

Instructions for:

**DIESEL ENGINE SETTING/LOCKING TOOL SET - PSA
HD/FORD TDCi 1.4 & 1.6 ENGINES**

Model No: VS4735A

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.
- x **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

PSA 1.4 and 1.6 HDi diesel engines are also fitted in Ford models under Duratorq (TDCi) identification.

Timing belt replacement on these engines requires the use of 4 Locking Pins.

2.2 Applications

CITROËN / PEUGEOT Diesel engines 1.4HDi & 1.6 HDi

Also in Ford models as Duratorq TDCi engines

CITROËN

Xsara, C2, C3, C4 & C5

FORD

Fiesta, Fusion, Focus, Focus C-Max

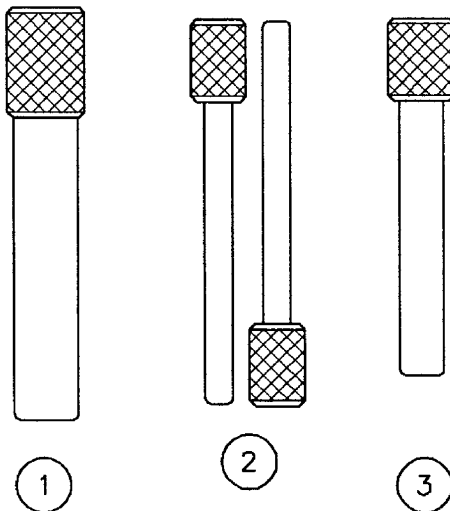
PEUGEOT

206, 307

Engine Codes: PSA - DV4TD (8HW/8HX/8HZ), DV4TED4 (8HV/8HY), DV6ATED4 (9HX/9HY/9HZ).

Ford:- F6JA/F6JB/F6JC/G8DA/G8DB.

3. CONTENTS & ASSOCIATED TOOLS



3. CONTENTS

- 1 VS4735/P16 Flywheel Locking Pin
- 2 VS4735/P15 Injection Pump & Crankshaft Locking Pin (2 per set)
- 3 VS4735/P17 Camshaft Locking Pin

4. INSTRUCTIONS

VS4735A Diesel Engine Setting/Locking Tool Set

Comprises:

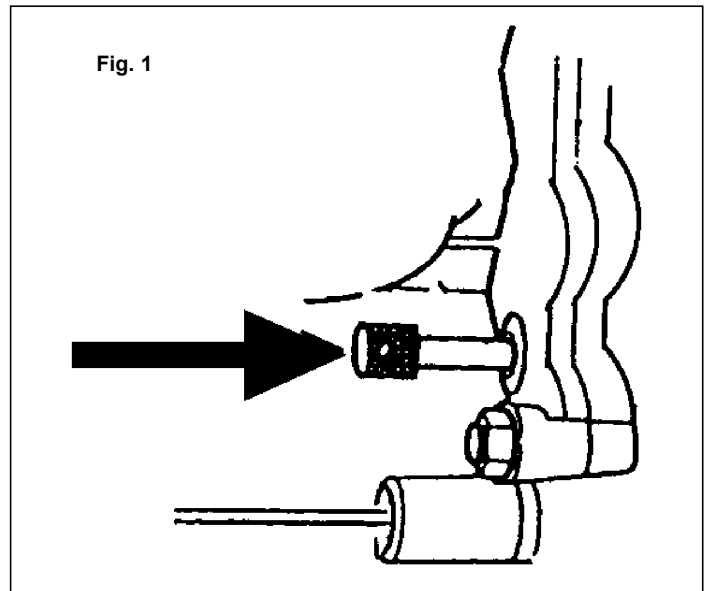
VS4735/P15 Crankshaft & Fuel Pump Sprocket Locking Pins (x 2)

VS4735/P16 Flywheel Locking Pin

For locking engine whilst removing and installing crank pulley/bolt.

VS4735/P17 Camshaft Locking Pin

NOTE: Remove the RH road wheel and inner wing cover. Move the electrical harness away from the belt upper cover and remove auxiliary belt, upper timing belt cover and the blanking plug in the bell housing where Locking Pin VS4735/P16 is to be inserted.



4.1 VS4735/P16 Flywheel Locking Pin

Rotate the crankshaft until VS4735/P16 can be inserted into one of the slots in the flywheel to 'lock' the engine (Fig. 1).

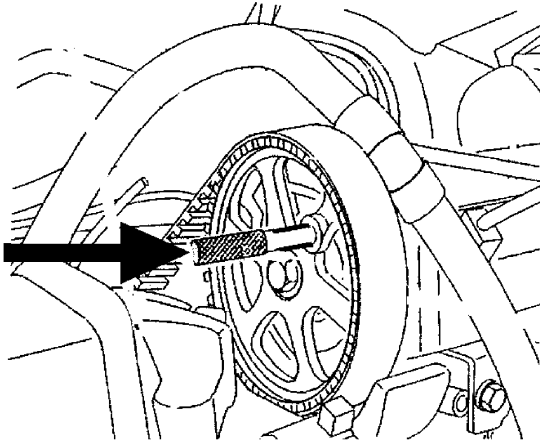
Remove the crankshaft pulley, lower timing belt cover, crank position sensor, (check that the magnetic track is not damaged) and belt guide angle bracket.

WARNING Do not touch the magnetic track (sensor ring).

Re-fit the crankshaft pulley bolt (to facilitate engine turning), and remove Locking Pin VS4735/P16.

1.4HDi

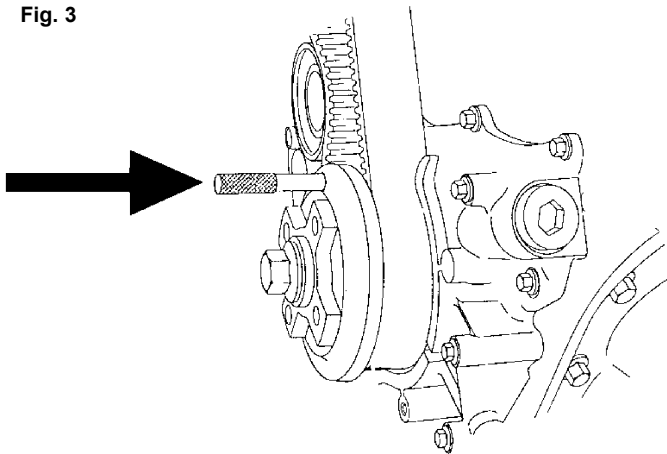
Fig. 2



4.2 VS4735/P17 Camshaft Locking Pin

Turn the engine until the camshaft sprocket timing holes align, and insert Locking Pin VS4735/P17 (Fig. 2). Check that the crank keyway is in the 11 o'clock position and insert Locking Pin VS4735/P15 to confirm correct crankshaft position.

Fig. 3



4.3 VS4735/P15 Crankshaft and Fuel Pump Sprocket Locking Pins (2 in set)

Check that the crankshaft keyway is in the 11 o'clock position and insert Locking Pin VS4735/P15 to confirm correct crankshaft position (Fig. 3).

One of the VS4735/P15 Locking Pins is used to lock the crankshaft and the other one locks the fuel pump sprocket.

Check the fuel pump alignment via holes in the pump sprocket. If there is not a corresponding hole in the pump bracket to the hole in the sprocket, then align by positioning the holes in the sprocket vertically. Support the engine to allow removal of the RH engine mounting/bracket, release the tensioner and remove the old timing belt.

Ensure the camshaft sprocket and crankshaft are locked in timing position with Pins VS4735/P17 and VS4735/P15 respectively. Ensure the fuel pump is aligned correctly.

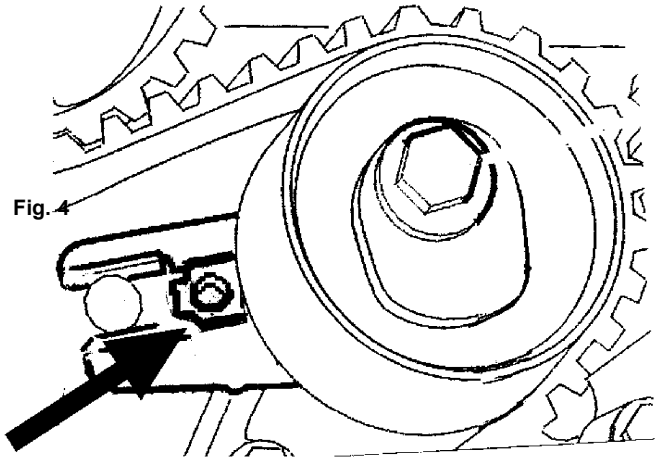


Fig. 4

4.4 Installing new belt

Fit the new timing belt and install the engine mounting/bracket. Apply tension to the belt by turning the tensioner anti-clockwise until the pointer is positioned between the sides of the window (Fig. 4). Re-fit crank position sensor and belt guide angle bracket.

WARNING Do not touch the magnetic track (sensor ring).

Remove the Locking Pins.

Carefully rotate the crankshaft 10 times clockwise.

Check engine timing by ensuring that the camshaft and crankshaft locking pins can be inserted and that the fuel pump sprocket is correctly aligned.

Remove all Locking Pins and check the tensioner pointer is positioned within the window.

Insert Locking Pin VS4735/P16 into the flywheel and fit the crankshaft pulley using a new centre bolt.

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.



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