



# DIESEL COMPRESSION TEST KIT 41PC

MODEL NO: **VSE3158.V2**

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 & 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. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Read instruction  
manual



Wear protective  
gloves



Wear eye  
protection

## 1. SAFETY

- ☐ **WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.
- ☒ **DO NOT** use tools if threads are damaged. Any defectives must be rectified before use, to avoid incorrect readings.
- ☒ Maintain tools in a good, clean condition for the best and safest performance.
- ☒ Ensure that a vehicle that has been jacked up, is adequately supported with axle stands.
- ☒ Wear approved eye protection. A full range of personal safety equipment is available from your Sealey stockist.
- ☒ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery and tie back long hair.
- ☒ Ensure any disconnected fuel pipes are plugged to avoid spillage.
- ☒ Ensure that the correct connector is used for the engine being tested.
- ☒ Always release the pressure from the gauge, before disconnecting the quick release coupling.
- ☒ Account for all tools and parts being used and **DO NOT** leave them in or near the engine.
- ☒ Always refer to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data.

## 2. INTRODUCTION

Up-to-date kit for compression testing on diesel vehicles. 23 Glow plug adaptors included, covering 35 manufacturers and over 1000 model/engine variants from 1995 to 2023. Includes dial pressure gauge reading in bar/psi ranging from 0-1000psi (0-70bar). Easily identify worn valves and piston rings. Set of injector adaptors also included if an alternative method of testing is required. Full application list can be found in the instruction manual on the Sealey website. Supplied in storage case.

## 3. SPECIFICATION

Model No:.....VSE3158.V2

Glow Plug Adaptors:

Alfa Romeo, Audi, BMW, Cadillac, Chevrolet, Chrysler, Citroen, Dacia, Fiat, Ford, Honda, Hyundai, Infiniti, Jaguar, Jeep, Kia, Land Rover, Mazda, Mercedes, MG, Mini, Mitsubishi, Nissan, Peugeot, Porsche, Renault, Rover, Saab, Seat, Skoda, Suzuki, Toyota, Vauxhall, Volkswagen, Volvo

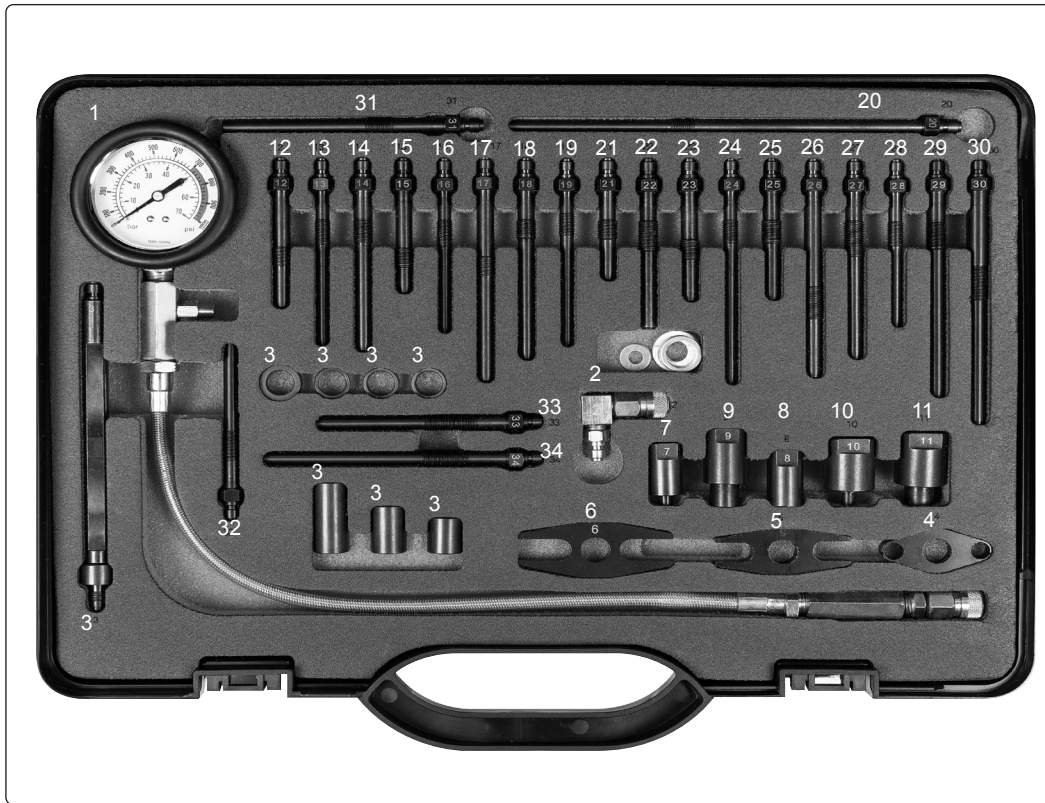
Contents:..... M17, M20, M24

Gauge Scale: .....0-70bar(0-1000psi)

**NOTE:** To view full list of applications please use QR code below.



## 4. CONTENTS



Item	Part Number	Description
1	VSE3158.01	Gauge and Hose ass (1000psi)
2	VSE3158.02	90 degree elbow
3	VSE3158.03	Injector adaptor with spacer sleeves
4	VSE3158.04	Injector adaptor clamp (51.5mm)
5	VSE3158.05	Injector adaptor clamp (64mm)
6	VSE3158.06	Injector adaptor clamp (73mm)
7	VSE3158.07	Injector adaptor nozzle (16.9/6.5mm dia)
8	VSE3158.08	Injector adaptor nozzle (17mm dia)
9	VSE3158.09	Injector adaptor nozzle (19.9/13.8mm dia)
10	VSE3158.10	Injector adaptor nozzle (24/5.7mm dia)
11	VSE3158.11	Injector adaptor nozzle (24/13.9mm dia)
12	VSE3158.12	Glow plug adaptor
13	VSE3158.13	Glow plug adaptor
14	VSE3158.14	Glow plug adaptor
15	VSE3158.15	Glow plug adaptor
16	VSE3158.16	Glow plug adaptor
17	VSE3158.17	Glow plug adaptor
18	VSE3158.18	Glow plug adaptor
19	VSE3158.19	Glow plug adaptor
20	VSE3158.20	Glow plug adaptor
21	VSE3158.21	Glow plug adaptor
22	VSE3158.22	Glow plug adaptor
23	VSE3158.23	Glow plug adaptor
24	VSE3158.24	Glow plug adaptor
25	VSE3158.25	Glow plug adaptor
26	VSE3158.26	Glow plug adaptor
27	VSE3158.27	Glow plug adaptor
28	VSE3158.28	Glow plug adaptor
29	VSE3158-V2-29	Glow Plug Ø8 x Ø6.5 x 127.85L

Item	Part Number	Description
30	VSE3158-V2-30	Glow Plug Ø8.1 x Ø6.5 x 141.85L
31	VSE3158-V2-31	Glow Plug Ø8 x Ø6.5 x 121.85L
32	VSE3158-V2-32	Glow Plug Ø7.5 x Ø6.5 x 95.85L
33	VSE3158-V2-33	Glow Plug Ø8.2 x Ø6.5 x 107.85L
34	VSE3158-V2-34	Glow Plug Ø8 x Ø6.5 x 132.85L
	VSE3158.W	Copper washer set

## 5. OPERATION

### 5.1. OVERVIEW OF COMPRESSION TESTING

When an engine's performance is down, or if misfiring occurs which cannot be attributed to the fuel systems, a compression test can provide diagnostic clues as to the engine's condition.

Compression should build up quickly in a healthy engine. A very low compression reading on the first stroke, followed by gradually increasing pressure on successive strokes, indicates worn piston rings. A low compression reading on the first stroke, which does not build up during successive strokes, indicates leaking valves or a faulty head gasket (a cracked head could also be the cause). Deposits on the undersides of the valve heads can also cause low compression. If the pressure in any cylinder is considerably lower than the others, introduce a small quantity of clean oil into that cylinder through the access hole, and repeat the test. If the addition of oil temporarily improves the compression pressure, this indicates that bore or piston wear is responsible for the pressure loss. If there is no improvement, it suggests that the leakage is around the valves, or a faulty head gasket. A low reading from two adjacent cylinders suggests a faulty head gasket between the two cylinders. The presence of coolant in the engine oil may confirm this. If the compression is unusually high, the combustion chambers are probably coated with carbon deposits. If this is the case, the cylinder head should be removed and de-carbonised.

### 5.2. COMPRESSION TESTING

5.2.1. Check the engine oil is at the correct level.

5.2.2. Remove all of the glow plugs from the engine.

5.2.3. Select the applicable adaptor from the kit and screw it into the first glow plug port, ensuring there is a good seal with the O-ring (if fitted). Connect the coupling on the pressure gauge hose to the adaptor, ensuring it locks into place.

5.2.4. Turn over the engine using the starter motor and observe the gauge, looking for a steady increase in the reading and note the maximum reading obtained. Refer to the vehicle/engine manufacturer's workshop manual for compression data.

5.2.5. Push the Re-set Valve (situated under the gauge) to release the pressure. The Re-set Valve allows the test to be repeated if required without disconnecting the tester from the glow plug port.

❑ **WARNING!** Always release pressure via the Re-set Valve BEFORE disconnecting the Tester.

5.2.6. Disconnect the compression tester from the adaptor and remove the adaptor from the glow plug port. Install them into the next cylinder's glow plug port and repeat the tests. Continue the tests for all of the remaining cylinders in turn.

**NOTE:** A variation in compression readings between cylinders is often a better indication of engine problems than the individual values of compression.

Parts support is available for this product. Please email [sales@sealey.co.uk](mailto:sales@sealey.co.uk) or telephone 01284 757500



#### ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

**Note:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on [technical@sealey.co.uk](mailto:technical@sealey.co.uk) or 01284 757505.

**Important:** No Liability is accepted for incorrect use of this product.

**Warranty:** Guarantee is 12 months from purchase date, proof of which is required for any claim.



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