



SETTING/LOCKING KIT VAUXHALL/ OPEL 2.0D

MODEL NO: **VSE5009**

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 & 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. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear eye protection

1. SAFETY

- WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.
 - * **DO NOT** use tools if damaged.
 - * **DO NOT** attempt to start engine or move vehicle whilst in gear, with locking devices fitted.
 - * **DO NOT** wear jewellery and tie back long hair.
 - ✓ Maintain tools in a good, clean condition for the best and safest performance.
 - ✓ Ensure that a vehicle which has been jacked up is adequately supported with axle stands.
 - ✓ Always display a warning notification on steering wheel when timing engine components.
 - ✓ Wear suitable clothing to avoid snagging.
 - ✓ Wear approved eye protection. A full range of personal safety equipment is available from your Sealey Stockist.
 - ✓ Account for all tools, locking bolts, pins and parts being used. **DO NOT** leave them in or near the engine.
 - ✓ When not in use, store in a safe, dry, childproof location.
 - WARNING!** Incorrect or out of phase camshaft timing can result in contact between valve head and piston crown causing damage to the engine.
 - WARNING!** The warnings, cautions and instructions in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.
- 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

Designed for Vauxhall/Opel/Chevrolet 2.0D common rail diesel engine. Locks the engine in the correct position whilst changing the timing belt on the SOHC 16v engine range. Supplied in storage case with instructions and warning tag.

3. APPLICATIONS

Chevrolet: Captiva (07-11), Cruze (09-11), Epica (06-11), Lacetti (06-10) Nubira (07-10)
 Vauxhall: Antara (07-11)
 Engine Codes:
 2.0D: Z20DM, Z20DMH, LLWZ20DMH, RA420, Z20S1
 OEM Tool(s): EN-48245, EN48246

4. OPERATION

4.1. DISMANTLING

- 4.1.1. Remove the timing covers and brake vacuum pump from the rear of the cylinder head.
- 4.1.2. Remove the TDC blanking plug from the cylinder block, this is located beneath the starter motor.
- 4.1.3. Turn the crankshaft in a clockwise direction until number one cylinder is just before TDC.
- 4.1.4. Insert the VSE5009.01 Crankshaft Timing Pin into the cylinder block and turn the crankshaft until the timing pin engages. (Fig.1)

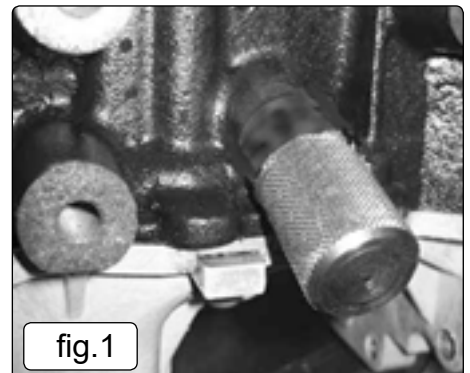
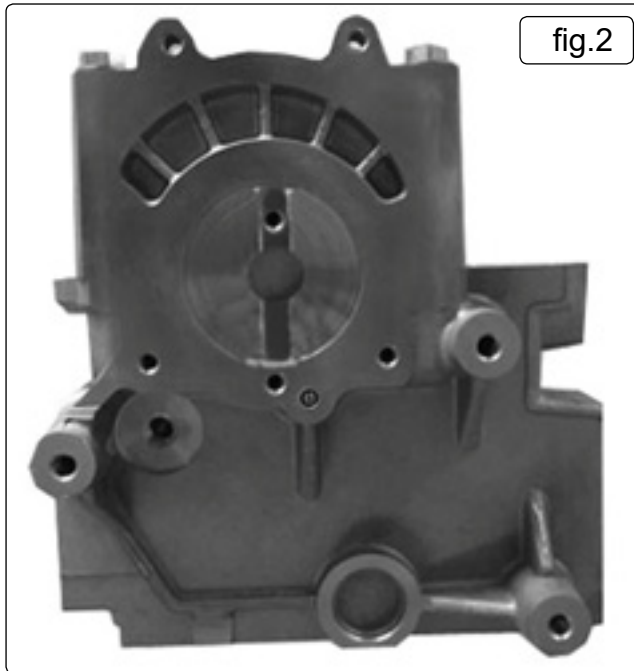


fig.1

- 4.1.5. Ensure the timing marks are aligned in the 12 o'clock position on the crankshaft sprocket.
- 4.1.6. Ensure the hole in the rear of the camshaft is in the 12 o'clock position (Fig.2) and fit the VSE5009.02 Camshaft Locking Tool using the bolts provided.



- 4.1.7. Slacken the camshaft drive belt tensioner fixing bolt and turn the tensioner clockwise and away from the belt.
- 4.1.8. Remove timing belt and tensioner assembly.
- 4.2. INSTALLATION**
- 4.2.1. Fit new timing belt tensioner, ensure the retaining lug is correctly engaged and tighten the securing bolt finger tight only.
- 4.2.2. Using a hex key, turn the tensioner pulley clockwise and tighten the securing bolt.
- 4.2.3. Ensure the VSE5009.01 Crankshaft Timing Pin and the VSE5009.02 Camshaft Locking Tool are correctly located, and the hole in the rear of the camshaft is in the 12 o'clock position.
- 4.2.4. Slacken the camshaft sprocket fixing bolt, ensure a counter hold such as the Sealey VS4844 Universal Pulley Holder is used.
- 4.2.5. Align the high pressure fuel pump timing marks, these are in the 5.00 o'clock position.
- 4.3. FIT THE NEW TIMING BELT.**
- 4.3.1. Slacken the timing belt tensioner and turn the tensioner anti-clockwise until the pointer aligns with the hole in the backplate.
- 4.3.2. Tighten the tensioner securing bolt to 25Nm.
- 4.3.3. Counter hold the camshaft using the Sealey VS4844 Universal Pulley Holder and tighten the camshaft sprocket securing bolt to 133Nm.
- 4.3.4. Remove all tooling and turn the crankshaft through two revolutions until just before TDC on number one cylinder.
- 4.3.5. Insert the VSE5009.01 Crankshaft Timing Pin into the cylinder block and turn the crankshaft until the timing pin engages.
- 4.3.6. Ensure the timing marks are aligned in the 12 o'clock position on the crankshaft sprocket.
- 4.3.7. Ensure the hole in the rear of the camshaft is in the 12 o'clock position and fit the VSE5009.02 Camshaft Locking Tool using the bolts provided.
- 4.3.8. Once the timing is confirmed as correct, remove all tooling and reassemble.

5. MAINTENANCE

- ✓ When not in use, store in a safe, dry, childproof location.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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 is required for any claim.

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