

Instructions for:

**PETROL ENGINE TWIN CAMSHAFT
TIMING BELT TENSIONER AND VALVE TIMING
TOOL SET - VAG 1.8 & 1.8 TURBO ENGINES**

Model No: VS4808

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.
- ✓ 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 & APPLICATIONS

2.1 Introduction

This V W range of 1.8 and 1.8 Turbo twin cam petrol engines, introduced around 1997 (dependant upon VW Group marque), have a timing belt connecting the crankshaft to exhaust camshaft, and a timing chain situated inside the cylinder head, driving the inlet camshaft from the exhaust camshaft.

2.2 Applications

VW GROUP 1.8 / 1.8T Petrol engines - twin camshaft, chain-in-head

AUDI

A3 A4 A6 TT S3

SEAT

Ibiza Cordoba Leon Toledo Alhambra

SKODA

Octavia

VOLKSWAGEN

Beetle Golf Bora Passat Sharan

1.8 / 1.8T engines

Timing Belt - Automatic Tensioner

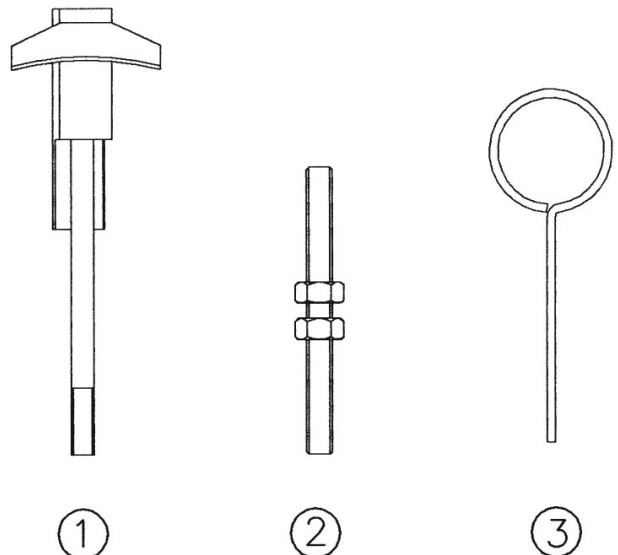
Valve timing - Chain-in-Head:-

ADR, AEB, AFY, AGN, AGU, AJH, AJL, AJP, AJQ, AMK, ANB, APG, APP, APT, APU, APX, APY, AQA, AQX, ARG, ARH, ARK, ARX, ARY, ARZ, AUM, AUQ, AVC, AWC, AWP, AWU, AWW, AYP and BAM

NOTE: VS4809 Retainer is also used for valve timing (chain-in-head) on V6 2.4 / 2.7 / 2.8 engines:-

AGA, AGB, AGE, AJG, AJK, ALF, ALG, ALW, AML, AMM, AMX, APC, APR, APS, APZ, AQD, ARE, ARJ, ARN, ASJ, ASM, AZA, AZR, BDV and BES

3. CONTENTS



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1 VS4809
2 VS124/T1
3 VS4593/1E

Chain Tensioner Retainer.
Belt Tensioner Retainer.
Belt Tensioner Pin.

4. INSTRUCTIONS

4.1 Timing Belt Replacement - 1.8 / 1.8T engines

Timing belt replacement is straightforward. The plunger of the automatic tensioner must be compressed and retained by a pin to allow the belt to be removed.

Position the crankshaft at TDC.

Check that the marks on the crankshaft pulley and camshaft front sprocket align correctly with their timing marks.

Support the engine as the R-H engine mounting bracket must be removed, along with the crankshaft pulley and timing covers.

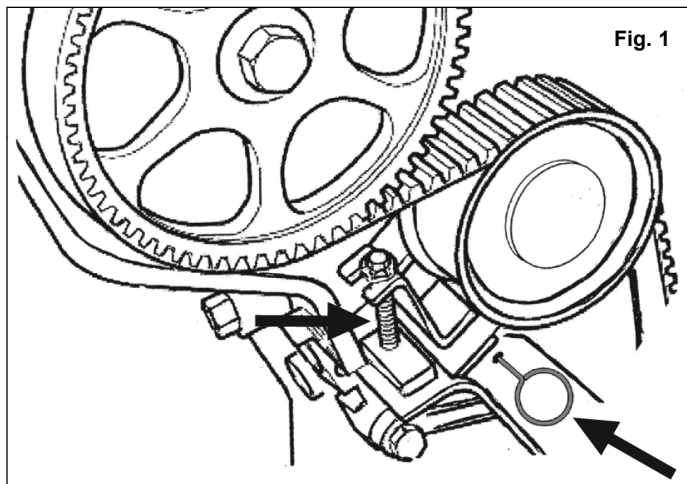


Fig. 1

VS124/T1 and VS4593/1E Tensioner Tools

Insert Tensioner Retainer VS124/T1 into the tensioner and tighten sufficiently to depress the plunger and to align the holes in the plunger with the hole in the tensioner housing.

'Lock' the plunger in position by inserting Pin VS4593/1E (Fig. 1). When fitting a new belt, ensure it is taut on the non-tensioned side. Apply tension by removing the Locking Pin. Remove VS124/T1 Retainer.

4.2 Valve Timing - 1.8 / 1.8T and 2.4 / 2.7 / 2.8 V6 engines

Removal and refitting of the valve gear, camshafts, timing chain etc. will require setting of the valve timing.

Prior to any disassembly, the crankshaft must be positioned at TDC No1. cylinder and the mark on the front camshaft sprocket must be aligned with the mark on the cylinder head cover.

Mark with paint if necessary, the position of the chain links relative to the arrows on the camshaft rear bearing caps.

The distance between arrows should be 16 rollers on the chain.

The head cover and timing belt can then be removed.

Remove the camshaft front sprocket, using a suitable counter-holding tool to retain sprocket whilst releasing the bolt.

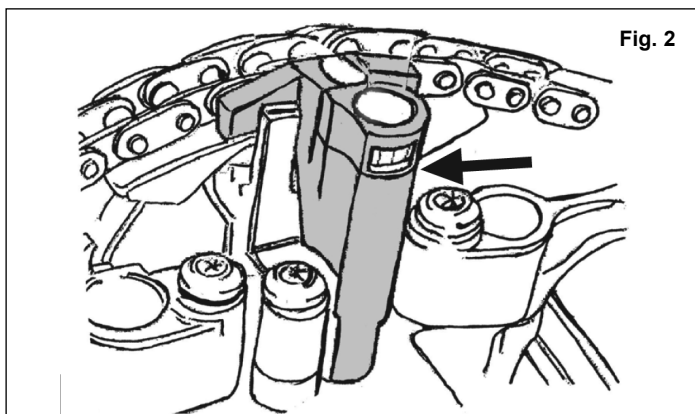


Fig. 2

VS4809 Chain Tensioner Retainer

The notches on the camshafts must be aligned with the arrows on the bearing caps.

Fit Chain Tensioner Retainer VS4809 to release tension off the chain (Fig. 2).

WARNING: Do not over-tighten Retainer as damage to the tensioner can result.

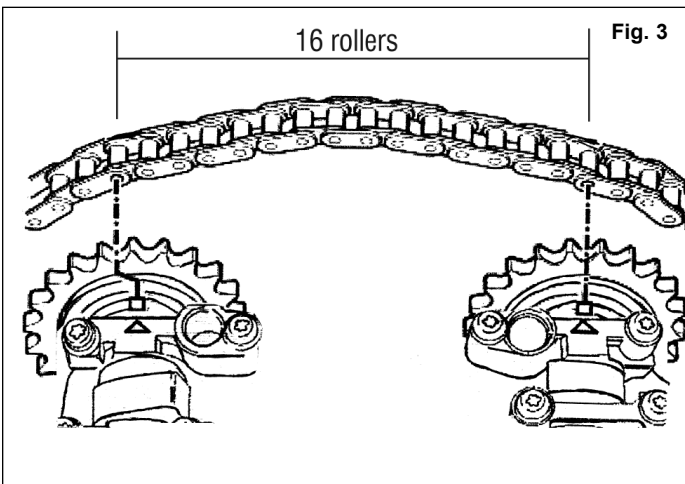


Fig. 3

IMPORTANT: When refitting a chain, align the paint marks with the notch/arrows. A new chain must be fitted so that the distance between the timing marks (the arrows on bearing caps/notches on camshafts) is 16 rollers on the chain.

Note however that the link being located onto the exhaust camshaft is slightly offset from the notch on the camshaft (Fig. 3).

NOTE: Timing Belt replacement on 2.4, 2.7 and 2.8 V6 engines (engine codes detailed in "APPLICATIONS"), requires VS1243 V6 Timing Set.



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.

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