



INSTRUCTIONS FOR:
**PETROL ENGINE SETTING/LOCKING KIT - ALFA
 ROMEO, FIAT, LANCIA,
 1.4 MULTIAIR - BELT DRIVE**
 MODEL No: **VS5050**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions and maintained properly, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & 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. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
instruction
manual

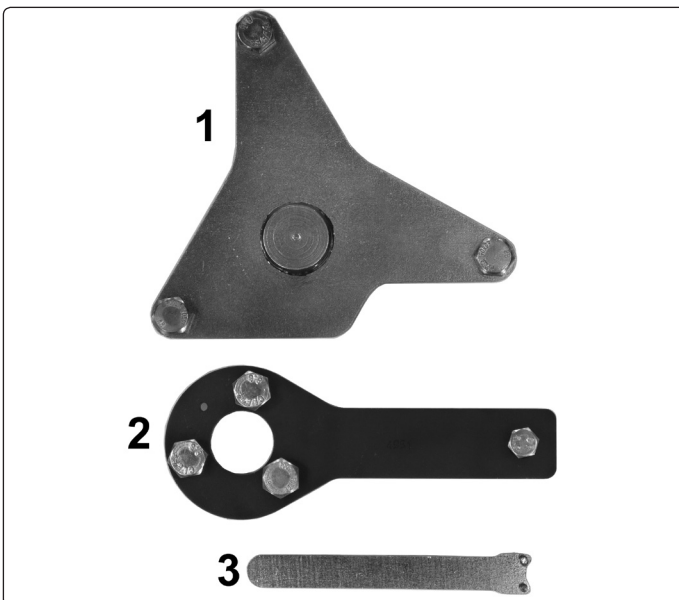


Wear eye
protection

1. SAFETY

- 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 a good, clean condition for the 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.
- DO NOT** attempt to start engine or move vehicle whilst in gear, with locking devices fitted.
- Always** display warning notification on steering wheel when locking engine components.
- Account for all tools, locking bolts, pins and parts being used, **DO NOT** 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. CONTENTS & APPLICATIONS



Applications:

1.4 MultiAir Petrol Engines fitted to:

Alfa Romeo: Giulietta (10-15) MiTo (09-15)

Fiat: Bravo (10-15) Punto Evo (09-12)
Punto (12-14)

Lancia: Delta (10-13)

Engine Codes:

1.4: 955A6000,

1.4 Turbo: 198A7000, 940A2000,
955A2000, 955A7000,
955A8000,

Item	Part No.	Description	Alfa/Fiat/Lancia
1	VS5051	Camshaft Locking Tool	2000034400
2	VS4951	Crankshaft Locking Tool	2000004500
3	VS5052	Tensioner Adjuster	-
-	VS5050.84	Case and Insert	-

This information table provides the Vehicle Manufacturers' Specialised Tool references and the Sealey tool numbers covering the relevant service application.



Associated tool required (not included in kit) -
VS4844 Camshaft Sprocket Holding Tool.

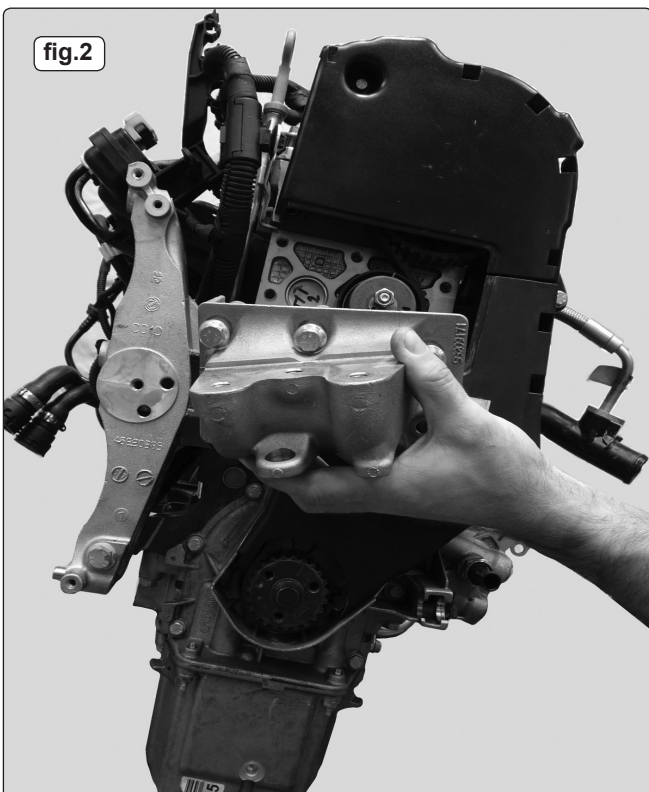
3. INSTRUCTIONS

Engine Introduction.

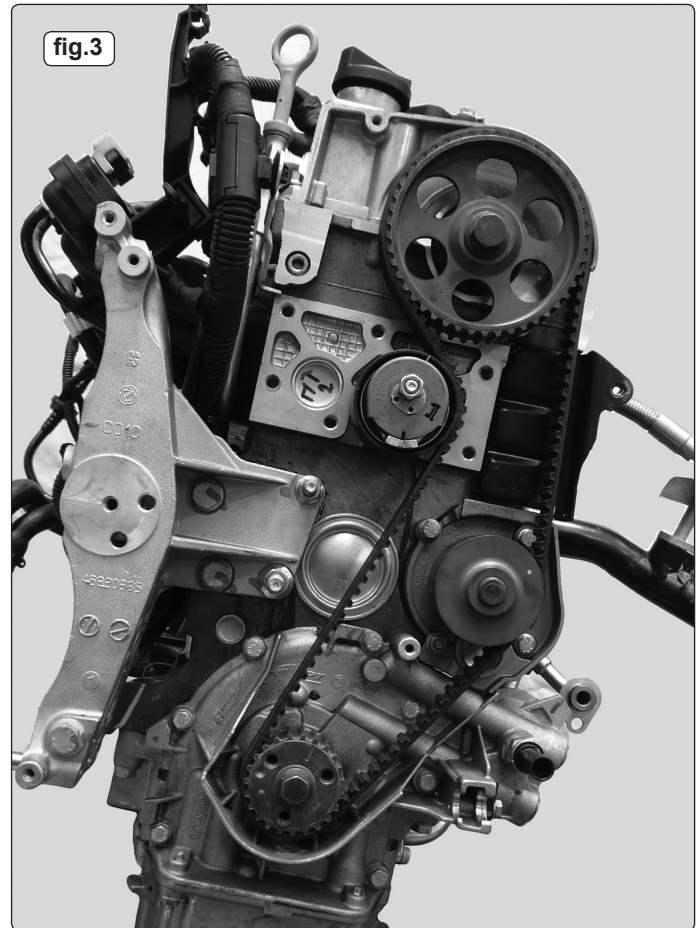
The 1368cc Fiat MultiAir engines have four cylinders, with four valves per cylinder and a single overhead camshaft operating the exhaust valves. The inlet valves are operated by the UNIAIR system. This system uses hydraulic pressure, controlled via a solenoid, to open the inlet valves. Naturally aspirated and turbocharged variants of this engine are available. This kit is required to set the engine timing when carrying out cambelt replacement.



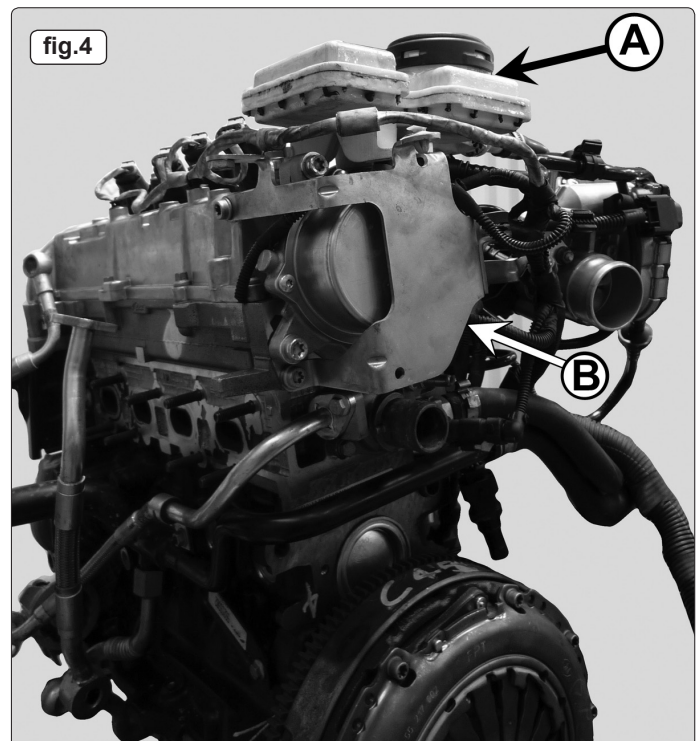
3.1. Remove the auxiliary drive belt and the crankshaft pulley.



3.2. With the engine supported, remove the engine mounting and the timing belt covers, to allow access to the timing belt.



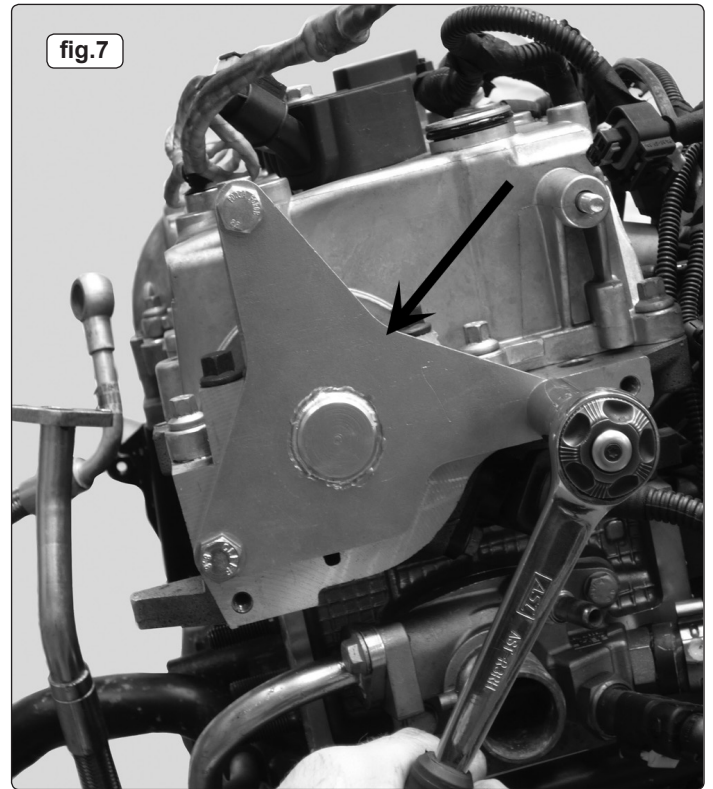
3.3. View of the timing belt with the engine mounting and timing belt covers removed.



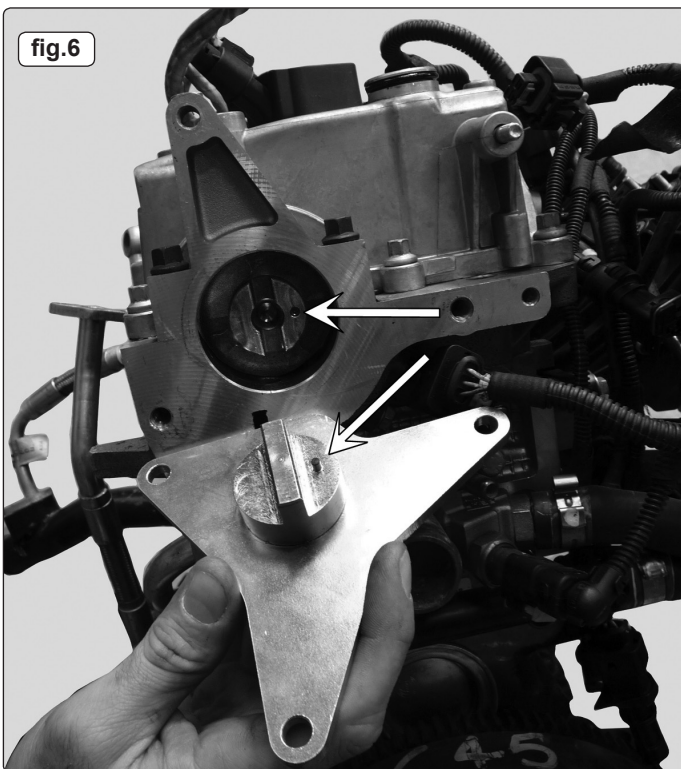
3.4. Remove the oil vapour separator unit (A) and bracket (B). Detach the vacuum pump hose.



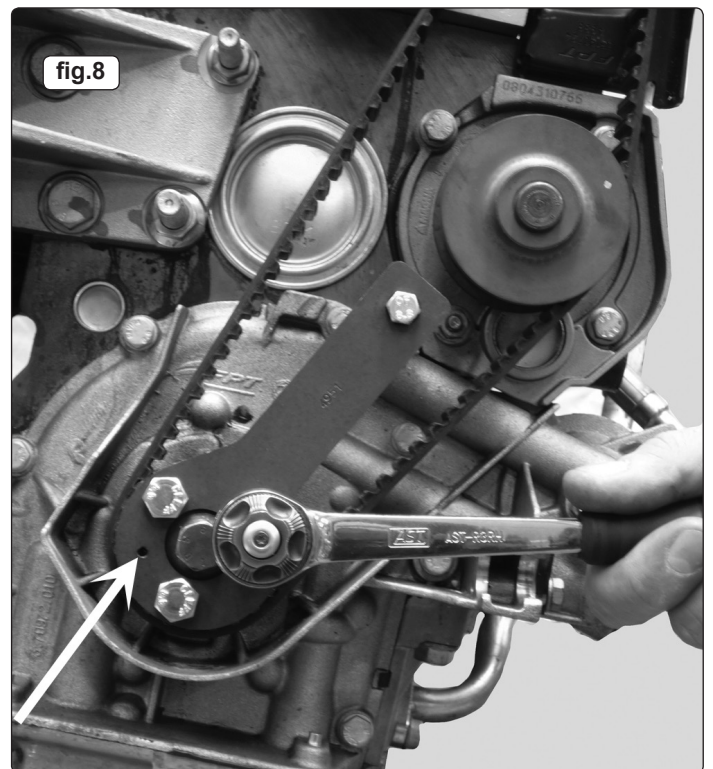
3.5. Remove the three retaining bolts from the vacuum pump, then remove the pump from the cylinder head.



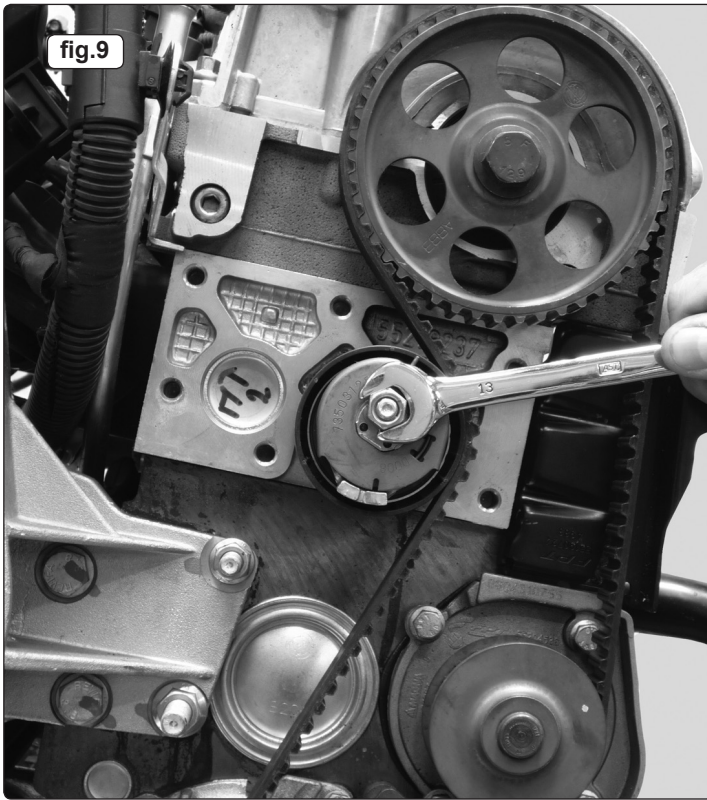
3.7. Install VS5051 camshaft locking tool, and retain in place using the three bolts provided in the kit.



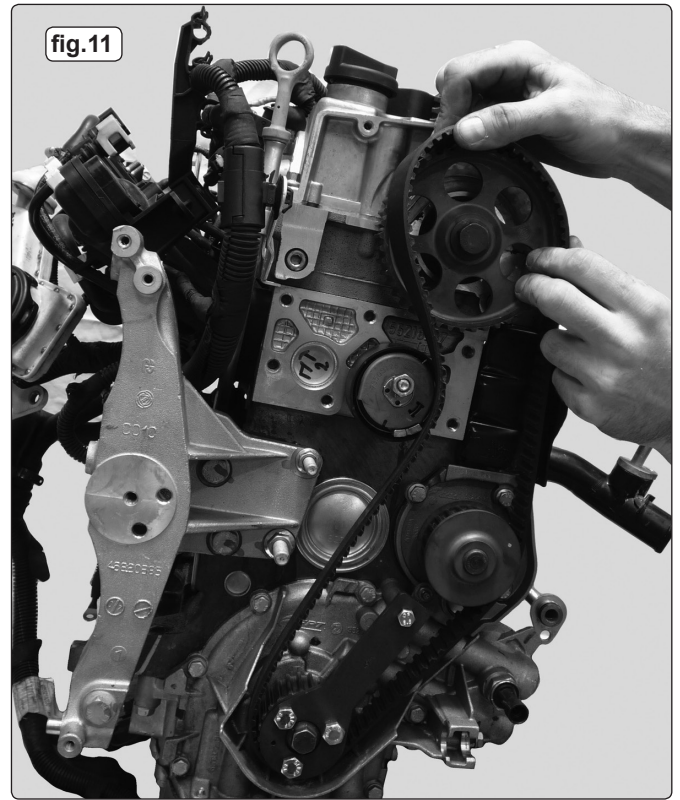
3.6. Rotate the **crankshaft** sprocket central bolt in the normal direction of engine rotation until the slot in the **camshaft** is in a vertical position and the drilled hole is to the right hand side of the slot.



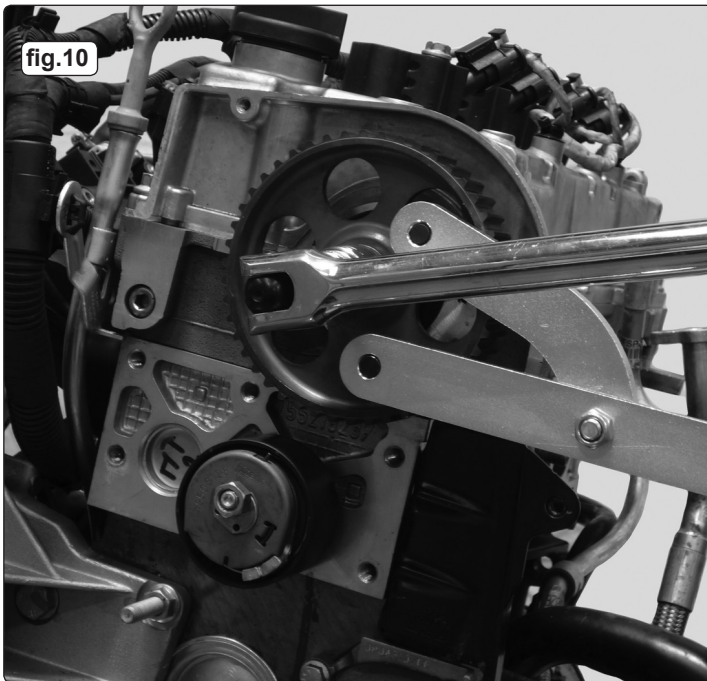
3.8. Install VS4951 crankshaft locking tool onto the crankshaft sprocket, ensuring that the location peg on the sprocket is aligned to the hole drilled in the locking tool. Secure the locking tool to the crankshaft sprocket and engine using the four bolts provided in the kit.



3.9. Slacken the tensioner locking nut, release the tension and remove the timing belt.

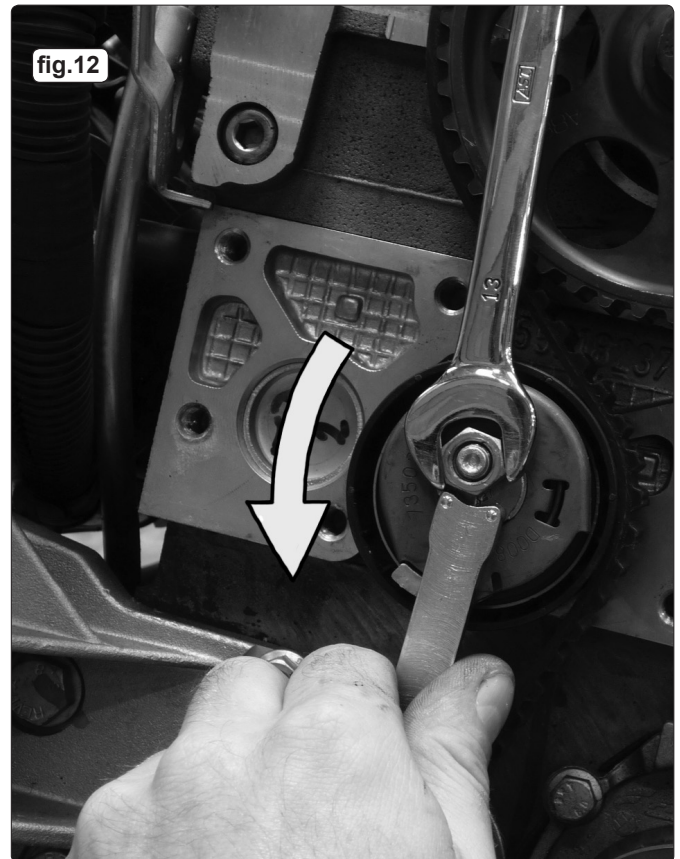


3.11. Install the timing belt in an anti-clockwise direction, starting at the crankshaft sprocket, then to the water pump sprocket, camshaft sprocket and finally the tensioner pulley.

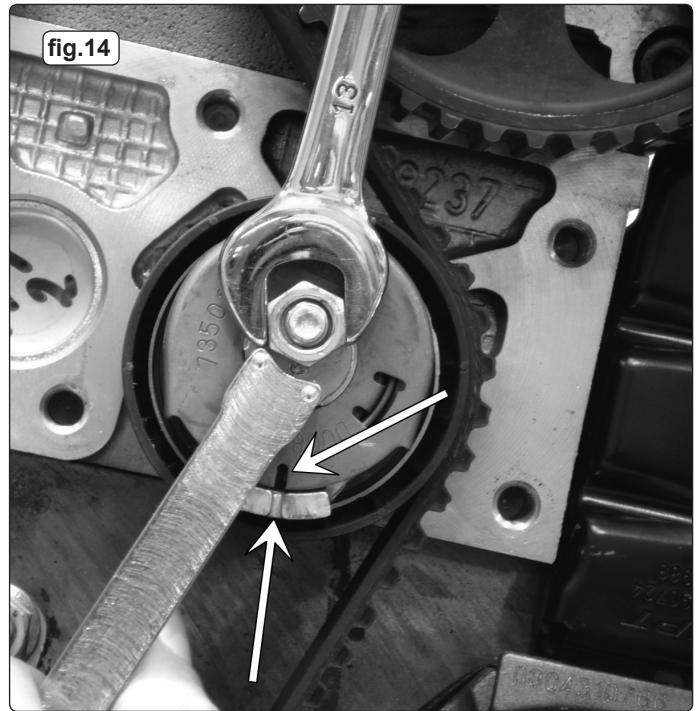
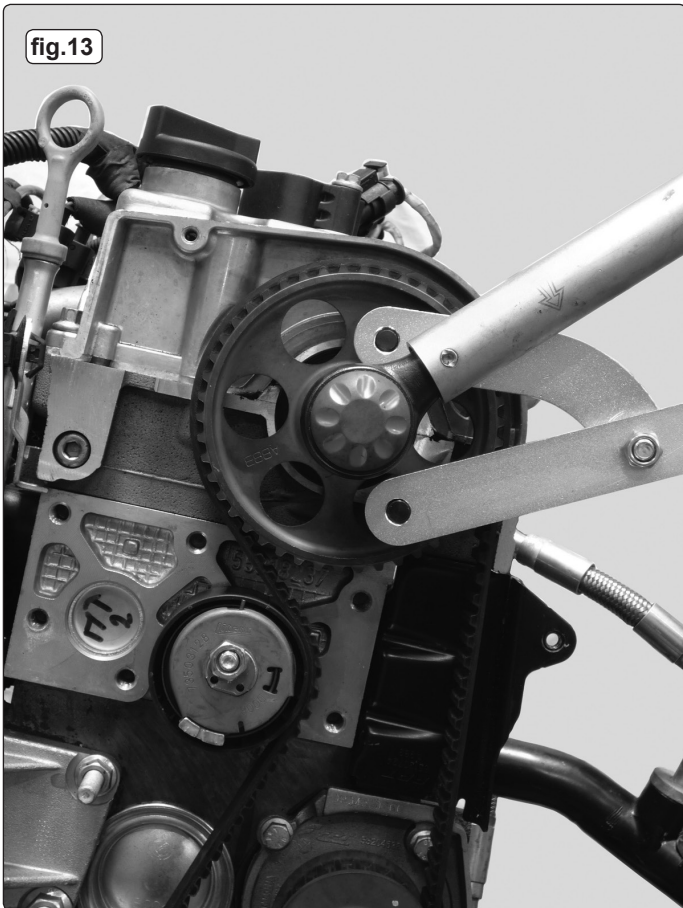


WARNING: DO NOT use VS5051 camshaft locking tool as a counter hold when releasing the camshaft sprocket central bolt.

3.10. Using a suitable counter hold tool, release the camshaft sprocket central bolt. Ensure that the camshaft sprocket rotates freely on the camshaft, this is essential to allow correct installation of the timing belt.



3.12. VS5052 tensioner adjuster locates into the two holes in the tensioner body. Using VS5052 tensioner adjuster, rotate the tensioner in an anti-clockwise direction until the automatic tensioner reaches its maximum tensioned position. Maintain this tensioned position whilst tightening the tensioner locking nut.



- 3.14.** Install **VS5052 tensioner adjuster** to the tensioner and maintain its tensioned position whilst releasing the tensioner locking nut. Adjust the tensioner so that the indicator slots on the tensioner are aligned. Whilst maintaining this position, tighten the tensioner locking nut to 22-27Nm. Rotate the crankshaft two further full revolutions, returning to the timed position. Check that the engine timing is correct by refitting **VS5051 camshaft locking tool** and **VS4951 crankshaft locking tool**. If the tools cannot be installed, it will be necessary to adjust the engine timing.

WARNING: DO NOT use VS5051 camshaft locking tool as a counter hold when tightening the camshaft sprocket central bolt.

- 3.13.** Whilst using a suitable counter hold tool, tighten the camshaft sprocket central bolt to 108-132Nm. Remove **VS4951 crankshaft locking tool** and **VS5051 camshaft locking tool**. Rotate the crankshaft sprocket central bolt two full revolutions in the normal direction of engine rotation.

Environmental Protection



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable dispose of it according to local regulations.

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.



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