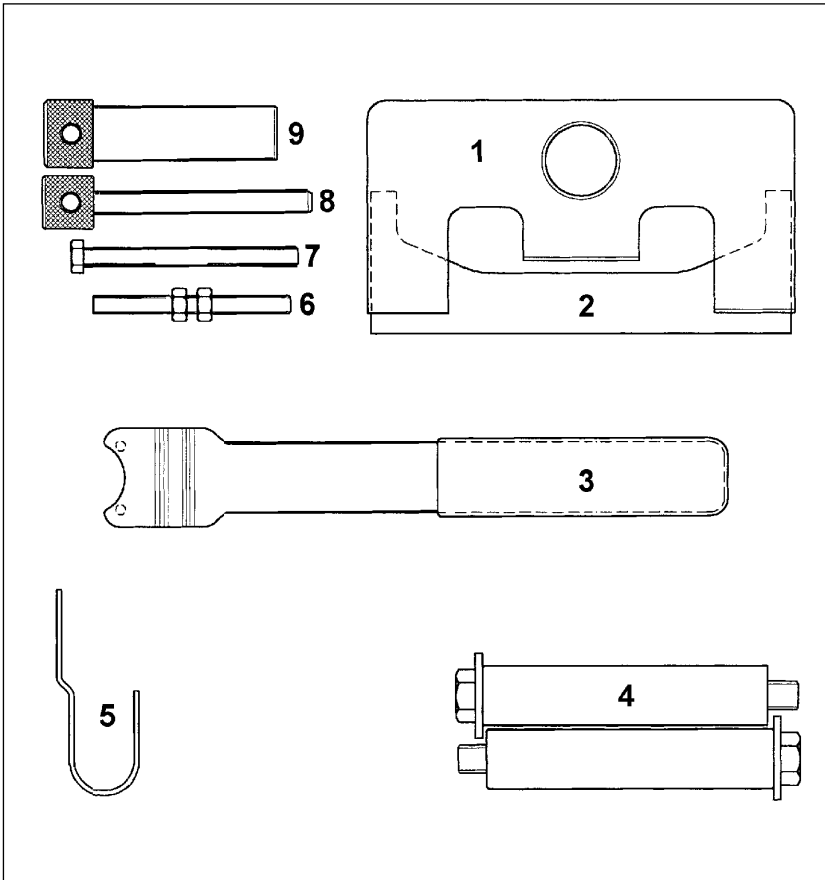


DIESEL & PETROL ENGINE SETTING/LOCKING TOOL KIT FOR VOLKSWAGEN, AUDI, SEAT, SKODA.



PARTS LIST		
Item	Part No.	Description
1	VS124/01	Camshaft Setting Plate
2	VS101/1	Camshaft Setting Plate
3	VS124/03	Tensioner Adjuster
4	VS124/02	Front Panel Support Guides (pair)
5	VS125/T1	Tensioner Locking Pin
6	VS124/T1	Tensioner Retainer
7	VS124/V1	Viscous Fan Retaining Bolt
8	VS124/V2	Injection Pump Locking Pin
9	VS101/5	Injection Pump Locking Pin

1. INTRODUCTION & APPLICATION

1.1. INTRODUCTION

A comprehensive kit of setting/locking, support and belt tension adjusting tools covering engine timing and timing belt renewal applications on the range of engines in 'popular' VW Group vehicles - Audi, Seat, Skoda & Volkswagen.

The range of diesel engines covered is 1.3 to 1.9 including SDi and TDi variants, plus petrol engines 1.6, 1.8 and 2.0 including 16v. engines. Special tools are also included to cover front panel support, for ease of access, and belt tensioner adjustment.

1.2. APPLICATION

VW Group Diesel & Petrol Engines in Audi, Seat, Skoda & Volkswagen, also fitted in Volvo models. Model Application Charts contained in these instructions detail the applications and show the tool combinations used from VS124 kit for each model/engine.

1.3. ASSOCIATED TOOLS & APPLICATIONS

Engine Setting/Locking tool kit - Audi/VW V6 2.5TDi diesel . . . VS1240
 Engine Setting/Locking tools - Audi/VW V6 petrol VS1242, VS1243.

2. APPLICATION DETAILS

Kit contents

Engine Setting/Locking Tools

- **VS101/5** Injection Pump Locking Pin
- **VS101/1** Camshaft Setting Plate
- **VS124/V2** Injection Pump Locking Pin
- **VS124/01** Camshaft Setting Plate

Support Tools

- **VS124/02** Front Panel Support Guides (Pair)
- **VS124/V1** Viscous Fan Retaining Bolt

Tensioner Adjustment Tools

- **VS125/T1** Tensioner Locking Pin
- **VS124/T1** Tensioner Retainer
- **VS124/03** Tensioner Adjuster

Diesel Engines including direct injection Models/engines	VS124 Kit Tools								
	Camshaft & Injection Pump Lock				Support Tools		Tensioner Adjustment		
	VS101/5	VS101/1	VS124/V2	VS124/01	VS124/02	VS124/V1	VS125/T1	VS124/T1	VS124/03
Audi 80D, 80D Turbo (-93), 80 1.9 Turbo D, 80 1.9TDi	●	●							●
A3 1.9TDi DIRECT INJECTION AGR engine - with 2 Part Inj. Pump Sprocket			●	●					●
A4 1.9D/TDi (94-) One Piece Inj. Pump Sprocket	●	●			●				●
A6 1.9TDi (94-) One Piece Inj. Pump Sprocket	●	●			●				●
For coverage of Audi models with V6 2.5TDi diesel engines - refer to Engine Setting/Locking Set VS1240 .									
Seat Terra 1.3D/1.4D (-95) MN engines - with Rear Inj. Pump Belt	●	●							
Ibiza 1.9D/TD/SDi/TDi, Cordoba 1.9D/TD/SDi/TDi, Toledo 1.9D/TD/TDi, Inca 1.9SDi, Alhambra 1.9TDi One Piece Inj. Pump Sprocket Manual or Auto Tensioner	●	●							●
Ibiza 1.9D/TD, Toledo 1.9D/TD, Inca 1.9D AAZ engines - with 2 Part Inj Pump Sprocket		●	●						●
Skoda Felicia 1.9D AEF engine - with 2 Part Inj. Pump Sprocket	●		●						●

Diesel Engines including direct injection <i>continued</i> Models/engines	VS124 Kit Tools								
	Camshaft & Injection Pump Lock				Support Tools		Tensioner Adjustment		
	VS101/5	VS101/1	VS124/V2	VS124/01	VS124/02	VS124/V1	VS125/T1	VS124/T1	VS124/03
Skoda <i>continued</i> Octavia 1.9SDi/TDi DIRECT INJECTION AGP/AGR engines - with 2 Part Inj. Pump Sprocket			●	●					TDi
Volkswagen Polo 1.3D/1.4D (-93) MN engines - with Rear Inj. Pump Belt	●	●							
Polo 1.7SDi/1.9SDi (95-) One Piece Inj. Pump Sprocket	●	●							●
Polo 1.9D, Polo Classic 1.9SDi, Caddy 1.9D/SDi AEF/1Y engines - with 2 Part Inj. Pump Sprocket		●	●						●
Polo Classic 1.7SDi/1.9SDi/1.9TDi One Piece Inj. Pump Sprocket	●	●							●
Caddy 1.5D/1.6D/Turbo/1.7SDi/1.9SDi One Piece Inj. Pump Sprocket	●	●							●
Golf/Jetta 1.5D/1.6D/Turbo One Piece Inj. Pump Sprocket	●	●							●
Golf/Vento 1.9SDi/1.9TD/TDi DIRECT INJECTION One Piece Inj. Pump Sprocket	●	●							●
Golf/Vento 1.9D/TD 2 Part Inj Pump Sprocket		●	●						●
Golf 1.9SDi/TDi (97-) DIRECT INJECTION 2 Part Inj. Pump Sprocket			●	●					TDi
Passat/Santana D/Turbo (-95), Passat 1.9TD/TDi (-96) One Piece Inj. Pump Sprocket	●	●							●
Passat 1.9TD (-96) 2 Part Inj. Pump Sprocket		●	●						●
Passat 1.9TDi (96-) One Piece Inj. Pump Sprocket	●	●			●				●
Passat 1.9TDi (97-) DIRECT INJECTION 2 Part Inj. Pump Sprocket		●	●		●				●
Sharan 1.9TDi One Piece Inj. Pump Sprocket	●	●			●				●

Diesel Engines including direct injection <i>continued</i>	VS124 Kit Tools								
	Camshaft & Injection Pump Lock				Support Tools		Tensioner Adjustment		
	VS101/5	VS101/1	VS124/V2	VS124/01	VS124/02	VS124/04/V1	VS125/T1	VS124/T1	VS124/03
Models/engines									
Volkswagen <i>continued</i> Transporter 1.6D/1.7D/1.9D/Turbo (-95) One Piece Inj. Pump Sprocket	●	●							●
Transporter 1.9TD 2 Part Inj. Pump Sprocket		●	●						●
Petrol Engines including 16v.									
Models/engines									
Audi 80 1.6/2.0 (91-)/2.0 16v. 100 2.0 (91-)/2.0 16v.									●
A3 1.6 (96-) AEH engines									●
A3 1.8/Turbo (96-) AGN/AGU engines							●	●	
A4 1.6/1.8/1.8 Turbo ADP/ADR/AEB/AJP engines					●	96 -			●
A6 1.8 (97-) ADR engines					●	●	●	●	
A6 1.8 Turbo AJL engines					●	●			●
A6 2.0/2.0 16v. (-97) ACE engines									●
For coverage of Audi models with V6 2.4/2.6/2.7/2.8 & 2.8(30v) petrol engines - refer to Engine Setting/Locking Tools VS1242 and VS1243									
Seat									●
Ibiza/Cordoba 1.6/1.8/1.8 16v/2.0/2.0 16v									●
Toledo 1.6/1.8/1.8 16v/2.0/2.0 16v									●
Inca 1.6									●
Alhambra 2.0									●

Petrol Engines including 16v. <i>continued</i>	VS124 Kit Tools								
	Camshaft & Injection Pump Lock				Support Tools		Tensioner Adjustment		
	VS101/5	VS101/1	VS124/V2	VS124/01	VS124/02	VS124/V1	VS125/T1	VS124/T1	VS124/03
Models/engines									
Skoda									●
Octavia 1.6 AEH/AKL engines									●
Octavia 1.8 AGN engines							●	●	
Volkswagen									●
Polo Classic 1.6									●
Golf/Vento 1.6, Golf 1.6 (97-) Golf 1.8 G60/Rallye (-93) Golf/Jetta/Vento 1.8/2.0 16v.									●
Golf 1.8/Turbo (97-) AGN/AGU/AQA engines							●	●	
Scirocco 1.8 16v.									●
Corrado 1.8 G60, 1.8/2.0 16v. ABF engines									●
Passat 1.6 AHL/ADP engines					96-				●
Passat 1.8/1.8 Turbo (96-) ADR/AEB engines					●		1.8		Turbo
Passat 1.8 G60/ 1.8/2.0 16v. (-94) ABF engines									●
For coverage of V W Passat models with V6 2.8 (30v) petrol engines - refer to Engine Setting/Locking Tools VS1243									
Sharan 1.8 Turbo AJH engines							●	●	
Sharan 2.0									●
Transporter 1.8/2.0 PD/AAC engines									●

3. 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.

4. INSTRUCTIONS FOR USE

- WARNING!** Ensure you have read and understood Section 3 Safety Instructions before commencing.

4.1. VS101A/1 & VS124/01 Camshaft Setting Plates

Camshaft Setting Plates are used to accurately align a datum slot, located in the end of the camshaft, with the top face of the camshaft housing, to hold the camshaft at the TDC position.

1. Remove the camshaft cover and timing belt cover and turn the engine in the normal direction of rotation until the appropriate camshaft setting plate can be inserted into the machined slot in the end of the camshaft.
2. When fitting the setting plate, feeler gauges of equal thickness can be inserted on either side of the plate until free play has been eliminated. The camshaft is now locked in its timing position and service work can be carried out.

VS101/1 plate has extended right angles at each end to allow it to rest on the sides of the cam housing (fig 1).

VS124/01 plate (fig 2) has an additional extended centre section which enters the end of the camshaft on direct injection engines.

4.2. VS101/5 and VS124/V2 Injection Pump Locking Pins

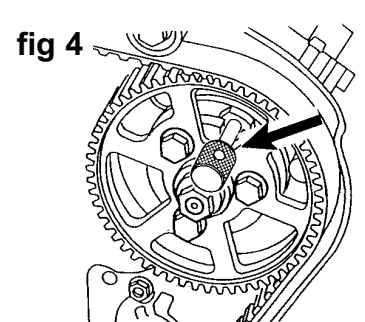
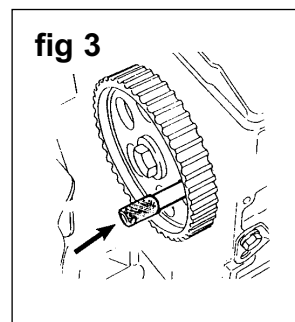
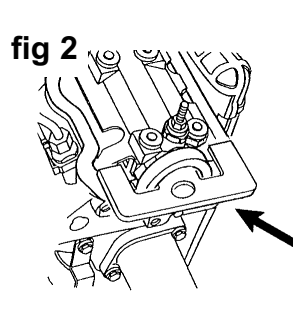
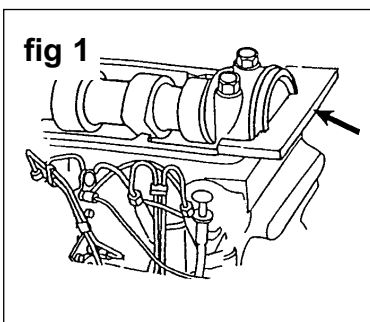
Locking pins are designed to pass through datum holes in the sprockets into fixed holes in the engine.

1. Insert the locking pin through the injection pump sprocket and rotate the engine in normal direction of rotation until the sprocket timing hole and the engine timing hole are aligned.
2. Engage the pin to lock the pump in the timed position.

VS101/5 is the larger diameter of the two locking pins in the kit and is used on engines having One Piece Injection Pump Sprockets (fig 3).

VS124/V2 pin is used when a 2-part sprocket is fitted (sprocket with three retaining bolts which secure it to a rear mounting), see fig 4.

- 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.



5. SUPPORT & ADJUSTMENT TOOLS

5.1. VS124/02 Front Panel Support Guides (Pair)

A number of diesel and petrol engine models require the front panel of the vehicle to be released and moved forward to provide access to the engine. This includes Audi A4/A6 and VW Passat 1.9TDi and Petrol 1.8 models. Remove the front panel bolts, fit VS124/02 support guides and slide the panel forward. Re-fit the upper bolts to hold panel in position. See fig 6.

5.2. VS124/V1 Viscous Fan Retaining Bolt.

On the latest Audi A4 and A6 1.6 and 1.8 petrol models timing belt renewal requires the viscous fan coupling to be released. For this to be achieved it must first be 'locked' in position using VS124/V1 and released with a suitable allen key.

5.3. VS124/03 Tensioner Adjuster

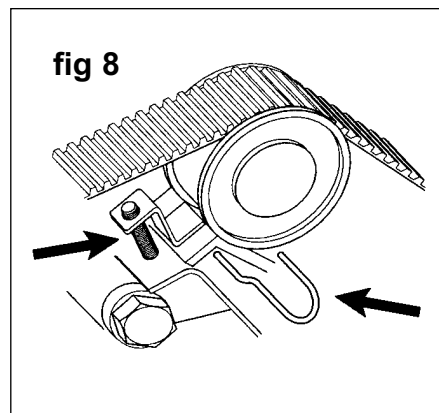
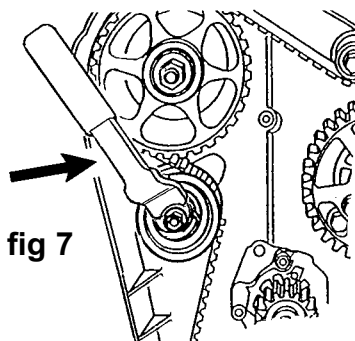
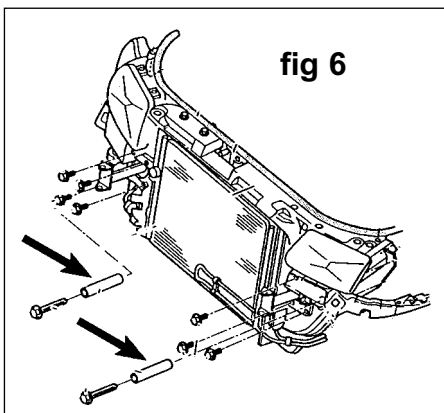
This adjuster is used on a very wide range of VW diesel and petrol engines, in all of the Group's marques, to adjust timing belt tension. The tensioner cam has two holes into which the two pegs of VS124/03 locate to allow the tensioner to be turned and provide tension adjustment for the timing belt (fig 7).

5.4. VS124/T1 and VS125/T1 Tensioner Tools

VS124/T1 Retainer and VS125/T1 Pin are used to compress and 'lock' the timing belt tensioner on VW 1.8 petrol engines (fig 8).

VS124/T1 Retainer is fitted and applies pressure to the tensioner plunger to release tension in the timing belt.

VS125/T1 Pin is then inserted to 'lock' the plunger in the retracted position, allowing the belt to be removed.



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