

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

The VW Group 1.2 engine range, introduced from 2001, can be a single camshaft 6 valve (AWY/BMD) or a twin camshaft 12 valve (AZQ/BME) engine. Chain drive - crankshaft to camshaft(s), they require use of a Flywheel Locking Pin, common to both engines, and a Camshaft Setting Tool for single camshaft AWY/BMD engine, or a pair of Camshaft Tools for the twin camshaft AZQ/BME engine.

2.2 Applications

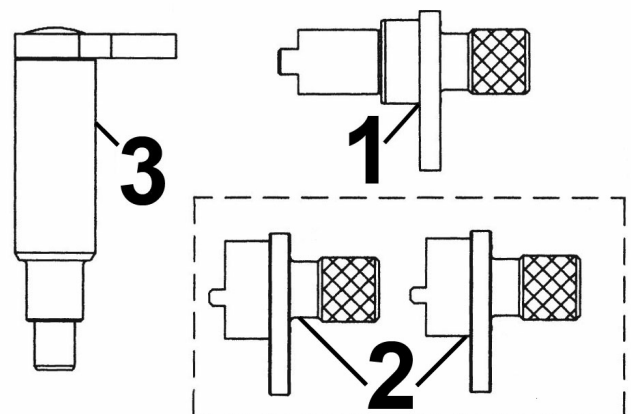
V W GROUP - 1.2 Single (6v) and Twin Camshaft (12v) 3 cylinder Petrol engines (2002-) fitted to:

SEAT:	Cordoba, Ibiza
SKODA:	Fabia
VOLKSWAGEN:	Eos, Fox, Polo
Engine Types:	AWY, AZQ, BMD, BME



3. CONTENTS

Item	Part No.	Description
1	VS4811	Camshaft Setting Tool (AWY/BMD)
2	VS4812	Camshaft Setting Tool Set - pair (AZQ/BME)
3	VS4813	Flywheel Locking Pin
--	VS4810/83	Case + Insert (Not shown)



4. INSTRUCTIONS

VS4810 Setting/Locking Tool Kit consists of:
VS4811 Camshaft Setting Tool - Single Camshaft engines
VS4812 Camshaft Setting Tool Set - Twin Camshaft engines
VS4813 Flywheel Locking Pin - Single & Twin Camshaft engines

4.1 Checking valve timing - Single camshaft engines

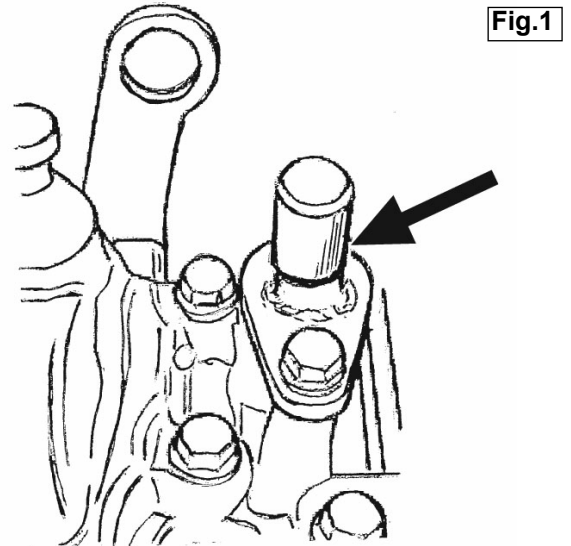
VS4811 Camshaft Setting Tool (AWY/BMD Single Camshaft engine)

VS4811 enters through the top of the engine to locate the camshaft timing 'slot' (Fig.1).

Remove the air cleaner, Hall sender unit and engine speed sensor.

Turn the crankshaft, in the normal direction of rotation, so that the 'slot' in the camshaft is seen in the hole for the Hall sender unit.

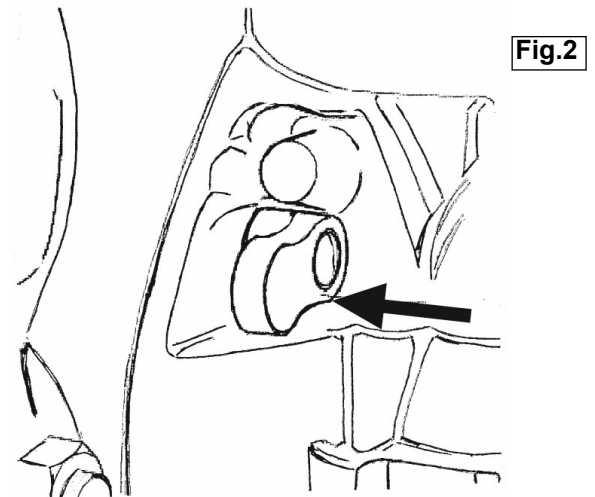
Insert VS4811 Camshaft Setting Tool. It should locate into the camshaft with ease. Secure in place with M6 bolt.



VS4813 Flywheel/Crankshaft Locking Pin (used for both single camshaft and twin camshaft engines (AWY, AZQ, BMD, BME))

The crankshaft is locked in timed position by inserting VS4813 Pin through housing and into the flywheel (Fig.2).

If it is not possible to insert the VS4813 Pin, remove VS4811 Camshaft Tool, turn the engine 360°, and then insert Camshaft Tool and Flywheel Pin.



4.2 Valve Timing Adjustment - Single camshaft engines

Should it not be possible to insert both the Camshaft Tool and Flywheel Pin with ease, the timing can be adjusted by positioning the 'slot' in the camshaft so it is visible in the hole for the Hall sender unit and inserting VS4811 Tool. Then, using a suitable sprocket counter-holding tool, hold the camshaft sprocket and slacken its bolt. Turn the crankshaft until VS4813 Pin can be inserted correctly into the flywheel.

Counter-hold the camshaft sprocket and tighten the sprocket bolt. Remove both tools, turn the crankshaft 2 times, and recheck valve timing by ensuring VS4811 and VS4813 fit correctly and with ease.

4.3 Timing on Twin Camshaft engine

VS4812 Camshaft Setting Tools - (AZQ/BME Twin Camshaft engine)

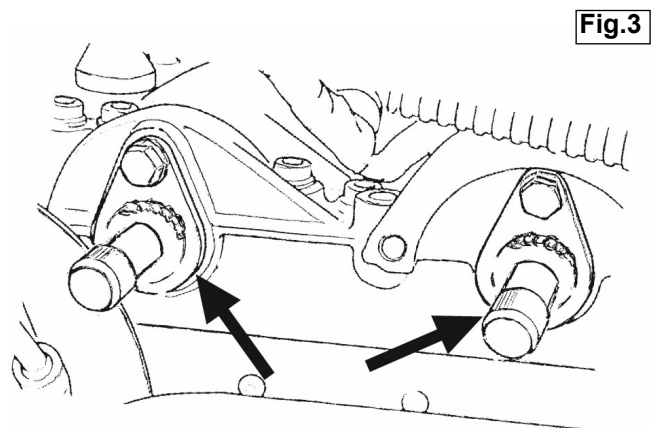
Identical procedures to the AWY/BMD single camshaft engine except the pair of Camshaft Setting Tools - VS4812, enter 'slots' at the rear of the camshafts (Fig.3).

Remove the air cleaner and both covers at the rear camshaft ends. Remove the engine speed sensor and turn the crankshaft so that the 'slots' in the rear of camshafts are horizontal.

VS4812 Tools can now be inserted into the 'slots' and secured in place with M6 bolts, hand tight only.

For valve timing adjustment, fit the VS4812 Camshaft Setting Tools and slacken both camshaft sprocket bolts.

Insert VS4813 Flywheel Locking Pin and counter-hold camshaft sprockets whilst tightening the sprocket bolts.



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.