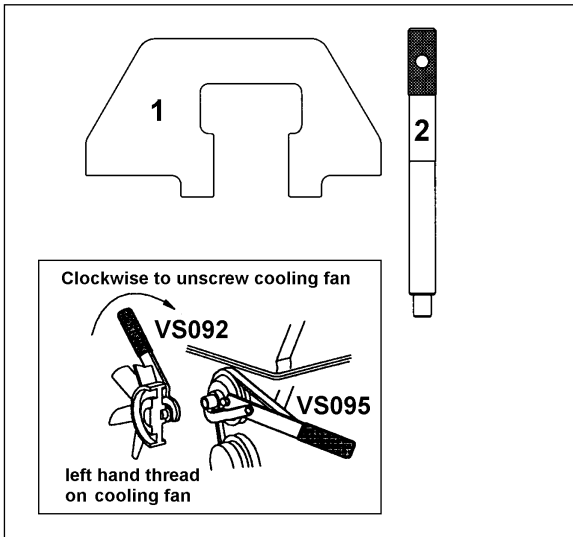


For: BMW 316i, 318i, 518i, M40/M43 ENGINES



STANDARD PARTS LIST	
1.	VS118/01 Camshaft locking plate
2.	VS118/02 Crankshaft locking pin

1. APPLICATIONS

VS118 kit is used to lock the camshaft and crankshaft TDC datum position to preserve their timing relationship when removing the timing belt on M40 engines, for servicing operations or timing belt replacement (may also be used on the M43 chain driven engine). Application requires removal of viscous fan using Fan Hub Wrench VS092 and Holding Tool VS095.

2. SAFETY INSTRUCTIONS

- WARNING!** Ensure all health and safety, local authority, and general workshop practice regulations are strictly adhered to when using tools.
- DO NOT** use tools if damaged.
- Maintain the tool in good and clean condition for best and safest performance.
- If required ensure the vehicle to be worked on is adequately supported with axle stands, 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 and parts being used and do not leave them near the engine.

IMPORTANT: Always refer to the vehicle manufacturer's service instructions, or proprietary manual to establish the current procedure and data. These instructions for use are provided as a guide only.

3. OPERATING INSTRUCTIONS

Ensure safety instructions and manufacturer's service instruction are adhered to.

WARNING! DO NOT turn crankshaft or camshaft when timing belt is removed. Keep tool in position. Check that locking tools have been removed after belt replacement before attempting to turn engine. Turn engine in the normal direction of rotation. Observe manufacturer's tightening torques and belt tension settings.

3.1. REMOVAL

- 3.1.1. Disconnect battery earth lead. Drain radiator. Remove fan hub using VS092 and holding tool VS095. Remove fan coupling and fan cowl, water pump pulley and alternator drive belt.
- 3.1.2. Remove distributor cap, rotor and ignition leads. Remove cylinder head cover and camshaft cover, together with vibration damper, and timing belt covers.
- 3.1.3. Turn crankshaft in the normal direction of rotation until piston in the 1st cylinder is at TDC. Insert locking pin VS118/02 in flywheel to lock crankshaft in TDC (fig 1).
- 3.1.4. Locate locking plate VS118/01 on flats at front of camshaft to lock camshaft at TDC (fig 2).
- 3.1.5. Loosen camshaft sprocket retaining bolt approximately half a turn. Loosen tension clamp nut and release belt tension. Remove timing belt.

3.2. INSTALLATION.

- 3.2.1. Ensure pin VS118/02 and plate VS118/01 are in position to hold crankshaft and camshaft at TDC.
- 3.2.2. Turn camshaft sprocket clockwise against stop. Fit timing belt to crankshaft sprocket, then camshaft sprocket, keeping the belt in tension between the sprockets. Fit belt round tensioner and guide sprockets.
- 3.2.3. Turn tensioner anti-clockwise to lightly tension belt. Fit BMW tension gauge to belt at position indicated in fig 3 and zero gauge. Turn tensioner anti-clockwise until the specified tension is indicated on the gauge.
- 3.2.4. Tighten nut on tensioner roller to specified torque. Tighten camshaft sprocket bolt to specified torque. Remove locking tools, rotate engine. Refit locking tools and tension belt using BMW gauge and temperature sensor to specified co-relation of cylinder head temperature and belt tension. Refit all parts and refill with coolant.

fig 1

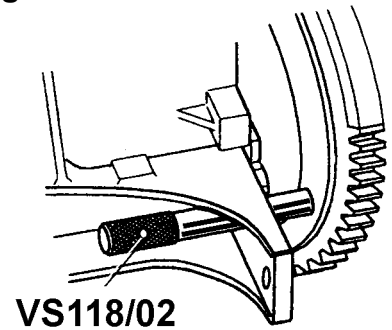


fig 2

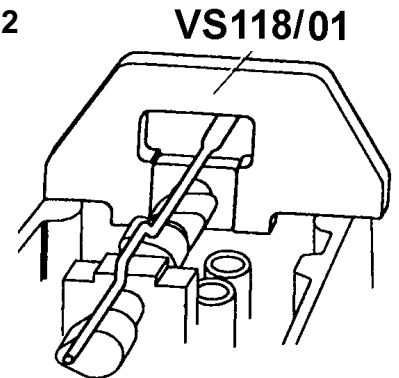
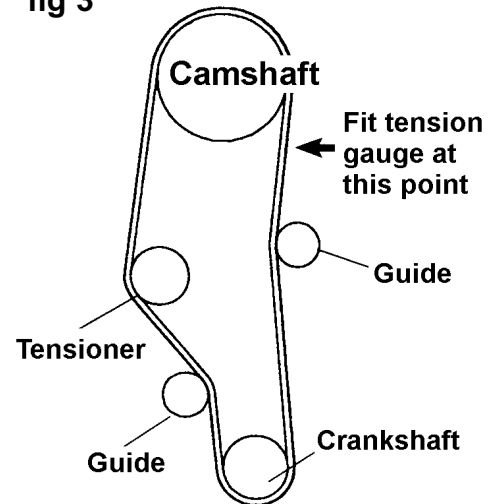


fig 3



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 product.

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

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