

Engine Timing Tool Set for Fiat, Ford, Lancia 1.2 & 1.4 8V



TOOLS

- 1 Crankshaft Locking Tool, to be used as OEM Fiat, Lancia 2.000.004.500, Ford 303-1480
- 2 Camshaft Setting Tool, to be used as OEM Fiat, Lancia 2.000.004.400, Ford 303-1479
- 3 Camshaft Sprocket Locking Tool, to be used as OEM Fiat, Lancia 2.000.004.200, Ford 303-1477
- 4 Camshaft Cover Aligner, to be used as OEM Fiat, Lancia 2.000.004.300, Ford 303-1478
- 5 Tensioner Adjuster, to be used as OEM Fiat, Lancia 1.860.987.000

INTENDED USE

This tool kit helps adjusting the engine control time and is suitable for Fiat, Lancia and Ford 1.2L and 1.4L 8V engines.

More information regarding this item and a list of suitable engines and models can be found on our website: www.bgstechnic.com

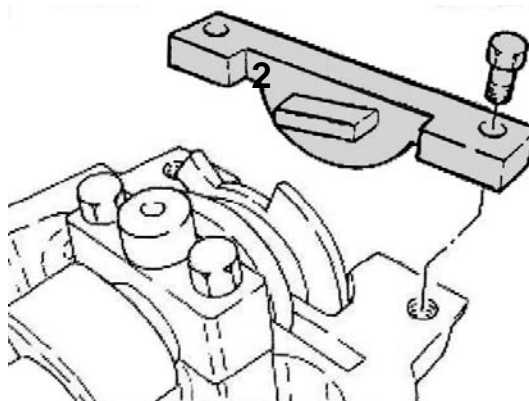
SAFETY INFORMATION

- Do not use the tool if parts are missing or damaged.
- Use the tool for the intended purpose only.
- Never place the tool on the vehicle battery. There is a risk of a short circuit.
- Be careful when working with the engine running. Loose clothing, tools and other objects can be caught by rotating parts and cause serious injury.
- Keep children and other unauthorized persons away from the work area.
- Be careful when working on hot engines because of the risk of burn injuries.
- If you remove the ignition key before repairing, you can prevent the engine from being started accidentally and resulting in engine damage.
- This manual serves as a brief guide and does not replace a workshop manual. Always refer to the vehicle-specific service literature, particularly the technical data such as torque values and instructions for disassembly/assembly, etc.
- After repair or before starting the engine, turn a minimum of 2 turns by hand and check the timing again.
- Turn the engine only in the normal direction of rotation (clockwise unless otherwise specified)

1.2L 8V Engine

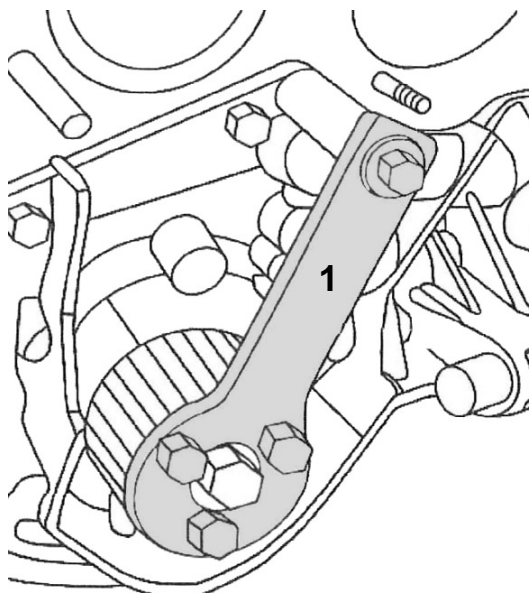
Turn the crankshaft to the 'timed' position. Check that the 'notch' in the rear of the camshaft is at the top and ensure that the camshaft timing is correct by installing Setting Tool into the slot in the rear of the camshaft and fix in place with two bolts.

IMPORTANT: When releasing/tightening the camshaft sprocket bolt a suitable sprocket holding tool must be used to counter hold the sprocket. DO NOT use the timing tools as the counter-hold.



Check that the crankshaft is in 'timed' position and attach Locking Tool to the crankshaft gear using the 3 x M8 Hex.

Cap Screws provided, and fix it to the engine, in the position shown, using the M6x30 Cap Screw supplied in the kit.



Slacken the belt tensioner and remove the old belt.

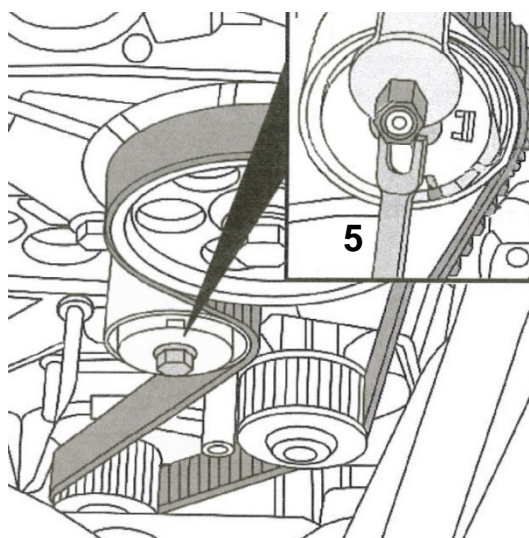
The Tensioner Adjuster pegs locate into the two holes in the tensioner.

The tensioner is initially adjusted to its maximum tension setting and the tensioner nut tightened.

Counter hold the camshaft sprocket using a suitable sprocket holding tool and tighten the sprocket bolt. Remove both timing tools and turn the engine, by hand, two complete revolutions, returning to the 'timed' position.

Insert Tensioner Adjuster into the tensioner and maintain the belt tension whilst slackening the tensioner nut. Allow the tensioner to achieve the final position with the pointers aligned, and tighten the nut.

A check should be made to ensure the engine timing is correct by installing the Camshaft Setting and Crankshaft Locking tools checking that they locate correctly.

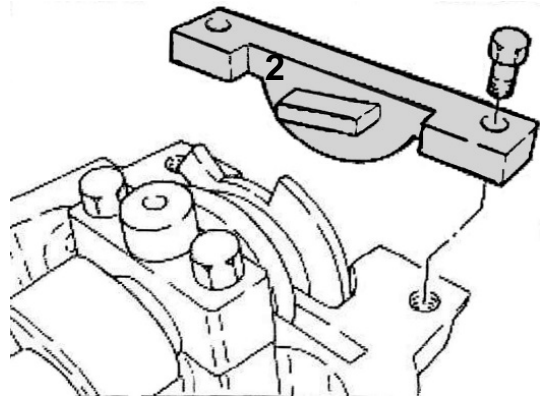


1.4 8v (VVT) Engine

Note: It is useful to mark the camshaft sprocket/adjuster position (chalk/paint) before removing the timing belt to assist positioning on installation.

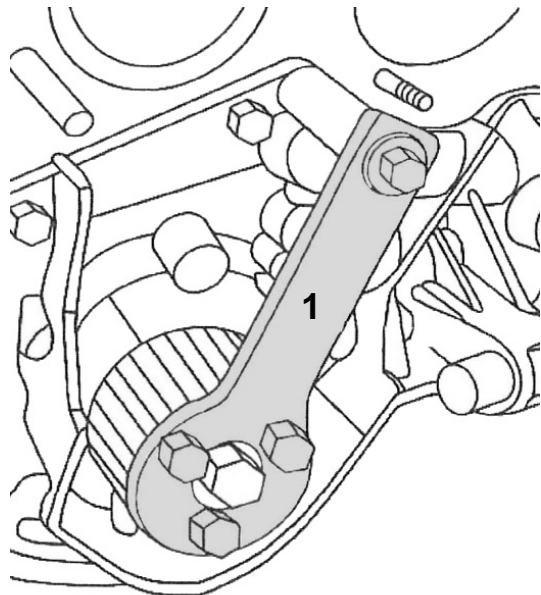
Turn the crankshaft to 'timed' position. Check that the 'notch' in the rear of the camshaft is at the top and ensure that the camshaft timing is correct by installing the Setting Tool into the slot in the rear of the camshaft and fix in place with two bolts.

IMPORTANT: When releasing/tightening the camshaft sprocket bolt a suitable sprocket holding tool must be used to counter hold the sprocket. DO NOT use the timing tools as the counter-hold.



Check that the crankshaft is in 'timed' position and attach Locking Tool to the crankshaft gear using the 3 x M8 Hex.

Cap Screws provided, and fix it to the engine, in the position shown, using the M6x30 Cap Screw supplied in the kit.

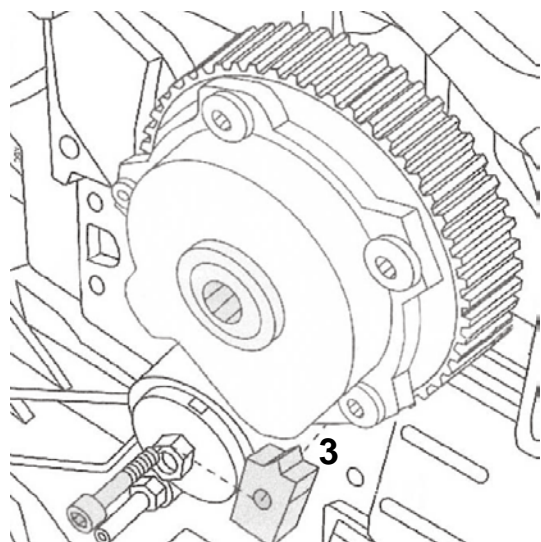


The Locking Tool locates into the teeth of the camshaft sprocket and bolted to the engine in order to hold the sprocket whilst the sprocket bolt is released.

Firmly secure in place using the bolt provided in the kit.

Remove the sprocket bolt cover (be prepared for oil leakage), and slacken the sprocket bolt sufficient to allow the sprocket to turn, but not tilt.

IMPORTANT: Remove the Sprocket Locking Tool.



Install the timing belt.

Locate the pegs of the Tensioner Adjuster into the two holes in the tensioner and turn it to maximum tension setting.

Tighten the tensioner nut.

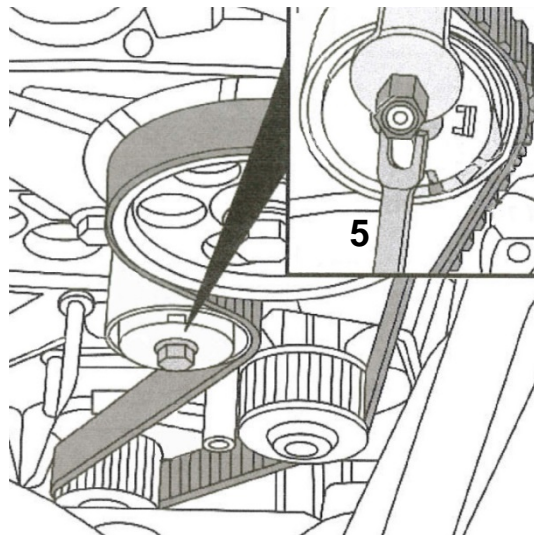
Firmly secure the Sprocket Locking Tool to the engine, ensuring it fully engages the sprocket teeth.

IMPORTANT: Replace the existing sprocket bolt with a new bolt.

Tighten the sprocket bolt to specified torque and replace the bolt cover.

Remove both timing tools and turn the engine, by hand, two complete revolutions, returning to the 'timed' position.

Insert Tensioner Adjuster into the tensioner and maintain the belt tension whilst slackening the tensioner nut. Allow the tensioner to achieve the final position with the pointers aligned, and tighten the nut. A check should be made to ensure the engine timing is correct by installing the Camshaft Setting and Crankshaft Locking tools checking that they locate correctly.



It is imperative to use Aligner when fitting the camshaft cover in order to ensure correct alignment to the cylinder head, ensuring that the camshaft timing sensor can be positioned correctly.

The sensor hole must be positioned correctly relative to the camshaft.

The Aligner is attached at 4 locations during the fitting of the cover, 2 on the cylinder head and 2 on the camshaft cover, to ensure alignment.

