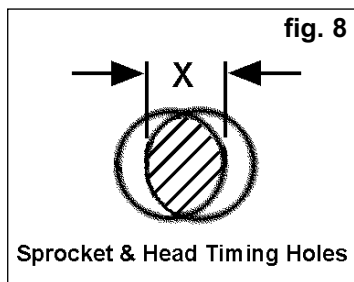


- 4.6.7. Loosen, to fingertight, the 3 bolts of the camshaft sprocket, and also the injection pump sprocket if DW8 engine, and release the tensioner bolt. Attach tension tester, re-tension belt to specified tension and tighten tensioner bolt. Tighten camshaft and injection pump sprocket bolts.
- 4.6.8. It is good practice to confirm that the timing is correct by finally adjusting the engine to timed position and ensuring that all the timing tools can be refitting. If it is not possible to locate the appropriate locking pin in the camshaft sprocket position, check the overlap (fig. 8.X) of the sprocket hole and the pin locating hole. If this **does not exceed 1mm** carry out the timing/tensioning procedure again.



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 equipment. **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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VS1210

DIESEL ENGINE SETTING/LOCKING TOOL KIT

1. INTRODUCTION & APPLICATIONS

1.1. INTRODUCTION

The VS1210 kit provides the specialised tools required to 'set' and 'lock' the engine timing position on the latest range of Citroën/Peugeot diesel engines, designated DW8 (1.9D) and DW10/DW12 (2.0/2.2HDi), for timing belt replacement applications and valve train work.

1.2. APPLICATIONS

Citroën: Xsara, Berlingo, Dispatch/Jumpy - DW8 (WJZ) 1.9D
Xantia, Xsara/Picasso, Dispatch/Jumpy, Synergie/Evasion, C5 - DW10 (RHY/RHZ) 2.0 HDi
C5 - DW12 (4HX) 2.2HDi

Fiat: Ulysse - DW10 (RHZ) 2.0 JTD

Peugeot: 206, 306, Expert, Partner - DW8 (WJZ) 1.9D
206, 306, 307, 406, 607, 806 - DW10 (RHY/RHZ) 2.0 HDi
406, 607 - DW12 (4HX) 2.2 HDi

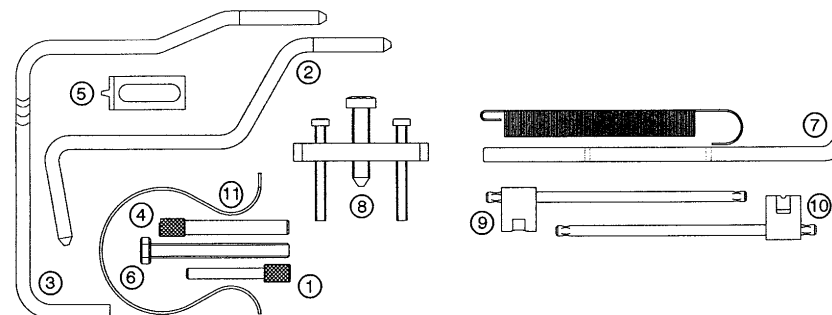
2. SAFETY INSTRUCTIONS

- ❑ **WARNING!** Ensure that 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 the ignition key is removed, to prevent inadvertent engine cranking.
- ✓ If the vehicle to be worked on is raised, ensure that it is adequately supported with axle stands or ramps and chocks.
- ✓ 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 on or near the engine.
- * **IMPORTANT: Always refer** to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data. These instructions are provided as a guide only.

3. CONTENT & ASSOCIATED TOOLS

3.1. Content

- | | | | |
|--------------|----------------------------|---------------|---------------------------|
| 1. VS125/C2 | Injection Pump Locking Pin | 7. VS1210/P9 | Flywheel TDC Locking Pin |
| 2. VS125/C6 | Flywheel TDC Locking Pin | 8. VS1210/01 | Crankshaft Pulley Remover |
| 3. VS125/C8 | Flywheel TDC Locking Pin | 9. VS1210/02 | Tensioner Adjuster |
| 4. VS125/P4 | Camshaft Locking Pin | 10. VS1210/03 | Tensioner Adjuster |
| 5. VS1286 | Flywheel Holding Tool | 11. VS1210/04 | Belt Retaining Clip |
| 6. VS1210/M8 | Camshaft Locking Bolt | - VS1210/84 | Case + Insert |



3.2. Associated Tools

MASTER KIT - Engine Setting/Locking Tool Kit -	
French Engine Applications - Citroën/Peugeot/Renault	VS125
Engine Setting/Locking Tool Kit - Citroën/Peugeot petrol & diesels - TU/XU/TUD/XUD. . .	VS121
Engine Setting/Locking Tool Kit - PSA "EW" 16v. engines	VS1211
Crankshaft Pulley Flange Repositioning Tool - PSA "EW" 16v. engines	VS1212

4. INSTRUCTIONS

4.1. Tool Usage Chart

TOOL	ENGINE	DW8 1.9D	DW10 2.0HDi	DW12 2.2HDi
Flywheel TDC Locking Pins - VS125/C6 VS125/C8 VS1210/P9		✓	✓	✓
Camshaft Locking Pin/Bolt - VS125/P4 VS1210/M8		✓	✓	✓
Injection Pump Locking Pin - VS125/C2		✓		
Timing Belt Retaining Clip - VS1210/04 Flywheel Holding Tool - VS1286 (Crankshaft pulley removal)		✓	✓	✓
Crankshaft Pulley Remover - VS1210/01			✓	✓
Tensioner Adjusters - VS1210/02 VS1210/03		✓	✓	✓

The PSA DW8 (WJZ) 1.9 diesel engine first appeared in 1998 models of both Citroën and Peugeot vehicles - see applications. DW10TD (RHY)/DW10ATED (RHZ) 2.0 HDi engines started in 1997 with the DW12TED4 (4HX) 2.2 HDi following later. The procedure for timing belt replacement is basically the same for all these engines. Some of the kit tools apply to all the DW8, DW10 and DW12 engines (see above chart).

The main exceptions are as follows:

The HDi engines require the use of a specialised remover to extract the crank pulley and require a different tensioner adjuster to the DW8 engine. When carrying out the belt pre-tensioning procedure on DW8s both camshaft and injection pump sprockets are allowed to move within the slotted holes, whereas this only applies to the camshaft sprocket on HDi engines.

4.2. VS1286 Flywheel Holding Tool (Crank Pulley removal) & VS1210/01 Crankshaft Pulley Remover

In order to remove the timing belt, the crankshaft pulley must be removed.

4.2.1. VS1286 Holding Tool is used to 'lock' the flywheel whilst releasing the pulley bolt. Once the bolt is released, the tool is removed. Remove the clutch housing bottom plate to give access for the holding tool. VS1286 is also used when refitting the pulley bolt (fig. 1).

IMPORTANT: Locking pins must NOT be used to hold the crankshaft whilst releasing or tightening the pulley bolt. Locking pins are for the retention of timing position only.

4.2.2. On HDi engines, once the pulley bolt is removed the pulley must be extracted using VS1210/01 Remover (fig. 2).

4.2.3. Support the engine and remove the right-hand mounting/bracket to enable the timing covers to be removed. On HDi engines it will be necessary to disconnect and seal off the fuel pipes.

4.3. VS125/C6, VS125/C8 and VS1210/P9 Flywheel TDC Locking Pins

4.3.1. Turn the crankshaft to the timed position and 'lock' by inserting the TDC pin into the flywheel datum hole. Often access is restricted by the starter motor or other components which are not usually removed. The special shape of VS125/C6 and VS125/C8 allows use around these obstructions (fig. 3).

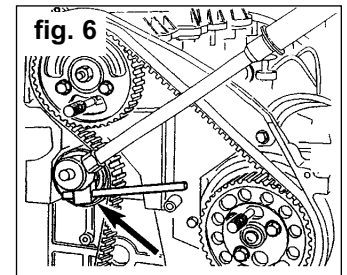
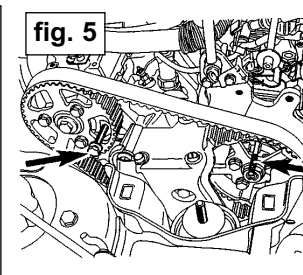
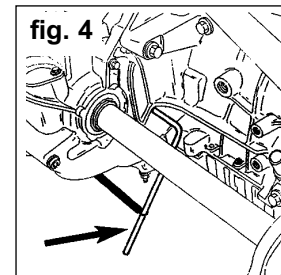
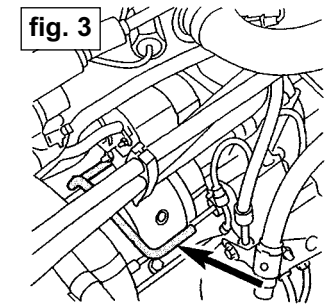
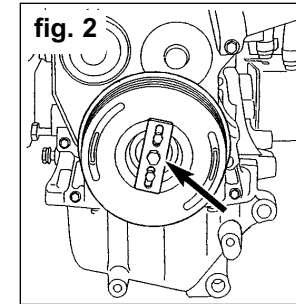
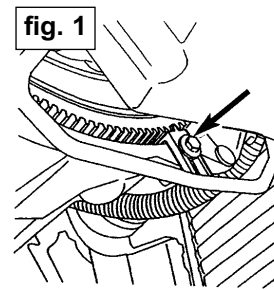
4.3.2. VS1210/P9 Locking Pin is used for double flywheel applications and is held in place by attaching the retaining spring to a suitable bolt head (fig. 4).

4.4. VS125/C2, VS125/P4 and VS1210/M8 Locking Pins/Bolt

The camshaft and injection pump must be held in their timed position using pins or bolts.

4.4.1. On DW8 engines VS125/C2 and VS1210/M8 are used to 'lock' the injection pump and camshaft sprockets respectively (fig. 5).

4.4.2. HDi engines use only the VS125/P4 Locking Pin to position the camshaft sprocket. No pump lock position is required.



4.5. VS1210/02 and VS1210/03 Tensioner Adjusters

4.5.1. Once the flywheel and camshaft/injection pump are 'locked' in the timed position with the appropriate locking pins, the tensioner can be released and turned **clockwise** away from the belt, using VS1210/02 (DW8) or VS1210/03 (DW10/DW12), and the timing belt removed (fig. 6).

4.6. Fitting New Belt/Tensioning Procedure

4.6.1. Before fitting the new belt ensure that the flywheel, camshaft sprocket and injection pump locking pins are in place and loosen, to fingertight, the 3 bolts retaining the camshaft sprocket to allow it to be turned fully **clockwise** to the end of the slotted holes. On DW8 engines also release the 3 bolts of the injection pump sprocket and likewise turn sprocket **clockwise** to the end of slotted holes.

4.6.2. Fit the new belt to the crankshaft gear and retain with AST4569 Clip (fig. 7).

4.6.3. Fit the belt in an **anti-clockwise** direction to tensioner roller, injection pump sprocket, camshaft sprocket, water pump and tensioner.

Note: Camshaft sprocket can be turned slightly anti-clockwise, to help fit the belt, **but NOT MORE than one tooth space**.

4.6.4. Remove AST4569 Belt Clip.

4.6.5. Use VS1210/02 or VS1210/03 Tensioner Adjuster to apply the initial tension to the belt. Attach a suitable tension tester and turn the tensioner **anti-clockwise** to achieve correct belt tension.

IMPORTANT: At this stage the 3 bolts of the camshaft and injection pump sprockets MUST NOT be at the ends of the slotted holes. Tighten these bolts to the specified torque.

4.6.6. Remove all locking pins and turn the engine over, by hand, a few times in the normal direction of rotation, returning to the timed position and re-fitting all locking pins.

IMPORTANT: Never allow the crankshaft to be turned in the reverse direction.

