

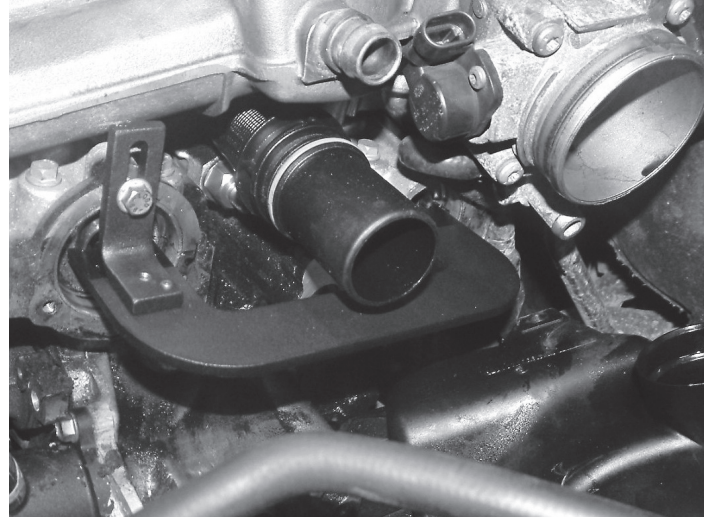
Instructions for:

**PETROL ENGINE TIMING KIT - RENAULT
 F5R 2.0 IDE**

Model No: **VS4860**

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.



VS4861 Setting Plate

2. APPLICATIONS

RENAULT 2.0 IDE Twin Camshaft Direct Injection Petrol engines in

RENAULT

Megane Laguna

Engine codes:

F5R 700/701/740 engines

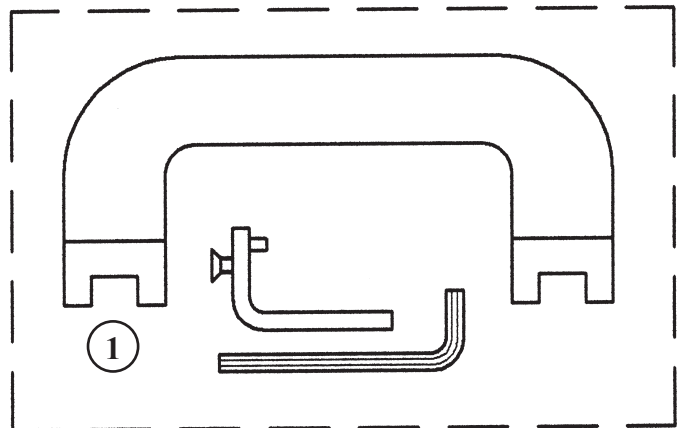
1. SAFETY INSTRUCTIONS

- 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 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.

WARNING: The warnings, cautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.

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4. INSTRUCTIONS

The VS4860 Setting/Locking Tool Kit provides the tools required for timing belt replacement applications on Renault F5R 2.0 16v. IDE (Direct injection) engines.

The VS4861 Camshaft Setting Plate locates in to the 'timing slots' in the rear of the camshafts.

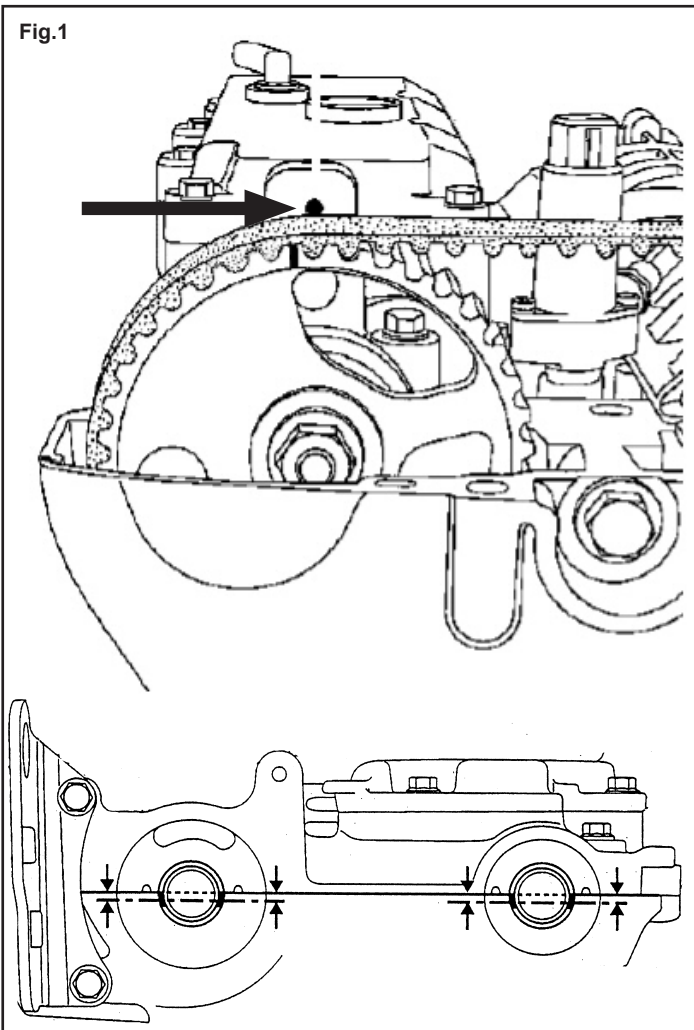
VS125/R1 Crankshaft Locking Pin fits in to a 'timing slot' in the crankshaft web.

4.1 Engine Setting/Locking – Timing Belt Replacement

It will be necessary to support the engine and remove the right-hand engine mounting, air resonator, ignition coil and inlet manifold.

Remove the sealing plug from the rear of the exhaust camshaft and the high pressure fuel pipe and fuel pump (to expose the rear of the Inlet camshaft) and remove timing belt covers.

Fig.1

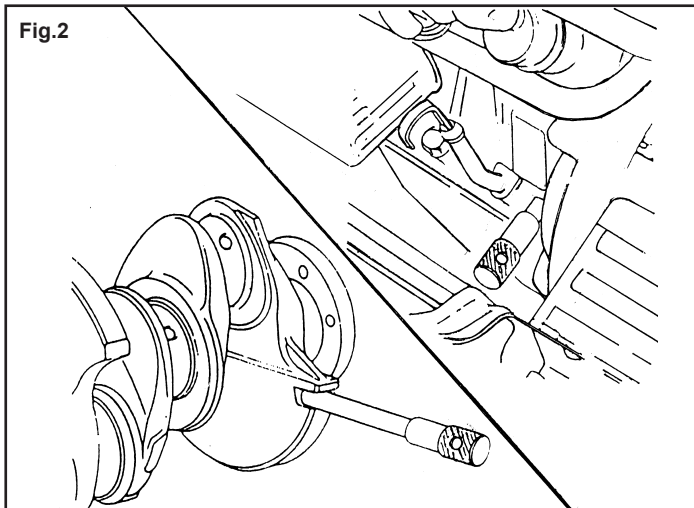


IMPORTANT: Turn the engine to align timing mark on the exhaust camshaft sprocket with the sensor mounting hole behind. Now check that the 'timing slots' in the rear of the camshafts are aligned horizontally and are below the surface line of the cylinder head. (Fig.1)

If 'timing slots' are above the surface line the engine is 180 degrees out and should be turned so camshafts are in correct position.

WARNING: F5R engines have a 'Floating' crankshaft gear (not fixed by keyway). Crankshaft MUST BE 'locked' before releasing crankshaft pulley bolt.

Fig.2



4.1.1 VS125/R1 Crankshaft Locking Pin

Insert VS125/R1 Crankshaft Locking Pin through the hole in the engine block and into the 'timing slot' in the crankshaft web. (Fig.2)

WARNING: Ensure the Locking Pin is correctly located in the 'timing slot' and not in the holes in the crankshaft web. If correctly fitted the Pin will 'lock' the crankshaft securely and enter fully up to the shoulder of the Pin. Move the crankshaft forwards and backwards slightly to check that the Pin is inserted correctly and securely in to the 'timing slot'

Fig.3



4.1.2 VS4861 Camshaft Setting Plate

With the crankshaft 'locked' in the correct position, check that the 'timing slots' in the rear of the camshafts are aligned horizontally and then fit VS4861 Setting Plate, securing its bracket to the engine. (Fig. 3)

Lock the flywheel and release the crankshaft pulley bolt – remove the crankshaft pulley. Slacken the belt tensioner nut and remove tensioner pulley and guide pulley.

NOTE: Tensioner and guide pulleys must be replaced when renewing timing belt.

Remove the old belt.

IMPORTANT: DO NOT allow the crankshaft gear to fall off the end of the crankshaft.

4.2 Fitting the new timing belt

Check exhaust camshaft sprocket timing marks are aligned and fit new tensioner and guide pulleys.

IMPORTANT: Ensure that the lug on the rear of the tensioner pulley is correctly positioned in the groove in the cylinder head.

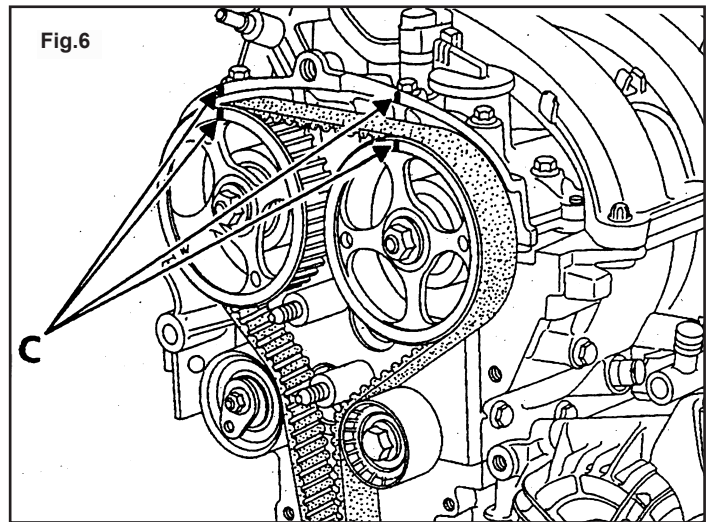


4.2.1 Degrease the crankshaft gear and end of the crankshaft and ensure the groove in the crankshaft is positioned central between the lugs on the engine front housing (Fig.4).

4.2.2 Slacken the tensioner nut and apply tension to the belt by turning the tensioner, with an Allen key, in a **clockwise** direction until the marks align. Temporarily tighten the tensioner nut. (Fig.5)

Lock the flywheel and tighten the crankshaft pulley bolt to 2daNm (20Nm.)

WARNING: Do not use the VS125/R1 Locking Pin to counter-hold the crankshaft whilst tightening the pulley bolt. The flywheel must be 'locked to provide this counter-hold position.



Fit new timing belt in an **anti-clockwise** direction commencing at the crankshaft gear. Ensure the belt is taut on the non-tensioned side. Tighten the tensioner pulley nut.

Degrease the crankshaft pulley and fit to the end of the crankshaft.

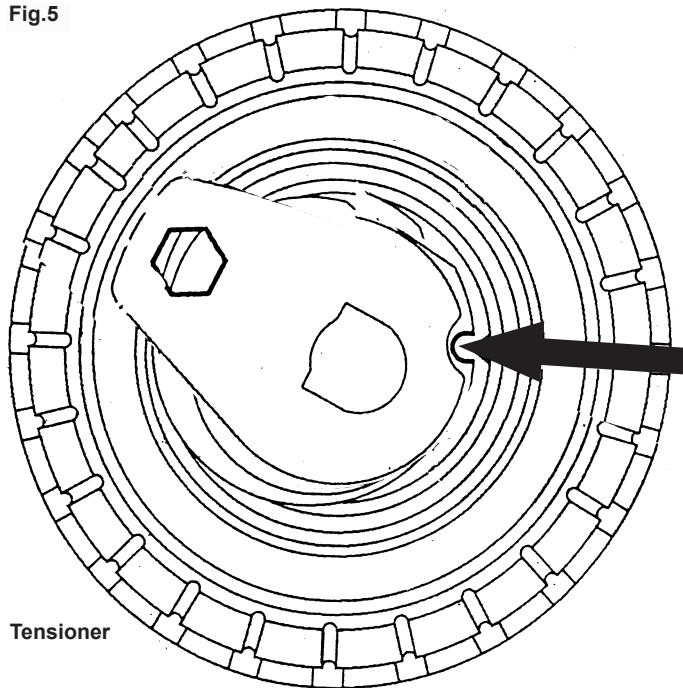
IMPORTANT: When screwing in the pulley bolt leave approx. 3mm clearance between the bolt head contact surface and the pulley.

NOTE: It is possible to re-use the pulley bolt if the length under the head is **49.1mm. or less.**

If longer than 49.1mm. it must be replaced.

IMPORTANT: DO NOT oil a new bolt. **DO** oil a re-used bolt.

Fig.5



Tensioner

4.2.3 NOTE: The crankshaft is now rotated to equalise belt tension, however it is useful to be able to determine the point at which the engine has returned to just before its timed position, to help with insertion of the Crankshaft Locking Pin. Therefore it is recommended to mark the camshaft sprockets at the 12-0-clock position with a paint / chalk mark and place a corresponding mark on the cylinder head directly behind them. (Fig. 6)

4.2.4 Remove the VS4861 Camshaft Setting Plate and VS125/R1 Crankshaft Locking Pin.

Lock the flywheel and tighten the crankshaft pulley bolt a further 115 degrees + 15 degrees

Rotate the crankshaft two turns in a **clockwise** direction and return to timing position, check marks on the camshaft sprockets align and 'timing slots' in the rear of camshafts are horizontal and below the surface line of the cylinder head.

Insert VS125/R1 Pin in to crankshaft and check that the VS4861 Setting Plate can be easily inserted into the camshaft 'timing slots'. Check that the tensioner marks align.

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.