Laser 6617

Laser 6617 Engine Timing Tool Kit Instruction Manual

For Vauxhall/Opel 1.6 CDTi Engines

1. Introduction

This manual provides instructions for the safe and effective use of the Laser 6617 Engine Timing Tool Kit. This kit is specifically designed for accurately locking the 1.6 diesel engine in its timed position, which is essential for the removal and replacement of the timing chain. The kit includes a specialized camshaft support bracket, required when the camshaft needs to be removed for maintenance procedures involving cam followers.

Proper use of this tool kit ensures correct engine timing, preventing potential engine damage during service. Always refer to the vehicle manufacturer's service manual for specific procedures and torque settings.

2. Safety Information

Always observe general workshop safety practices when using this tool kit. Failure to follow safety precautions can result in personal injury or damage to the vehicle.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands or a lift before commencing work.
- Disconnect the vehicle's battery before performing any engine work to prevent accidental starting.
- Ensure the engine is cool before working on it.
- Keep the work area clean and well-lit.
- Do not use damaged or modified tools.
- This tool kit is intended for use by qualified personnel with experience in automotive engine repair.

3. Kit Contents

The Laser 6617 Engine Timing Tool Kit includes the following components:

- Crankshaft Locking Pin
- Camshaft Locking Tool
- Camshaft Support Bracket

- Associated Fasteners and Pins

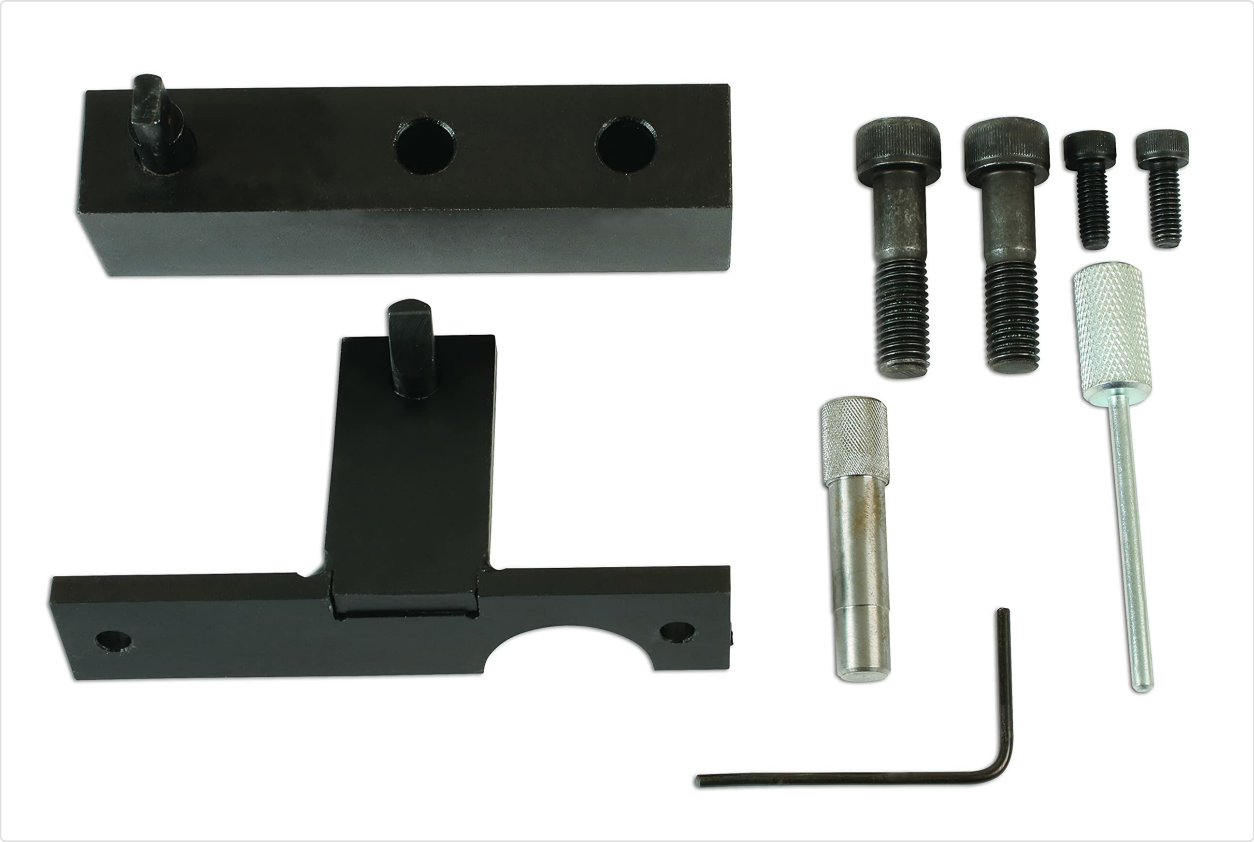

Figure 1: Overview of the Laser 6617 Engine Timing Tool Kit components.

4. Applications

This tool kit is compatible with the following Vauxhall/Opel vehicles equipped with 1.6 CDTi Ecoflex diesel engines:

- Astra-J
- Astra-K
- GTC
- Insignia-A
- Meriva-B
- Mokka
- Mokka X
- Zafira-C Tourer (from 2013 onwards)

Applicable Engine Codes:

- B16DTC
- B16DTE
- B16DTH
- B16DTJ
- B16DTL
- B16DTN
- B16DTR
- B16DTU

5. Setup

Before using the timing tool kit, ensure the following preparatory steps are completed:

1. Park the vehicle on a level surface and engage the parking brake.
2. Ensure the engine is cool.
3. Disconnect the negative terminal of the vehicle's battery.
4. Remove any components obstructing access to the timing chain cover, crankshaft, and camshafts as per the vehicle manufacturer's service manual.
5. Rotate the engine manually to the Top Dead Center (TDC) position for cylinder 1, or as specified by the vehicle manufacturer for timing chain service.

6. Operating Instructions

The following steps outline the general procedure for using the Laser 6617 Engine Timing Tool Kit. Always consult the specific vehicle manufacturer's repair manual for detailed, model-specific instructions.

1. **Crankshaft Locking:** Insert the crankshaft locking pin into the designated hole on the engine block to secure the crankshaft in its timed position. Ensure it is fully engaged.
2. **Camshaft Locking:** Position the camshaft locking tool onto the camshaft sprockets. This tool will align the camshafts correctly. Secure it with the provided fasteners if applicable.
3. **Camshaft Support Bracket (if required):** If the camshaft needs to be removed for cam follower service, install the camshaft support bracket as per the vehicle manufacturer's instructions. This bracket provides necessary support during camshaft removal and reinstallation.
4. **Timing Chain Service:** With the crankshaft and camshafts locked, proceed with the timing chain removal and replacement as detailed in the vehicle's service manual.
5. **Reassembly:** After replacing the timing chain and related components, remove the timing tools in reverse order of installation.
6. **Verification:** Manually rotate the engine two full revolutions and re-check the timing marks to ensure correct alignment before starting the engine.

7. Maintenance

To ensure the longevity and accuracy of your Laser 6617 Engine Timing Tool Kit, follow these maintenance guidelines:

- Clean all components thoroughly after each use to remove oil, grease, and debris.
- Inspect tools for any signs of wear, damage, or deformation. Do not use damaged tools.
- Apply a light coat of rust preventative oil to metal components before storage.
- Store the kit in its original case in a dry, clean environment to protect it from corrosion and physical damage.

8. Troubleshooting

If you encounter issues while using the timing tool kit, consider the following:

- **Tools not fitting:** Double-check that the vehicle model and engine code match the applications listed in this manual. Ensure the engine is at the correct timing position (e.g., TDC for cylinder 1).

- **Difficulty locking components:** Ensure all obstructing components have been removed and that the engine is rotated to the precise timing position. Do not force the tools into place.
- **Engine timing issues after service:** Re-verify all timing marks and tool installations. Consult the vehicle manufacturer's service manual for specific timing procedures and checks.

For persistent issues or technical support, contact the manufacturer or your tool supplier.

9. Specifications

Specification	Detail
Brand	Laser
Model Number	6617
Manufacturer Part Number	LAS6617
Original Part Numbers (Cross-reference)	EN50513, EN51140, EN51143, EN6130
Product Dimensions	2.8 x 15 x 22.5 cm
Item Weight	630 g

Figure 2: The 'Made in Sheffield' logo, indicating the origin of the product.

10. Warranty and Support

For information regarding product warranty, please refer to the documentation provided with your purchase or visit the official Laser Tools website. For technical support, spare parts, or any inquiries not covered in this manual, please contact The Tool Connection Ltd directly or your authorized Laser Tools distributor.

Contact information can typically be found on the product packaging or the manufacturer's official website.