnect the fuel return pipe from the pressure regulator outlet back to the tank and place it in a suitably large container. By-pass the fuel pump relay and measure the amount of fuel delivered in 1 minute. This should be a minimum of 1.5 to 2.0 litres, however systems vary a great deal and it is essential to check manufacture's data before condemning the pump.

### 3. Connecting to the 31489500 Kit

Certain manufacturers have built quick connectors into their systems and this makes 'hook up' faster and simpler. By-pass the fuel pump relay again and make note of the pressure.

#### **IF THE PRESSURE IS TOO LOW**

Clamp the fuel return line from the pressure regulator-briefly **CAUTION! - On older cars this could burst a fuel line. If the pressure rises, suspect a faulty fuel pressure regulator. If the pressure rises slowly this could be due to a blocked fuel line or filter.** Two other possible causes will be faulty fuel pump or leaking injectors.

#### **IF THE PRESSURE IS TOO HIGH**

Disconnect the fuel return line from the pressure regulator, channel the fuel in to a container and run the engine. If the pressure is still high, the pressure regulator is faulty. If the pressure is OK then check the fuel return line for blockages.

### 4. Maximum Pump Pressure

To measure the ability of the fuel pump to produce pressure, briefly close the T connector valve – **CAUTION - On older cars this could burst a fuel line. The pressure should now reach between 4 and 6 bar depending on the system. A low pressure here would indicate a faulty fuel pump.**

### 5. Running Pressure

Re- connect all electrical connections and start the engine. The fuel pressure with the engine running and the pressure regulator vacuum hose connected should be approximately 0.5bar.

Under system pressure (check against manufacturers data). With the vacuum pipe from the Pressure regulator removed and plugged, the pressure should rise to the same as system pressure. If system pressure was evident before the vacuum hose was removed (and the pipe was ok) then the pressure regulator is faulty.

### 6. Residual Pressure

Switch the engine off and check the residual pressure. This should not drop more than approximately 0.5bar in 60 seconds. If the pressure drops too fast then simultaneously shut the T connector valve and stop the engine. If the pressure still drops too fast then suspect a faulty fuel pump check valve. If the pressure drop is ok with the valve closed then suspect a faulty fuel pressure regulator or leaking injectors.

### 7. Completion

When all tests have been completed and the pressure test equipment is to be removed, depressurize the system via the drain hose on the gauge. Make sure all the vehicle's hoses and connections are refitted and tight.

**NOTE: THESE INSTRUCTIONS ARE PROVIDED AS A GENERAL GUIDE ONLY AND REFERENCE SHOULD ALWAYS BE MADE TO THE MANUFACTURERS TEST PROCEDURES**