

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. 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 locking devices fitted.
- Always display warning notification on steering wheel when locking engine components.
- Account for all tools, locking bolts, pins and parts being used and do not leave them in or near the engine.
- WARNING!** Incorrect or out of phase camshaft timing can result in contact between valve head and piston crown causing damage to the engine.
- 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.

2. INTRODUCTION

- 2.1 Suitable for engine timing and belt replacement on VW 2.4D / 2.5TDi Transporter 1990-2003. Set includes crankshaft holding tool, camshaft plate, injection pump locking pin and tensioner adjuster.

NOTE: The crankshaft pulley centre bolt has a high torque loading and therefore use of the correct Crank Pulley Holding Tool is essential for the safe removal/re-fitting of the pulley.

3. APPLICATIONS & CONTENTS

3.1 Applications

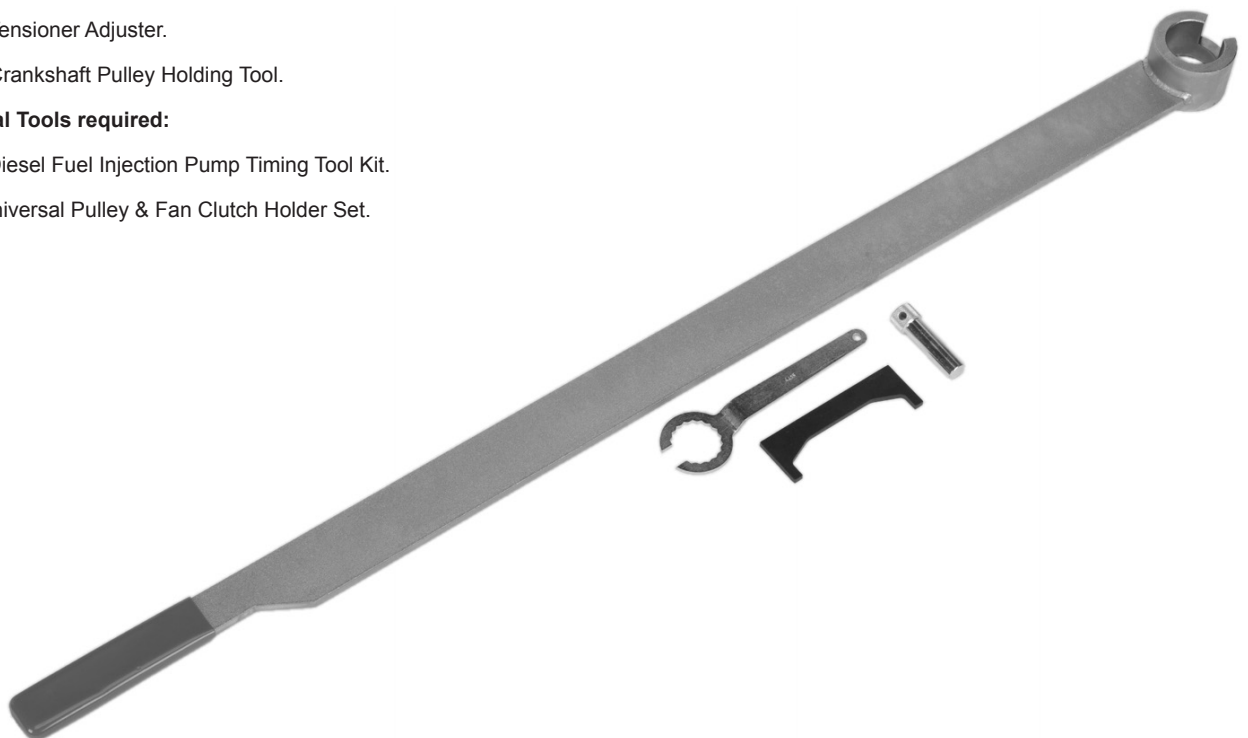
VW Transporter / LT Diesel engines (90 - 03)
2.4D – AAB, AJA Engines.
2.5TDi – ACV, AHY, AJT, AUF, AXG, AXL, AYC Engines.

3.2 VS4448 Kit contents:

VS4333 Camshaft/Injection Pump Locking Tools.
VS4435 Tensioner Adjuster.
VS4438 Crankshaft Pulley Holding Tool.

Additional Tools required:

VS1131 Diesel Fuel Injection Pump Timing Tool Kit.
VS783 Universal Pulley & Fan Clutch Holder Set.



4. INSTRUCTIONS FOR USE

Engine Setting/Locking.

This Timing Set for the 2.4 and 2.5 engines contains the tools required to 'lock' the engine in its timed position for service applications such as timing belt replacement.

The Set contains, Crankshaft Pulley Holding Tool, Tensioner Adjuster and Camshaft/Injection Pump Locking Tools.

4.1 Crankshaft Pulley Removal.

VS4438 Crank Pulley Holding Tool (fig.1)

The 2.4 / 2.5 diesel engines require the crankshaft pulley/damper to be removed as part of the procedure for timing belt removal/renewal and other service applications.

The centre bolt of the crankshaft pulley has a high torque loading and it is essential to 'lock' the pulley securely and safely in position whilst releasing and re-tightening the pulley bolt.

For this reason, an appropriate Crankshaft Pulley Holding Tool is included in the VS4448 Set.

IMPORTANT: The Crankshaft Pulley Holding Tool is designed only for use on the engines specified. It is essential for the safe counter holding of the pulley during this procedure.

Example of crank pulley centre bolt torque loading is -

Transporter / LT 2.4D	460Nm	} Dependant on engine type.
	160Nm + 180°	
Transporter / LT 2.5TDi	160Nm + 180°	

4.2 VS4333 Setting/Locking Tool Kit for Camshaft and Injection Pump.

Comprises of: Camshaft Setting Plate (fig.2).

Injection Pump Locking Pin (fig.3).

The Camshaft Setting Plate is used to accurately align a datum slot in the end of the camshaft with the top face of the camshaft housing to hold the camshaft at the TDC position.

When fitting the Camshaft Setting Plate, feeler gauges of equal thickness can be inserted on either side of the plate until all free play has been eliminated.

The Injection Pump Locking Pin is designed to pass through a datum hole in the injection pump sprocket into a fixed timing hole in the engine.

NOTE: VS4448 includes VS4333 Tool Kit as the engines covered require both the camshaft and injection pump to be 'locked' in a timed position.

4.3 VS4435 Tensioner Adjuster.

VS4435 (fig.4) is a specialised wrench required to adjust the tensioner position to achieve correct belt tension.

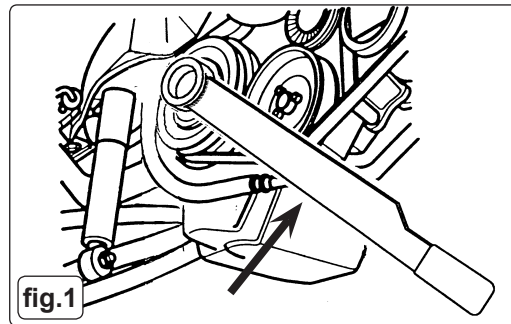
Additional Tools required – not included in Set.

IMPORTANT: DO NOT use the Camshaft Setting Plate or Locking Pin to hold the camshaft/injection pump in position whilst releasing or re-tightening the sprocket bolt. The Plate and Pin are for retention of the timing only. Use Universal Pulley Holding Tool VS783 to counterhold sprockets.

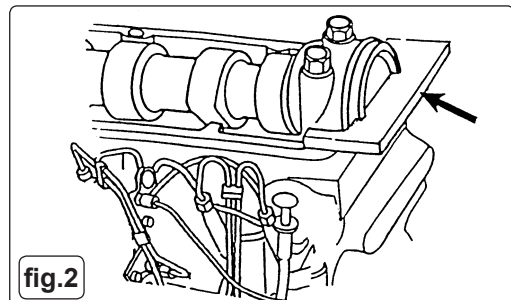
VS1131 Diesel Fuel Pump Timing Kit.

Transporter and LT models with 2.5SDi/TDi diesel engines require the injection pump to be timed as part of the timing belt renewal application.

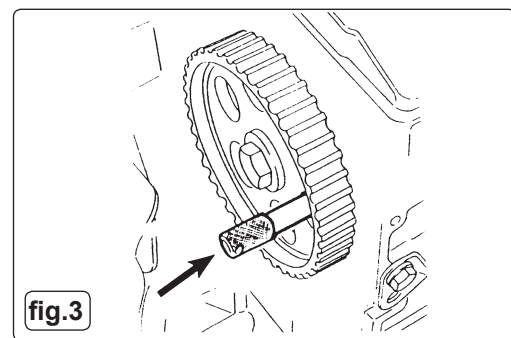
VS1131 Diesel Fuel Pump Timing Kit provides the necessary adaptors to fit onto the service port located on the pump, between the injection pipes, for establishing static pump timing position. The appropriate adaptor must be used in conjunction with Dial Test Indicator AK9634M (fig.5).



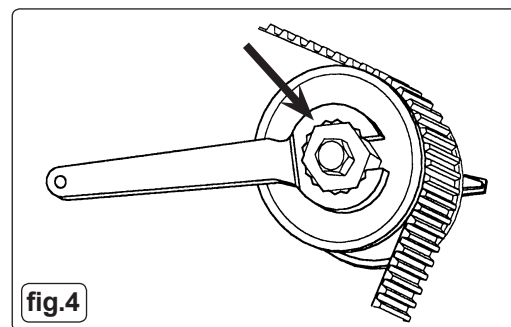
VS4438 Crankshaft Pulley Holding Tool



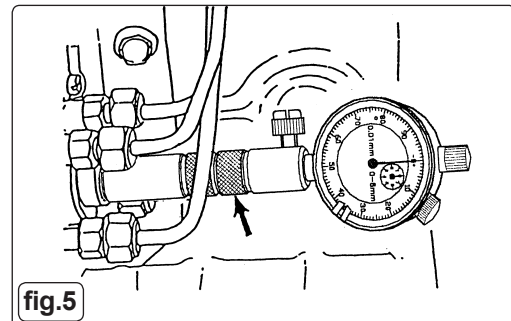
Camshaft Setting Plate



Injection Pump Locking Pin



VS4435 Tensioner Adjuster



Bosch Diesel Pump Timing Adaptor and Dial Gauge

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 equipment.

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.