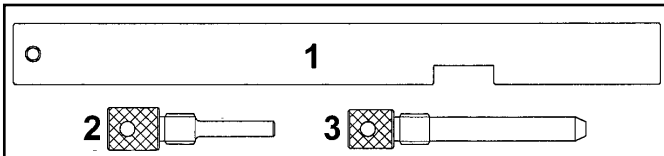


For use with Ford and Mazda twin camshaft engines (16v) - Update

FORD: 1.25, 1.4, 1.6, 1.7, 1.8 and 2.0 Twin Cam 16v ZETEC engines in Fiesta, Puma, Escort, Focus, Mondeo, Cougar.

MAZDA: 121 1.25 engine.

Refer to the Application Chart in Section 3 for specific model information.

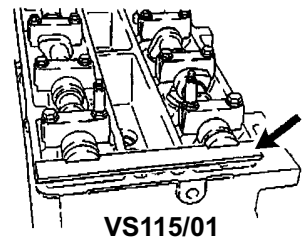


PARTS LIST		
1	VS115/01	Camshaft Setting Plate
2	VS115/02	Crankshaft TDC Location Pin
3	VS115/03	Crankshaft TDC Location Pin

1. SAFETY INSTRUCTIONS

- ✓ Maintain the tools in good and clean condition for best and safest performance.
- ❑ **WARNING!** Ensure that all Health & Safety, local authority and general workshop practice regulations are strictly adhered to when using these tools.
- ✗ DO NOT use tools if damaged.
- ❑ **WARNING!** Incorrect or out of phase camshaft timing can result in contact between the valve head and the piston crown, possibly causing damage to the engine. Incorrect injection pump timing may cause excessive smoke emissions, poor starting and a low power output.

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



2. OPERATING INSTRUCTIONS

2.1. CAMSHAFT SETTING PLATE VS115/01

On all Ford 16v twin cam engines, VS115/01 Setting Plate is used to lock the camshafts in the correct timing position via a slot at the rear of the camshafts.

2.1.1. For timing belt replacement the crankshaft must be positioned at TDC (see VS115/02 & VS115/03) and the camshaft 'locked' with VS115/01 Setting Plate.

Note: If the Cam Setting Plate cannot be inserted, remove Crankshaft Location Pin, turn crankshaft clockwise one turn and re-insert Pin to position crankshaft at TDC.

2.1.2. The tensioner can then be slackened and the crankshaft pulley and timing belt removed.

2.1.3. When fitting the new belt the camshaft sprockets should be loosened. Some camshafts provide a hexagon to locate a spanner to counter-hold the camshaft whilst releasing/tightening the centre bolts. Others require the use of a holding tool to counter-hold the sprockets.

❑ **WARNING!** These timing tools must NOT be used to counter-hold the crank or camshaft for releasing/tightening the pulley/sprocket bolt. They are for retention of engine timing position only. Use appropriate holding tools.

2.1.4. After fitting the new belt, apply tensioner following manufacturer's procedure and tighten cam sprocket bolts.

2.1.5. Remove all locking tools and rotate engine carefully by hand at least two revolutions.

2.1.6. Return to TDC and re-check camshaft position by re-fitting VS115/01 Setting Plate.

2.1.7. If it does not easily fit into the slots, re-check tensioning procedure again.

2.2. CRANKSHAFT TDC LOCATION PINS VS115/02 & VS115/03

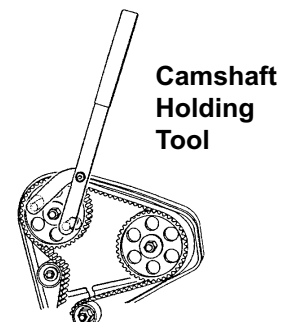
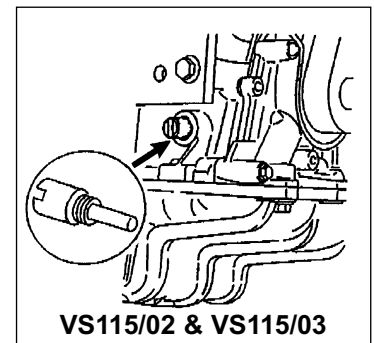
Dependent upon engine type, Location Pin VS115/02 or VS115/03 is used to ensure that the correct crank TDC position is established and maintained during timing belt renewal (see Application Chart).

2.2.1. Remove the engine/crank blanking plug to allow the pin to be screwed into position.

2.2.2. Carefully rotate the crankshaft until the web rests against the pin.

2.2.3. Insert VS115/01 Setting Plate to maintain correct positioning of the camshafts during belt renewal.

Note: For Fiesta/Escort 1.6i/1.8i and Mondeo 1.6/1.8/2.0 (-98) engines, only VS115/01 Cam Setting Plate is used. A crank pin entry point is not provided.



3. APPLICATION CHART

Twin Cam 16v Petrol Engines	VS1152 Tools	Additional Camshaft Holding Tool
Ford		
Fiesta 1.25/1.4 (-97)	VS115/01 & VS115/02	Required
Fiesta 1.25/1.4 (97-), Puma 1.4/1.7, Focus 1.4/1.6	VS115/01 & VS115/02	
Fiesta 1.6i/1.8i XR2/RS, Escort 1.6i/1.8i, Mondeo 1.6/1.8/2.0 (-98)	VS115/01	Required
Focus 1.8/2.0, Mondeo 1.6/1.8/2.0 (98-), Cougar 2.0	VS115/01 & VS115/03	Required
Mazda		
121 1.25	VS115/01 & VS115/02	Required

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

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