

VS1406, VS1407 & VS1408

DIESEL ENGINE SETTING/LOCKING TOOL KITS FOR FIAT 1.7D/TD & 1.9D/TD

1. INTRODUCTION & APPLICATION

1.1. Introduction

A series of 3 Diesel Engine Setting/Locking Tool Kits covering 1.7D/TD, 1.9D and 1.9TD engines with adjustable camshaft sprockets. VS1406/01 Crank Locking Tool is common to all applications and is, therefore, included in each Set. A different Camshaft Setting Tool is required for each application.

1.2. Applications

VS1406 Kit

Fiat: 1.7D/TD Diesel Engines - Punto (96-97)

VS1407 Kit

Fiat: 1.9D Diesel Engines (with adjustable camshaft sprocket) - Tempra (90-), Tipo (91-95), Ducato (94-)

VS1408 Kit

Fiat: 1.9TD Turbo Diesel Engines (with adjustable camshaft sprocket) - Tempra (90-), Tipo (88-), Ducato (94-)

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

VS1406 Kit

1. VS1406/01 Crank Locking Tool
2. VS1406/02 Camshaft Setting Tool (Silver)

VS1407 Kit

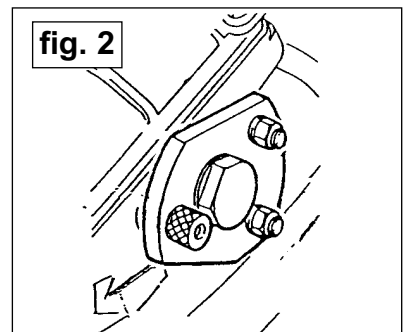
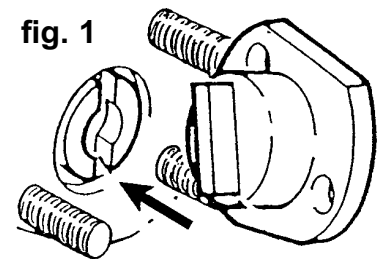
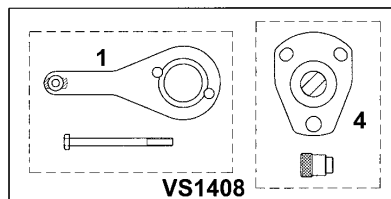
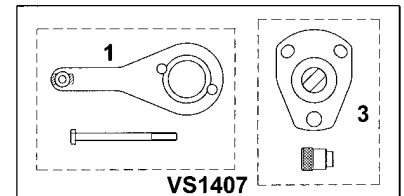
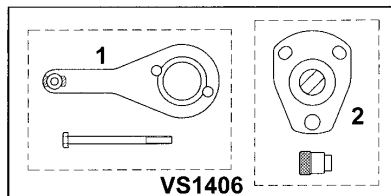
1. VS1406/01 Crank Locking Tool
3. VS1407/01 Camshaft Setting Tool (Yellow)

VS1408 Kit

1. VS1406/01 Crank Locking Tool
4. VS1408/01 Camshaft Setting Tool (Black)

3.2. Associated Tool

Sprocket Holding ToolVS169



4. INSTRUCTIONS

A series of 3 Tool Kits each covering the required crank and camshaft timing position retention on these major diesel engine types.

The procedure for timing belt replacement on all these engines is basically the same, and VS1406/01 Crank Locking Tool is common to all applications/kits. However the Camshaft Setting Tool in each kit is specific to each engine type, as below:

VS1406/02 - 1.7D/TD **VS1407/01** - 1.9 Non-Turbo **VS1408/01** - 1.9 Turbo.

Turn the engine to TDC and check that all timing marks align.

Note: The camshaft timing marks may be slightly out as sprocket is on a keyway.

Slacken tension and remove belt.

Remove the vacuum pump from the rear of the cylinder head and install the appropriate Camshaft Setting Tool into the slot in the camshaft (fig. 1, typical). The Setting Tool locates onto two studs and is centralised by its Location Screw in the 3rd position (fig. 2, typical).

Check that all timing marks align and install new belt around crank gear.

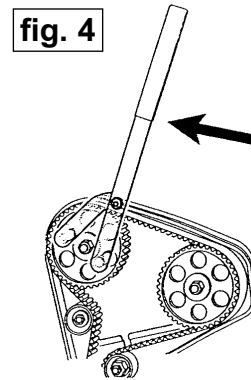
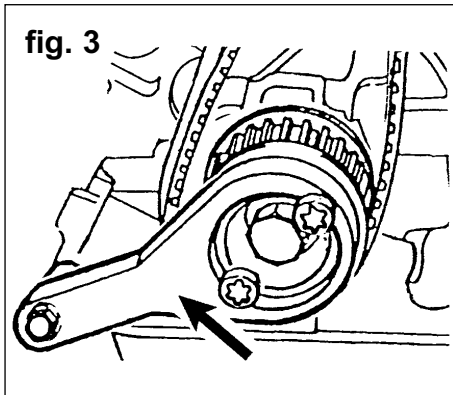
Remove cover bolt and fit VS1406/01 Crank Locking Tool with its securing bolt and attach to crank gear (fig. 3).

Release camshaft sprocket bolt, counter-holding sprocket with VS169 Holding Tool (fig. 4). Sprocket should be able to turn slightly.

Fit timing belt in an anti-clockwise direction and tension belt.

Tighten camshaft sprocket bolt and remove crank and cam locking tools.
Turn engine slowly, by hand, and return to TDC position. Check that all timing marks align.

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. 4). VS169 is an associated tool, not included in kits.



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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