SEALEY Professional TOOLS
Auto Service Line

INSTRUCTIONS FOR:

DIESEL ENGINE CAMSHAFT LOCKING/ FUEL PUMP TIMING KIT - LAND ROVER 2.5D, 200TDi, 300TDi - BELT DRIVE

MODEL No: VS129, VS1291

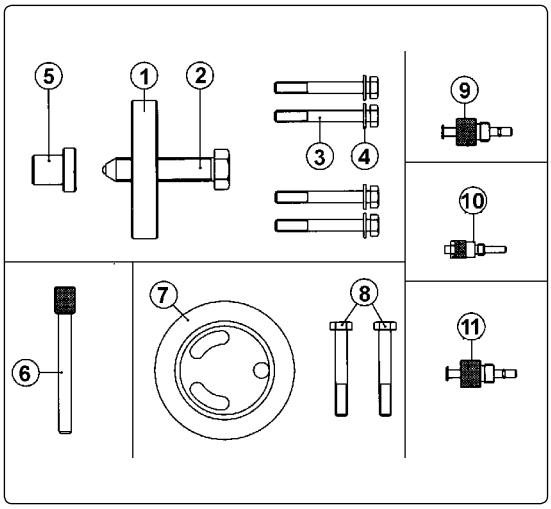
Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

⚠ ***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. INTRODUCTION & APPLICATIONS

1.1. INTRODUCTION

Kit contains specialised tools required for timing belt replacement without losing the engine camshaft and injection pump timing. Suitable for 2.5D/Turbo, 200Tdi and 300Tdi engines fitted to Land Rover vehicles. Supplied in carry-case with application and operation guidelines.



Item:	Part No:	Description:	OEM Part No:
1	VS129/1	Puller Plate	LRT-12-049/LST136
2	VS129/2	Thrust Bolt	LRT-12-049/LST136
3	VS129/3	Hex Screw Set (*4 per kit)	LRT-12-049/LST136
4	VS129/4	Washers (*4 per kit)	LRT-12-049/LST136
5	VS129/5	Pressure Button	LRT-12-031/18G 1464
6	VS129/6	Pump Timing Pin	LRT-12-045/LST129
7	VS129/7	Retainer	LRT-12-045/LST129
8	VS129/8	Hex Screw Set (*2 per kit)	LRT-12-045/LST129
9	VS129/9	Timing Pin - Flywheel	LRT-12-044/LST128
10	VS129/10	Timing Pin - Fuel Injection Pump	LRT-12-030/18G 1458
11	VS129/11	Timing Pin - Flywheel	LRT-12-003/LST107

This information table provides the Vehicle Manufacturers' Specialised Tool references and the Sealey tool numbers covering the relevant service application.

1.2. Applications:

Land Rover:
90/110/130 (85-90), Defender (90-98), Range Rover classic (93-95)

1.3. Engine Codes:

2.5D/Turbo: 12J, 19J
200Tdi: 12L
300Tdi: 16L, 17L, 18L, 19L, 20L, 21L, 22L, 23L, 24L

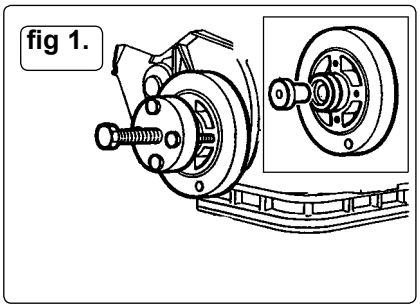
1.4: Associated Tools:

VS1291 - Diesel Engine Timing Pin - Land Rover EDC 300Tdi

2. SAFETY INSTRUCTIONS

▲**WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.
× **DO NOT** use tools if damaged.
✓ Maintain tools in good and clean condition for best and safest performance.
✓ Ensure that a vehicle which 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 dealer.
✓ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery and tie back long hair.
× **DO NOT** attempt to start engine or move vehicle whilst in gear with timing devices fitted.
✓ Always display a warning notification on steering wheel when timing engine components.
✓ Account for all tools, locking bolts, pins and parts being used and **DO NOT** leave them in or near the engine.
✓ Ensure all pieces are returned to the case and store this in a safe, dry, childproof location.
▲**WARNING!** Incorrect camshaft timing can result in contact between valve head and piston crown causing damage to the engine.
❒ **IMPORTANT:** Always refer to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data.
❒**IMPORTANT:** These instructions are provided as a guide only. Always refer to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data.
▲**WARNING!** The warnings, cautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.

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.

4.1.1. Release the 4 bolts and remove the crankshaft pulley from the damper.

4.1.2. 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.

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 - 200TDi/300TDi

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/300TDi.

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

4.4.1. View valve position through oil filler hole and turn crankshaft clockwise until No 1 cyl, is just before TDC.

4.4.2. Remove blank plug from flywheel housing.

4.4.3. 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

4.6.1. Unscrew the larger bolt from the cover plate located on the engine back plate, to the rear of the sump.

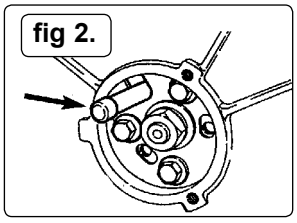
4.6.2. Pivot the cover away from the bolt hole and screw in body section of VS129/9.

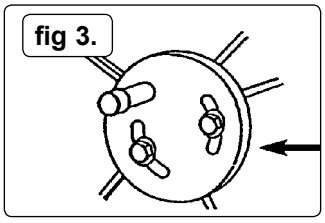
4.6.3. Centre Pin locates into ring gear, fig 5. ***NOTE:*** *Manual transmission with EDC (Electronic Diesel Control) use VS1291 Flywheel Timing Pin.*

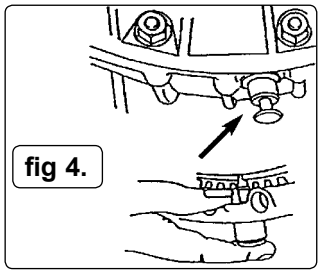
4.6.4. Remove pump access plate and fit VS129/6 Pin into injection pump gear.

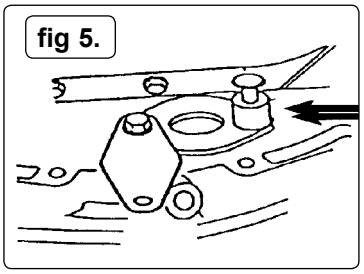
4.6.5. Remove keeper plate - lock pump.

4.6.6. 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.

4.7.1. With the flywheel marks aligned, remove the plug from the side of the pump and insert VS129/10 Timing Tool fig 6 and 7.

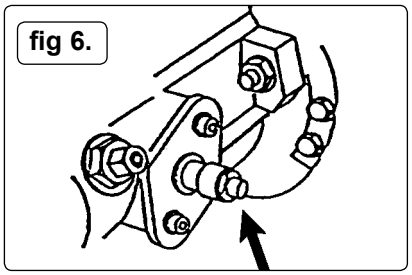
4.7.2. Turn the pump body and insure that the tool locates and is fully screwed into position.

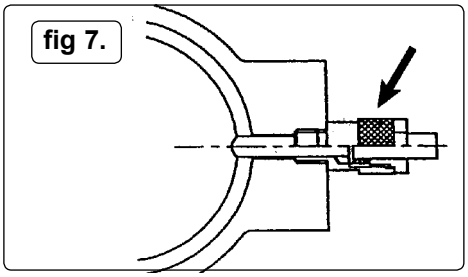
4.7.3. Tighten the pump cover and support bracket nuts.

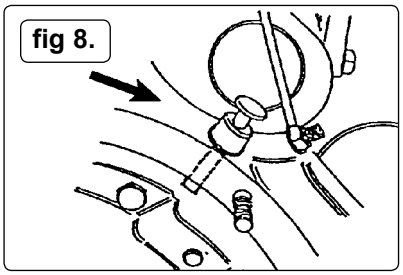
NOTE: a) On early engines the timing position on the rear cover is aligned with a scribed mark on the pump flange.
b) On later engines VS129/11 is used to establish flywheel position fig 8, and the timing pointer on the pump is deleted.

▲ **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 this product.
WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.
INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

SEALEY Professional TOOLS Auto Service Line

Sole UK Distributor, Sealey Group,
Kempson Way, Suffolk Business Park,
Bury St. Edmunds, Suffolk,
IP32 7AR

01284 757500 www.sealey.co.uk
01284 703534 sales@sealey.co.uk