

DIESEL ENGINE SETTING/LOCKING TOOL KIT FOR FIAT 1.9D/TD/JTD, 2.1TD, 2.4TD

1. INTRODUCTION & APPLICATION

1.1. Introduction

VS1405 Kit provides the tools for the later 1.9D/TD and JTD (Common Rail) diesels in Brava, Marea, Multipla, Ulysse and Scudo, as well as the 2.1TD in Ulysse and 2.4TD engines in Marea/Weekend.

1.2. Applications

| | | |
|--|--|--------------------------------------|
| Fiat: Brava/Bravo 1.9D (95-), 1.9TD (96-), 1.9 JTD | Marea/Marea Weekend 1.9TD (96-), 1.9JTD, 2.4TD | Multipla 1.9JTD |
| Punto 1.9D, 1.9JTD | Scudo 1.9D (87-) | Ulysse 1.9TD (94-), 2.1TD 12v. (95-) |

2. 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 the valve head and the 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.

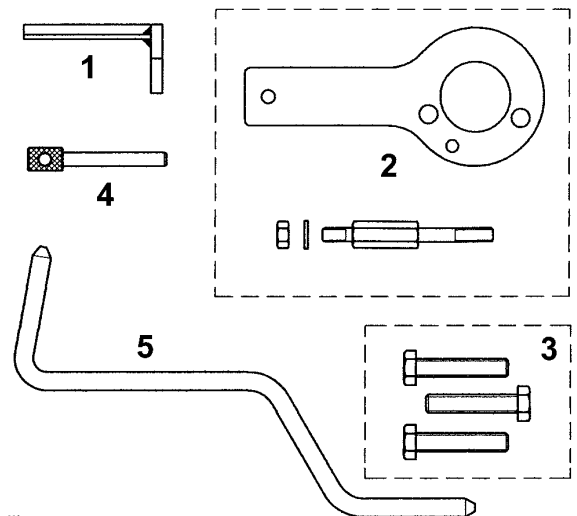
3. CONTENTS & ASSOCIATED TOOLS

3.1. Contents

1. VS1405/01 Crank Locking Tool
2. VS1405/02 Crank Locking Tool
3. VS125/M8 M8 Locking Bolts (Set of 3)
4. VS125/C2 Injection Pump Locking Pin
5. VS125/C6 Flywheel Locking Pin
- VS1405/84 Case + Insert

3.2. Associated Tools

Sprocket Holding Tool VS169
 Flywheel Holding Tool (Crank Pulley removal) -1.9TD/2.1TD (PSA) . . . VS1283
 Flywheel Holding Tool (Crank Pulley removal) - 1.9TD/2.4TD VS1403/03



4. INSTRUCTIONS

Kit VS1405 covers a wide range of later Fiat diesel engines, including JTD (Common Rail).

4.1. VS1405/01 Crank Locking Tool - 1.9D engine Brava/Bravo

On Brava/Bravo models with 1.9D engines the flywheel guard is removed and VS1405/01 fitted into the teeth of the flywheel to hold it securely and safely whilst the crank pulley bolt is released or tightened (fig. 1). The crank pulley must be removed to replace the timing belt. Additionally, for this application, VS1405/01 remains in place to retain the crankshaft in its timed position during timing belt renewal.

4.2. VS1405/02 Crank Locking Tool - 1.9TD/2.4TD and 1.9JTD (Common Rail) engines Brava/Bravo, Marea/Weekend, Multipla, Punto

On these engines the crank position is retained at TDC by fitting VS1405/02 Locking Tool (fig. 2). Additionally for some applications VS125/C2 Locking Pin and VS125/M8 Locking Bolts, from the kit, are required to 'lock' the injection pump sprocket. The crank pulley must be removed to replace the timing belt and the flywheel can be held securely by VS1403/03 Holding Tool (an associated tool - not in kit) to release/tighten the pulley bolt (fig. 3).

To fit VS1405/02, remove the crank pulley and check the crank is at TDC - the dowel on the crank gear is at the bottom position and central to the cylinder block.

Remove the oil pump bolt and insert Support Spindle of VS1405/02.

At this point the new belt must be fitted to the crank gear. Fix VS1405/02 with the dowel correctly located into the hole in VS1405/02 and secure with bolts through to the crank gear.

Insert Injection Pump Locking Pin or Locking Bolts - see application chart, slacken sprocket bolts and fit belt. Ensure marks on the belt align to marks on sprockets.

Adjust tensioner to maximum and tighten pump sprocket bolts.

Remove all Locking Tools and re-fit oil pump bolt.

Rotate engine twice, by hand, and return to TDC, checking that all timing marks align.

Adjust tensioner to final position with pointer aligned with reference point.

4.3. VS125/C2 Locking Pin and VS125/M8 Locking Bolts - 1.9TD, 2.1TD, 2.4TD engines - Brava/Bravo, Marea/Weekend, Punto

On 1.9TD (182 A7.000) engines VS125/C2 Locking Pin is used to 'lock' the injection Pump in its timed position (fig. 4).

For 1.9TD (182 A8.000) as well as 2.1TD and 2.4TD engines, VS125/M8 Locking Bolts are fitted in the camshaft and injection pump sprocket to achieve timing retention (fig. 5).

4.4. VS125/C6 Flywheel TDC Locking Pin - 1.9TD & 2.1TD 12v. engines - Scudo, Ulysse

For the Ulysse/Scudo range the crank is positioned at TDC with VS125/C6 Pin which aligns a datum hole in the engine with a hole in the flywheel (fig. 6). VS125/M8 Locking Bolts, from the kit, are used to 'lock' the camshaft and injection pump sprockets in the timing position.

The crankshaft pulley must be removed to replace the timing belt. Use VS1283 Flywheel Holding Tool (an associated tool - not in kit), to securely and safely counter-hold the flywheel whilst releasing/tightening the pulley bolt.

Important! DO NOT use Camshaft Setting Tools to hold camshafts in position whilst releasing or tightening the sprocket bolt. Setting Tools are for retention of timing position only. Use Sprocket Holding Tool VS169 to counter-hold sprocket (fig. 7). VS169 is an associated tool, not included in kit.

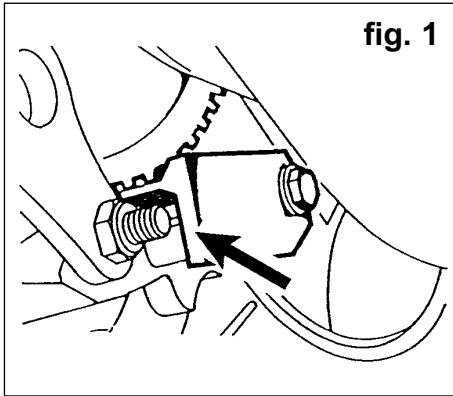


fig. 1

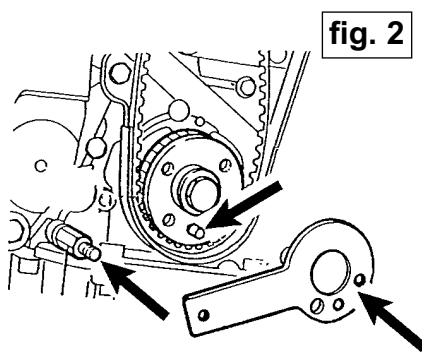


fig. 2

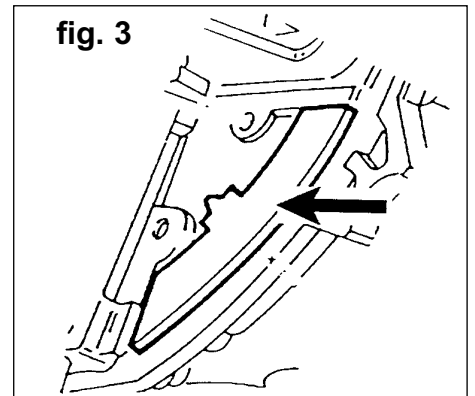


fig. 3

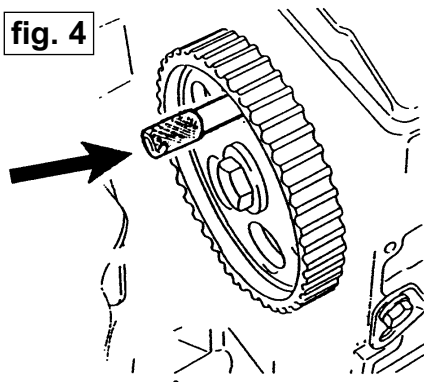


fig. 4

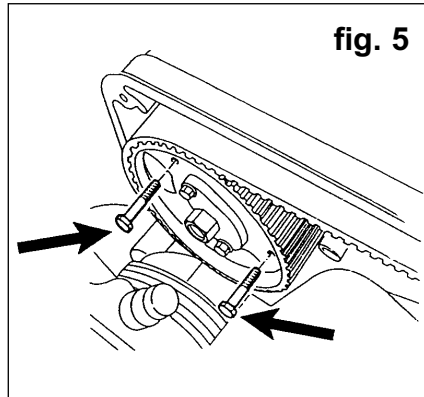


fig. 5

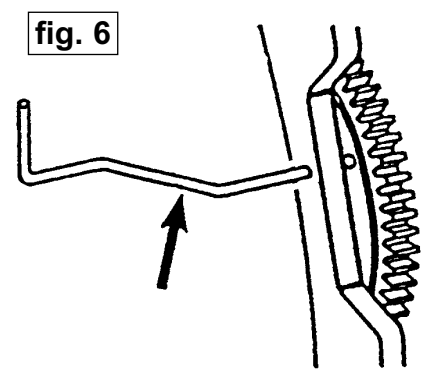


fig. 6

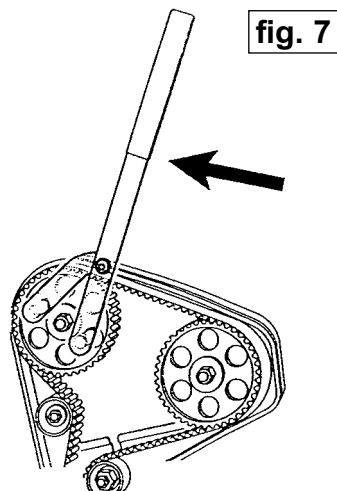


fig. 7

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 responsibility is accepted for incorrect use of this equipment.

WARRANTY: Guarantee is 12 months from purchase, proof of which will be required for any claim.

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