



Timing Tools For Opel 1.0-1.2 3 Cylinders Engines

User's manual

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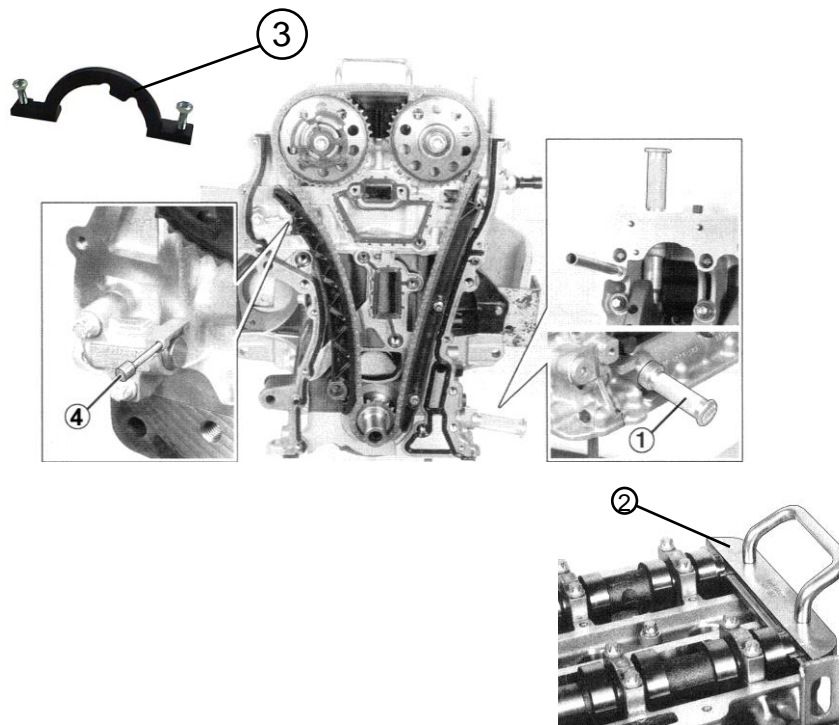
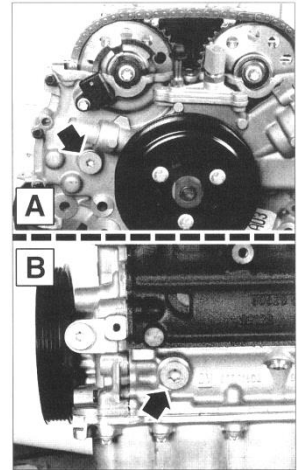
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Set of tools for crankshaft and camshaft timing on

OPEL 1.0 - 1.2 12v. e 16 v.

TIMING

- Rotate the engine till reaching TDC "ignition" at 1° cylinder. The notch on the distribution guard has to be a little bit ahead to the notch on the crankshaft pulley. The cams of the 1° cylinder have to be oriented externally.
- Remove the lid of the TDC timing pin on the cylinders block (see fig. A)
- Insert the pin (1) in the hole than rotate slowly the crankshaft following the rotating sense of the engine until the pin is introduced in the plate of the cylinders block or in the crankshaft collar. Now the notches on the crankshaft pulley and on the distribution guard has to be aligned
- Introduce the locker (2) to fix the camshafts (see fig.).
- Place the tool (3) for the timing of the aspiration camshaft sensor.



ADJUSTMENT

- Remove the tools (2 and 3).
- Remove the plug of the chain tensioner on the distribution guard (fig. A).
- Block the chain tensioner with the pin (4) and the aspiration camshaft with a face wrench suitable for pulleys, rotating following the engine rotation.
- Remove the locking screws of the camshaft sprockets.
- Join the new locking screws on the camshaft sprockets, manually tighten (the disc of the aspiration camshaft sensor must rotate manually).
- Rotate carefully the camshafts using the hexagons till the locker (2) is introduced into the shafts' holes.
- Control that the cams have reached the TDC "ignition" on the 1° cylinder. They have to be oriented externally.
- Remove the chain tensioner pin (4).
- Rotate the disc of the camshaft position sensor until the tool (3) is mounted on the distribution guard.
- Now screw only at 1 Nm the locking screws of the camshafts (starting the aspiration)
- Remove the tools (1, 2 e 3).
- Tighten definitively the locking screws of the camshaft sprockets.
- Make the crankshaft execute a complete rotation twice, in the spin sense; then reach the TDC of the 1° cylinder
- Place the pin (1).
- The notches on the crankshaft pulley on the distribution guard have to be aligned.
- The cams has to be oriented externally.

Place again the locker (2) and the tool (3). Now they go easily in the camshaft position sensor and in the distribution guard. If this does not happen, repeat the timing operation.

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