SEALEY Professional TOOLS
AUTO SERVICE LINE

Instructions for:

Diesel Engine Setting/Locking Tool Kit VAUXHALL/OPEL 1.3CDTi

Model No: VS4770

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.*

VS4770

2. INTRODUCTION & APPLICATIONS

The Vauxhall/Opel 1.3CDTi diesel engine is a new generation, twin cam 16v., common rail, multijet diesel with CHAIN DRIVEN exhaust camshaft and GEAR DRIVE between exhaust and inlet camshafts.

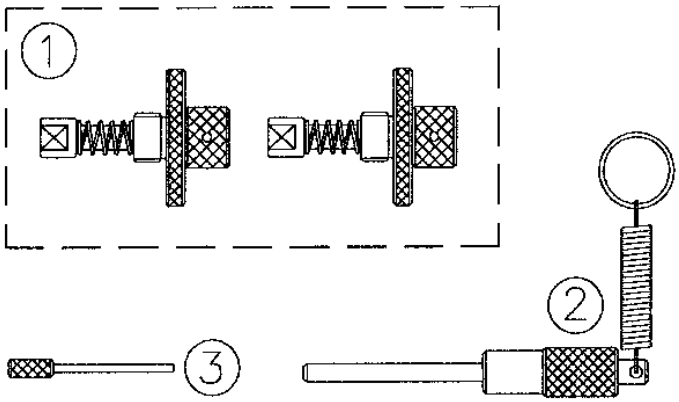
Engine timing positions are established at both camshafts and the flywheel (for crankshaft).

2.2. Applications:

- **VAUXHALL/OPEL 1.3CDTi Common Rail Diesel engine in: VAUXHALL/OPEL**
  Corsa Combo
- **Z13DT engine**

3. CONTENTS

1	VS4771	Camshaft Setting Tool Set (Pair)
2	VS4772	Flywheel Locking Pin
3	VS132/04	Tensioner Retaining Pin
--	VS4770/84	Case + Insert



4. INSTRUCTIONS

VS4770 Diesel Engine Setting/Locking Tool Kit
Comprises:

VS4771 Camshaft Setting Tools (Pair)
VS4772 Flywheel Locking Pin
VS132/04 Tensioner Retaining Pin

Engine timing positions are established at both camshafts and the flywheel (for crankshaft).
Timing tools are required when carrying out service work on the cylinder head, front end timing case, timing chain/sprockets and tensioners.

4.1 **VS4771 Camshaft Setting Tool Set (Pair)**

Both camshafts have a 'timing position slot' and are locked in timed position by VS4771 Setting Tools which screw in to the camshaft housing and locate into the 'timing slots'. (Fig. 1)
In order to access the blanking plugs in the camshaft housing it is necessary to detach the fuel rail and engine management wiring harness and disconnect glowplug, injector and sensor plugs.
(Fig. 2) VS4771 Setting Tools have spring loaded spindles on the end of which are 'flats' which engage the 'timing slots' in the camshafts.
IMPORTANT: When fitting the VS4771 Tools the flats must be maintained in a horizontal position. Their horizontal plane is confirmed by the roll pin in the spindle knob being on 'top' position.
(Fig. 3) Remove the blanking plugs and screw in VS4771 Setting Tools. Using the roll pin in the spindle knob as a guide, ensure the flats on the ends of the spindles are horizontal.
Slowly turn the engine in its normal direction of rotation.
IMPORTANT: Ensure the spindles are held horizontal as they may rotate as the camshafts turn.
As the ends of the spindles engage the slots in the camshaft an audible **click** will be heard as the springs activate the spindles.

IMPORTANT: DO NOT use Camshaft Setting Tools to hold camshafts in position whilst releasing or tightening the sprocket bolts. Setting Tools are for retention of timing position only.

4.2 **VS4772 Flywheel Locking Pin** (Fig. 4)

The crankshaft timing position is established by VS4772 Locking Pin locating into the flywheel via a datum hole in the gearbox bell housing.
VS4772 incorporates a spring which can be attached to a nearby bolt to retain the Pin in the datum hole.

4.3 **VS132/04 Tensioner Retaining Pin**

When removing the timing chain or guide rails, the hydraulic chain tensioner must be released and retained back using Pin VS132/04.

Fig 1

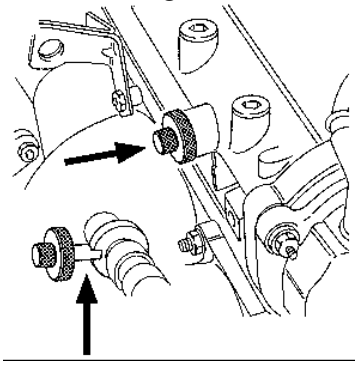


Fig 2

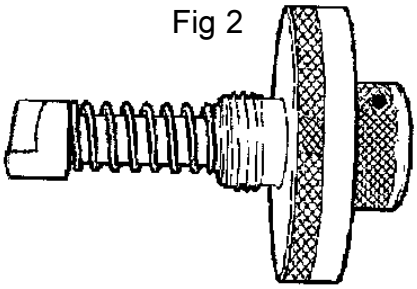


Fig 3

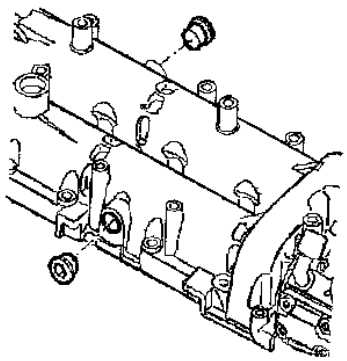
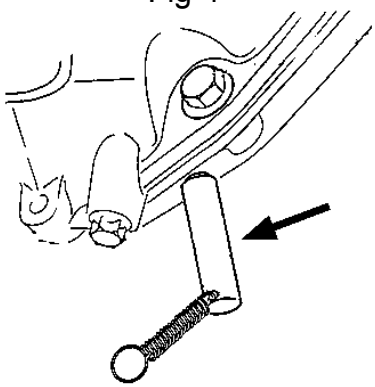


Fig 4



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: Call 01284 757525 for our catalogue and promotions. Leave your full name, address and postcode.

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