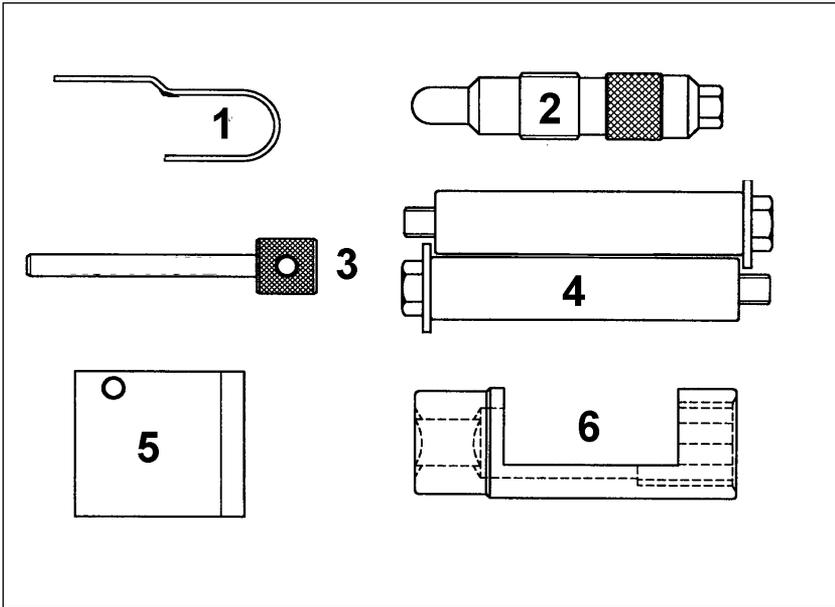


DIESEL ENGINE SETTING/LOCKING TOOL KIT FOR VOLKSWAGEN, AUDI. V6 2.5 TDi



PARTS LIST		
Item	Part No.	Description
1	VS125/T1	Tensioner retaining pin
2	VS1242/01	Crankshaft TDC locking pin
3	VS124/V2	Injection pump locking pin
4	VS124/02	Front panel support guide (Pair)
5	VS1240/01	Camshaft setting plates (Pair)
6.	VS1240/02	Tensioner Adjuster

1. INTRODUCTION & APPLICATION

1.1. INTRODUCTION

A dedicated kit of setting/locking support and tensioner adjusting tools for the VW2.5 V6 diesel engine introduced in 1997. The camshafts each have individual setting plates and the injection pump is driven by a separate belt requiring its own tensioner adjusting tool. On some models the front panel slides forward for access and the necessary front end support guides to accomplish this are also included in the kit.

1.2. APPLICATION

VW Group: 2.5TDi V6 diesel. Audi: A4, A6, A8. Volkswagen: Passat AFB/AKN.

1.3. ASSOCIATED TOOLS & APPLICATIONS

Engine Setting/Locking Tool Kit - VW 'popular' diesel & petrol engine . . .VS124
 Engine Setting/Locking Tools - Audi/VW V6 petrolVS1242, VS1243.

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.
- If raised, ensure the vehicle to be worked on is adequately supported with axle stands or 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.
- Account for all tools, locking bolts, pins and parts being used and do not leave them in or near the engine.
- WARNING!** DO NOT use Camshaft Setting Plates or Locking Pins to hold the camshaft/injection pump in position whilst releasing or re-tightening the sprocket bolt. Plates and Pins are for retention of timing position only.
- * **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.

3. INSTRUCTIONS FOR USE

⚠ **WARNING!** Ensure you have read and understood Section 2 Safety Instructions before commencing.

Note: The VW2.5TDi V6 engine has two drive belts. The main timing belt and an injection pump belt. Follow procedures to remove the injection pump belt first.

3.1. VS124/02 Front Panel Support Guides (pair) (see fig 1).

On Audi A4, A6 and VW Passat models, the front panel is released and moved forward to provide access to engine.

1. Remove the front panel bolts, fit VS124/02 Support guides and slide panel forward.
2. Refit the upper bolts to hold panel in position.

3.2 VS1242/01 Crankshaft TDC Locking Pin (see fig 2).

This pin is used to retain the crankshaft at TDC position, entering via a threaded hole in the crankcase and into a TDC location hole in the crankshaft web.

1. Turn crankshaft to TDC and check that the camshaft mark aligns with the centre of the oil filler cap hole ('OT' visible)
2. Remove blanking plug from crankcase and ensure the location hole in the crankshaft web is aligned with the blanking plug hole before screwing in the VS1242/01 pin.

3.3. VS1240/01 Camshaft Setting Plates (pair) (see fig 3).

These are two setting plates, one for each camshaft. These locate within the slots in the rear of the camshafts. They are supplied with chains which are attached to a suitable engine part to prevent them from falling into engine.

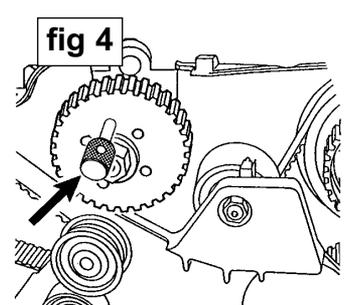
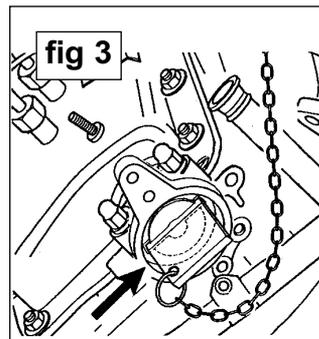
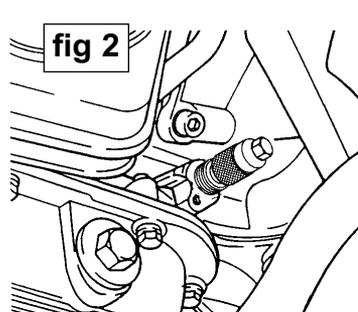
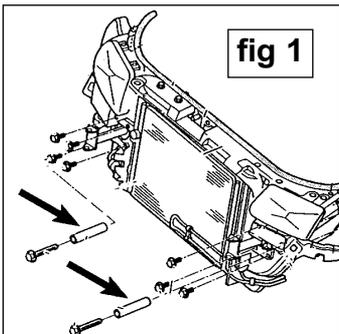
1. Remove exhauster pump and cover plate and fit camshaft setting plates.

IMPORTANT: Setting plates MUST NOT be used to 'lock' camshafts when releasing sprocket bolts. They are for timing position retention only.

3.4. VS124/V2 Injection Pump Locking Pin (see fig 4).

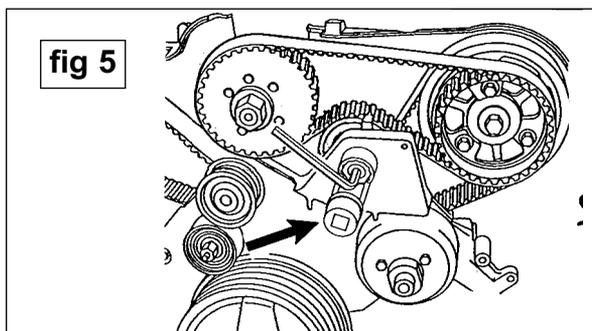
Remove injection pump damper and insert VS124/V2 Locking Pin through injection pump sprocket.

IMPORTANT: DO NOT release centre nut of the injection pump sprocket as the basic pump setting will be affected. This cannot be reset within the workshop.



3.5. VS1240/02 Tensioner Adjuster (see fig 5).

Release injection pump belt tensioner using VS1240/02 and turn tensioner away from belt in order to remove belt.



3.6. VS125/T1 Tensioner Retaining Pin.

Turn timing belt tensioner so that the plunger is depressed to align hole in plunger with the hole in the main body and insert Pin VS125/T1 to 'lock' in place.

1. Release camshaft sprockets off their taper with suitable puller and remove left-hand sprocket to remove timing belt.

3.6.1. Installing Timing belt.

1. To install timing belt, align the camshaft timing mark in the centre of the oil filler cap hole ('OT' visible).
2. Ensure the crankshaft is 'locked' at TDC with VS1242/01 Pin and VS1240/01 Camshaft setting plates are located in the end slots of the camshafts.

The RH camshaft sprocket must be able to turn freely on its taper, **but not tilt**.

3. Re-fit the LH camshaft sprocket and cam sprocket (for injection pump belt).
Again the LH sprocket must turn freely on its taper.
4. Turn timing belt tensioner slightly to release VS125/T1 Pin. Using a torque wrench on the tensioner apply 15Nm. to tensioner pulley.
5. Counter-hold camshaft sprockets and tighten centre bolts.

3.6.2. Installing injection pump belt.

1. When refitting the injection pump belt, the crankshaft, camshaft and injection pump timing tools must be in place.
2. Fit the camshaft (to injection pump belt) sprocket ensuring that the bolts are toward the centre of the slotted holes in the sprocket. **DO NOT** tighten as the sprocket must be free to turn.

3.6.3. Fit the injection pump belt.

1. Release injection pump belt tensioner onto belt and check that the markings align.
2. Tighten tensioner nut using VS1240/02
3. Tighten sprocket bolts.
4. Remove all timing tools and re-fit blanking plug to crankcase.
5. Rotate engine slowly for two turns, returning to TDC position.
6. RE-fit VS1242/01 Crankshaft Locking Pin and check that VS1240/01 Camshaft Setting Plates can be inserted into the slots at the rear of the camshafts.
7. Check that VS124/V2 Injection Pump Locking Pin can be inserted and that the markings of the tensioner are correctly aligned.
8. Remove all timing tools and re-install components.

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WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

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