SEALEY Professional TOOLS
AUTO SERVICE LINE

INSTRUCTIONS FOR:
DIESEL INJECTION LEAK BACK TEST KIT - PIEZO
MODEL No: **VS2050**

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

⚠ *IMPORTANT:* PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.
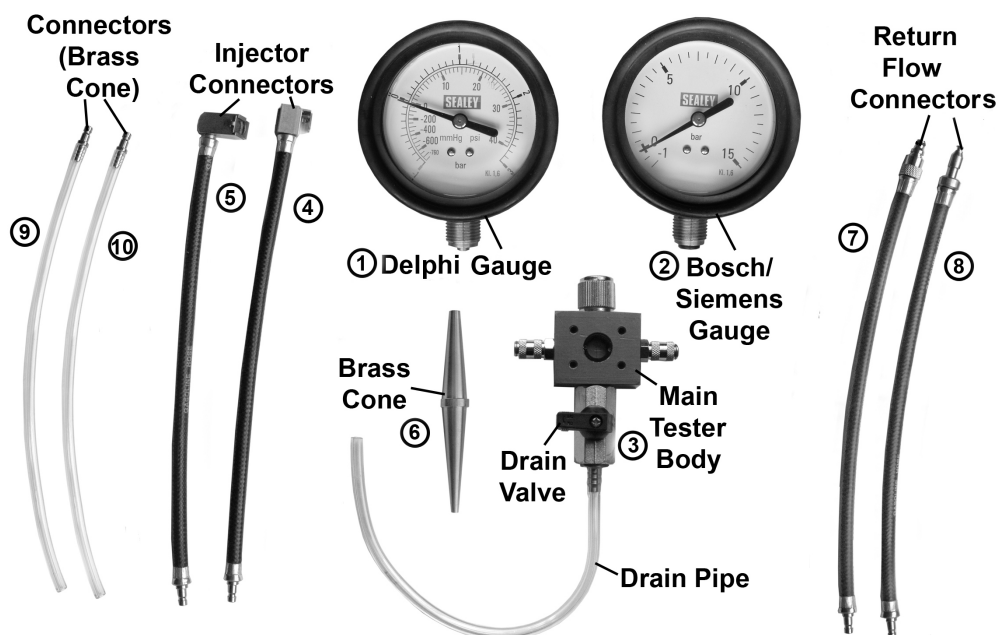
1. SAFETY INSTRUCTIONS

- ❏ **WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using this kit.
- ❏ **WARNING!** Fuel is flammable - keep away from sources of ignition, including hot surfaces e.g. exhaust manifold.
- ✗ **DO NOT** use the kit if any parts are missing or damaged.
- ✗ **DO NOT** use the kit to perform a task for which it is not designed.
- ✗ **DO NOT** allow untrained persons to use the kit.
- ✗ **DO NOT** use when tired or under the influence of drugs, alcohol or intoxicating medication.
- ✓ Switch off vehicle's ignition before commencing work under the bonnet.
- ✓ Maintain the kit's components in good and clean condition for best and safest performance.
- ✓ Wear eye protection and keep skin contact with fuel to a minimum. If fuel enters eyes rinse with plenty of water and seek medical advice. If swallowed seek medical advice immediately. A full range of personal safety equipment is available from your Sealey dealer.
- ✓ Wear suitable clothing to avoid snagging. Do not wear jewellery and tie back long hair.
- ✓ Keep children and other unauthorised persons away from the working area.
- ✓ Ensure there is adequate lighting whilst using this kit.
- ✓ Use approved parts only. Unapproved parts may be dangerous and will invalidate the warranty.
- ✓ Keep work area clean and tidy and free from unrelated materials.
- ✓ If running the vehicle's engine in an enclosed space, ensure that there is sufficient ventilation or use an exhaust extraction system.
- ✓ Dispose of waste fuel in accordance with local authority regulations.
- ✓ When work on the vehicle is finished ensure that there are no tools or parts left in the engine compartment.
- ✓ After use, clean equipment, return all contents to the case and store in a safe, dry, childproof location.
- **IMPORTANT:** Always refer to the vehicle manufacturer's service instructions, or proprietary manual, to establish the current procedures and correct data.

2. INTRODUCTION

Specially designed to test the return flow fuel pressure from Piezo diesel common rail injectors on Bosch, Delphi and Siemens systems. Supplied with two gauges, -1 to +3 bar and -1 to +15 bar. Sight-glass that identifies air in the fuel system and drain valve allows safe recovery of fuel.

3. PARTS

Item	Part No.	Description	Item	Part No.	Description
1	VS2050.01	Pressure Gauge (-1 to +3 bar) (Delphi)	6	VS2050.06	Brass Cone (Delphi)
2	VS2050.02	Pressure Gauge (-1 to +15 bar) (Bosch/Siemens)	7	VS2050.07	Return Flow Connector (Brass end)
3	VS2050.03	Main Body	8	VS2050.08	Return Flow Connector
4	VS2050.04	Injector Connector	9	VS2050.09	Connectors (Delphi-brass cone)
5	VS2050.05	Injector Connector (angled)	10	VS2050.10	Connectors (Delphi-brass cone)

Connectors (Brass Cone) ⑨ ⑩ — Injector Connectors ⑤ ④ — ① Delphi Gauge — ② Bosch/Siemens Gauge — Brass Cone ⑥ — Drain Valve — ③ Main Tester Body — Drain Pipe — Return Flow Connectors ⑦ ⑧

4.   OPERATION

NOTE: Before using the tester, inspect the adaptor connections and return flow connections for obstructions, as these could considerably increase the pressure in the injector, possibly causing damage to it. Ensure that the fuel system is NOT pressurised, refer to the vehicle manufacturer's instruction manual.

4.1.   Setting up the tester.
Fit one of the gauges to the main body, the 15 Bar gauge for Bosch and Siemens systems and the 3 Bar gauge for Delphi systems. Ensure that the drain valve is in the Off position.

4.1.1. Disconnect the return line to the injector that is to be tested.

4.1.2. Connect the return line to one of the return flow connectors and connect the other end of the return flow connector to one of the connectors on the main body of the tester.

4.1.3. Connect one of the injector connectors to the injector and the other end of the injector connector to the other connector on the main body.

4.1.4. If testing a Delphi system, use the brass cone for the return flow.

4.2.   Testing an engine that will not start.
4.2.1. Briefly operate the starter motor several times so that the transparent sight glass is filled with fuel.

4.2.2. Operate the starter motor for ten seconds, at the same time read the pressure or vacuum reading on the gauge. Compare this reading with the manufacturer's data and rectify problem if required.

4.3.   Testing an engine that is running.
4.3.1. Start the engine and allow it to run at idling speed until the transparent sight glass is filled with fuel.

4.3.2. Read the pressure or vacuum reading on the gauge. Compare this reading with the manufacturer's data and rectify problem if required.

4.4.   Removing tester.
4.4.1. Turn off the engine. To depressurise the fuel system, place the drain pipe into a suitable container and open the drain valve. When all fuel has drained out, close the drain valve. Dispose of the fuel responsibly or re-use it.

4.4.2. Remove the connectors from the main body, disconnect the connectors from the vehicle's fuel system and reconnect the return line to the injector. Ensure all tools and kit parts are removed before driving the vehicle.

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