



DIESEL ENGINE SETTING/LOCKING KIT FORD 2.0TDCI ECO BLUE - BELT DRIVE

MODEL NO: **VSE5640**

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 & 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 protective gloves



Wear eye protection



Wear protective clothing

1. SAFETY

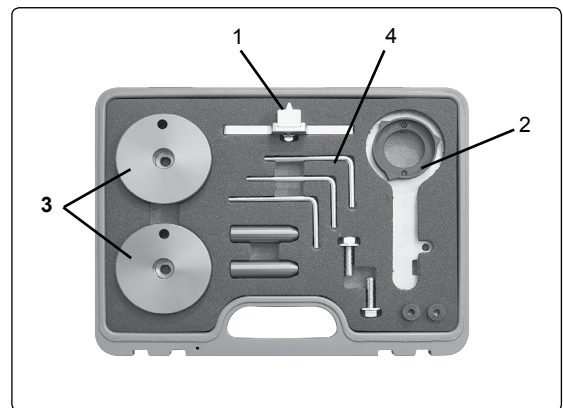
- WARNING!** Wear approved eye protection. Wear appropriate Personal Protective Equipment. A full range of Personal Protective Equipment is available from your Sealey stockist.
- WARNING!** Ensure that Health & Safety, Local Authority Regulations and general workshop practice Regulations are adhered to when using tools.
- ✗ **DO NOT** use tools if damaged.
- ✓ Maintain tools to ensure that they are in an adequate condition for safe use and optimum performance.
- ✓ Ensure that a vehicle that has been raised by a jack is adequately supported. Use axle stands.
- ✗ **DO NOT** attempt to start or move a vehicle whilst in gear and with timing devices fitted.
- ✓ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery. Tie back long hair.
- ✓ Account for all tools, parts and components being used. **DO NOT** leave these in or near the engine. Return tools to suitable storage after use.
- ✓ When not in use, store in a safe, dry childproof place.
- ✓ Keep children and unauthorised persons away from the work area.
- ▲ **IMPORTANT!** These instructions are intended as a guide only. Always refer to the vehicle manufacturer's service instructions or a proprietary manual to establish the correct procedure and data.
- WARNING!** The warnings, conditions and instructions in this manual cannot cover all possible conditions and situations. The Operator/ User must apply caution and common sense (good practical sense).
- ✓ When timing an engine, always prevent the engine from being turned over. Use a notice and/or inhibit the engine.
- WARNING!** Incorrect or out of phase camshaft timing can result in contact between the valve head and the piston crown. This will cause damage to the engine.

2. INTRODUCTION

Designed to fit the new generation of Ford EcoBlue belt in oil diesel engines. Contains the special tooling essential for locking the engine in its timing position. Includes tools for fitting the timing belt onto the camshafts. Supplied in a storage case with warning tag and full instructions.

3. SPECIFICATION

Item	Sealey Part No.	Description	OEM Number
1	VSE5640-01	Flywheel locking tool	303-1643
2	VSE5640.02	Crankshaft alignment tool	303-1637
3	VSE5640.03	Timing belt installation tools (2)	303-1650
4	VSE5640.04	Locking pins (3)	N/A



4. APPLICATIONS

Models:	Engines
Ford	2.0TDCi
Transit (16-18)	YLFS
Transit Custom (16-18)	YLF6
Tourneo Custom (16-19)	YMFS
	YNFS
	YMF6
	YNF6
	YLR6
	YMR6
	YNR6

5. OPERATION

5.1. REMOVAL

- 5.1.1. Remove the starter motor and fit the VSE5640.01 Flywheel Locking Tool using the bolts provided. (fig.1)
- 5.1.2. Remove the auxiliary drive belt, crankshaft pulley and timing belt cover.
NOTE: on some variants the auxiliary drive belt will have to be cut off, all auxiliary belts will have to be replaced regardless of variant. The timing cover will require replacement as these cannot be reused.
- 5.1.3. Remove the flywheel locking tool, refit the crankshaft pulley bolt and turn the crankshaft in the direction of rotation to TDC on cylinder number one, the camshaft timing datum holes should be at the 12 o'clock position. (fig.2)
- 5.1.4. The crankshaft timing gear and intermediate shaft timing marks should be aligned at the 7 o'clock position.
- 5.1.5. Remove the crankshaft pulley bolt and fit the VSE5640.02 Crankshaft Alignment Tool and secure to the cylinder block. (fig.3)
- 5.1.6. Assemble the VSE5640.03 and fit them onto the camshafts. Fit the VSE5640.04 locking pins ensuring they are correctly located into the datum points in the cylinder head. (fig.4)
- 5.1.7. Using an 8mm hex key, release the timing belt tensioner and lock in its retracted position using a VSE5640.04 locking pin.
- 5.1.8. The timing belt and tensioner can now be removed.

5.2. INSTALLATION

- 5.2.1. Ensure the camshaft sprockets are correctly locked (fig.4). Fit the VSE5640.02 Crankshaft Alignment Tool and secure to the cylinder block. (fig.3)
- 5.2.2. Fit a new timing belt tensioner and tighten the securing bolt to 25 Nm.
- 5.2.3. Fit the new timing belt in a clockwise direction starting at the intermediate sprocket.
- 5.2.4. Remove the tensioner locking pin.
- 5.2.5. Remove all tooling and fit the old crankshaft pulley bolt.
- 5.2.6. Turn the engine through four revolutions and return it to TDC on number one cylinder.
- 5.2.7. Remove the crankshaft pulley bolt, fit the VSE5640.02 Crankshaft Alignment Tool. Fit the VSE5640.04 locking pins ensuring they are correctly located into the datum points in the cylinder head.
- 5.2.8. Once the camshaft timing has been confirmed as correct, remove all tooling.
- 5.2.9. Refit the VSE5640.01 Flywheel Locking Tool.
- 5.2.10. The timing belt cover can now be fitted using the recommended sealant. The sequence of tightening and the torque required for the fixing bolts varies by application therefore the manufacturer's information must be followed for each application.
- 5.2.11. Once the timing cover has been correctly fitted the new front pulley bolt can be fitted following the tightening procedure as follows;
 - Stage 1: Tighten to 10 Nm.
 - Stage 2: Slacken 60°
 - Stage 3: Tighten to 20 Nm.
 - Stage 4: Tighten to 70 Nm.
 - Stage 5: Tighten to 150 Nm.
 - Stage 6: Slacken 90°
 - Stage 7: Tighten to 100 Nm.
 - Stage 8: Tighten to 300 Nm.
 - Stage 9: Tighten by 90°
- 5.2.12. Remove the VSE5640.01 Flywheel Locking Tool.

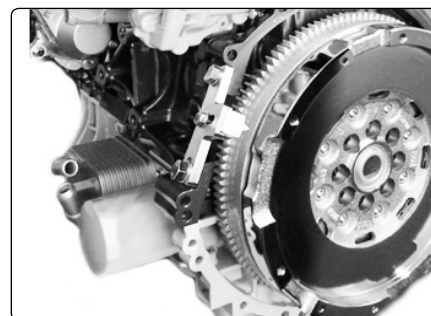


fig.1

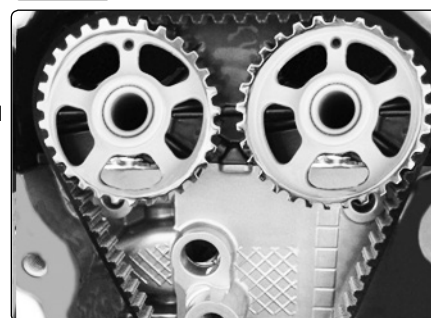


fig.2

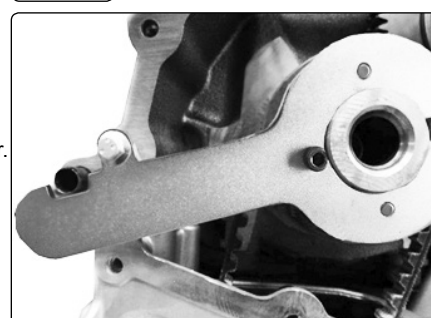


fig.3

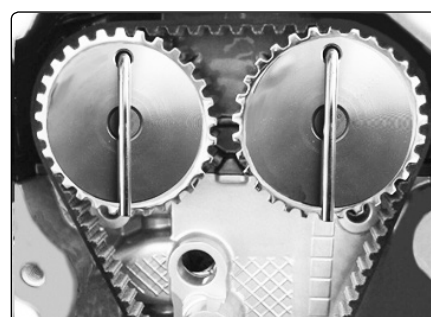


fig.4



ENVIRONMENT 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 and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids 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. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.

Important: No Liability is accepted for incorrect use of this product.

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

Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk. IP32 7AR



01284 757500



01284 703534



sales@sealey.co.uk



www.sealey.co.uk