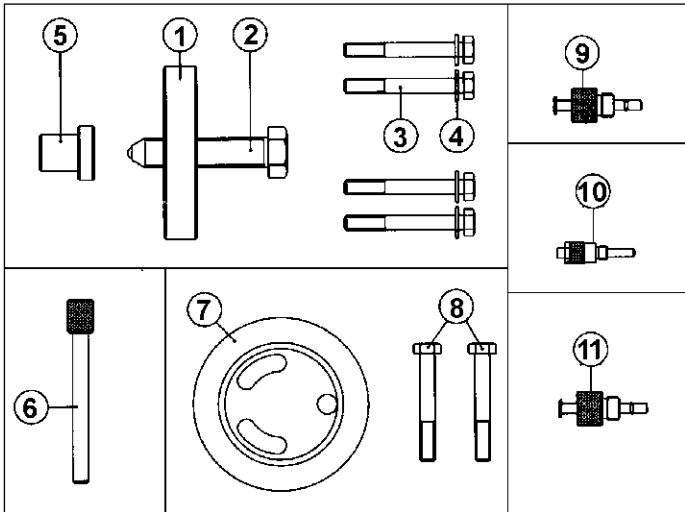


# VS129 & VS1291

## DIESEL ENGINE CAMSHAFT LOCKING & FUEL INJECTION PUMP TIMING KIT. - LAND ROVER, LDV & LTI CARBODIES.



STANDARD PARTS LIST		
1	VS129/1	PULLER PLATE
2	VS129/2	THRUST BOLT
3	VS129/3	HEX SCREW SET (4)
4	VS129/4	WASHERS (4)
5	VS129/5	PRESSURE BUTTON
6	VS129/6	PUMP TIMING PIN
7	VS129/7	RETAINER
8	VS129/8	HEX SCREW SET (2)
9	VS129/9	TIMING PIN-FLYWHEEL
10	VS129/10	TIMING PIN-DPS PUMP
11	VS129/11	TIMING PIN-FLYWHEEL
	VS129/84	CASE & INSERT

### 1. INTRODUCTION & APPLICATION

#### 1.1. INTRODUCTION

The VS129 Locking and Fuel Injection Pump Kit contains the specialised tools required for carrying out belt replacement, without losing the engine camshaft and injection pump timing, on Land Rover 2.5D, 200TDi and 300 TDi engines. An essential kit for service work on these long established popular engines.

#### 1.2. APPLICATION

**Land Rover:** 2.5D -Defender 90/110 (-91) 200TDi- Defender 90/110, Discovery (98-) Range Rover Classic (93-). 300TDi- Defender 90/110, Discovery, Range Rover Classic (95-).

**LDV:** Sherpa 285, 310, 350, 2.5D.

**LTI Carbodies:** Taxi FX45 2.5D.

See model applications chart below.

#### 1.3. USE PRODUCT WITH THE FOLLOWING TOOLS

Flywheel Timing Pin - EDC/Manual Transmission .....VS1291

### 2. APPLICATION DETAILS

#### LAND ROVER.

Defender 90/110 - 2.5D engine .....VS129/10 + VS129/11

Defender 90/110, Discovery, Ranger Rover Classic - 200 TDi/300 TDi Engines .....VS129/1 THRU VS129/8 + VS129/9

#### LDV/LTI Carbodies.

Sherpa 285, 310 350  
 Taxi FX45 2.5D engine .....VS129/10 + VS129/11

### 3. SAFETY INSTRUCTIONS

- WARNING!** Ensure all health and safety, local authority, and general workshop practice regulations are strictly adhered to when using tools.
- DO NOT use tools if damaged.
- Maintain the tool in good and clean condition for best and safest performance.
- If required ensure the vehicle to be worked on is adequately supported with axle stands, ramps and chocks.
- Wear approved eye protection. 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.
- WARNING!** Account for all tools, timing pins, locking bolts, and parts being used and do not leave them in or near the engine.

**IMPORTANT:** Always refer to the vehicle manufacturer's service instructions, or proprietary manual to establish the current procedure and data. These instructions for use are provided as a guide only.

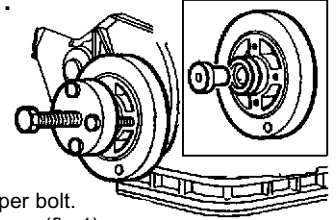
## 4. INSTRUCTIONS FOR USE.

### 4.1. VS129 CRANKSHAFT DAMPER REMOVER - 200 TDi/300 TDi, (Parts VS129/1 to VS129/5).

The crankshaft damper and bolt are coated with a thread locking compound and tightened to a high torque. This Remover is therefore essential to remove the crankshaft damper.

1. Release the 4 bolts and remove the crankshaft pulley from the damper.
2. Remove the damper bolt, (the damper is secured to the crankshaft with a thread locking compound). Use a Holding Tool to retain the damper in position whilst removing or re-assembling the crankshaft damper bolt. Insert pressure button VS129/5 into the end of the crankshaft to provide a pressure point for the force screw, (fig 1).
3. Assemble the Remover onto the damper and extract.

fig 1.



### 4.2. VS129/6 INJECTION PUMP TIMING PIN - 200TDi / 300 TDi.

Used when removing the injection pump, replacing the cam belt or checking injection pump timing. The pump hub has a "U" shaped slot and the VS129/6 Timing Pin should locate easily into this position fig 2. At the same time Timing tool VS129/9 should locate into its slot in the flywheel (refer to VS129/9 instructions).

### 4.3. VS129/7 + VS129/8 Fuel Pump Gear Retainer - 200 TDi/300 TDi

This tool is designed to lock the fuel injection pump gear in its timed position when removing the pump for service. The retainer allows removal of fuel injection pump without disturbing the timing belt, thus retaining the pump sprocket in position, see fig 3.

### 4.4. VS129/9 Flywheel Timing Pin - 200TDi / 300 TDi.

This timing pin is located in different ways dependant upon the model having manual or automatic transmission.

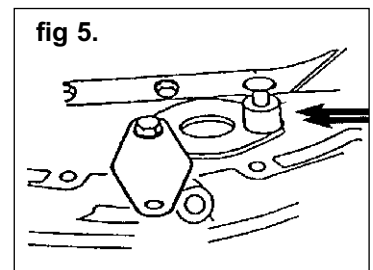
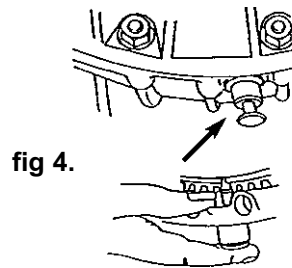
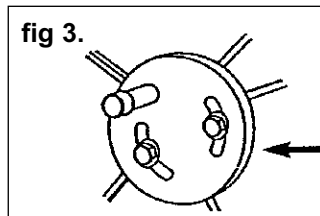
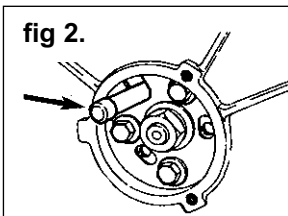
1. View valve position through oil filler hole and turn crankshaft clockwise until No 1 cyl, is just before TDC.
2. Remove blank plug from flywheel housing.
3. Fit body section of timing pin and then rotate crankshaft clockwise until centre pin of VS129/9 engages slot.

### 4.5. Manual Transmission

Unscrew the blanking plug from the timing hole in the base of the flywheel housing and screw in the body section of VS129/9, fig 4.

### 4.6. Automatic Transmission

1. Unscrew the larger bolt from the cover plate located on the engine back plate, to the rear of the sump.
2. Pivot the cover away from the bolt hole and screw in body section of VS129/9.
3. Centre Pin locates into ring gear, fig 5. **NOTE: Manual transmission with EDC (Electronic Diesel Control) use VS1291 Flywheel Timing Pin.**
4. Remove pump access plate and fit VS129/6 Pin into injection pump gear.
5. Remove keeper plate - lock pump.
6. Fit Gear Retaining Tool Assembly VS129/7 + VS129/8.



### 4.7. VS129/10 DPS Pump Timing Tool and VS129/11 Flywheel Timing Pin - 2.5D

The injection pump is timed at exhaust valve peak (E.P.) of No 1. cylinder. On early engines, timing marks are provided on the flywheel and a pointer on the housing, on the crankshaft, injection pump and camshaft.

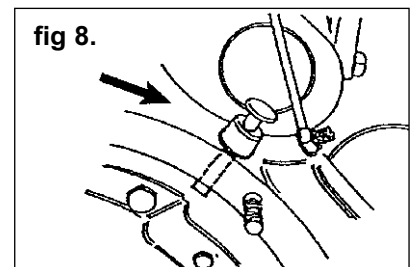
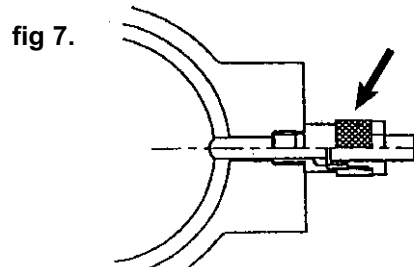
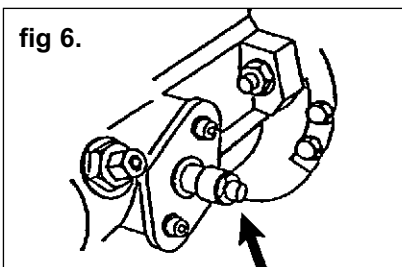
1. With the flywheel marks aligned, remove the plug from the side of the pump and insert VS129/10 Timing Tool fig 6 and 7.
2. Turn the pump body and insure that the tool locates and is fully screwed into position.
3. Tighten the pump cover and support bracket nuts.

**NOTE:** a) On early engines the timing position on the rear cover is aligned with a scribed mark on the pump flange.

b) On later engines VS129/11 is used to establish flywheel position fig 8, and the timing pointer on the pump is deleted.

**WARNING!** Always ensure that all timing pins have been removed before starting engine.

**IMPORTANT:** Belt Tensioning is critical and the manufacturer's procedure must be followed.



**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.

**IMPORTANT:** No liability is accepted for incorrect use of product. **WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim. **INFORMATION:** Call us for a copy of our latest catalogue on 01284 757525 and leave your full name and address including your postcode.

