

# NT 05007 VKMA/C 05202

Vauxhall / Opel


VKMA 05202

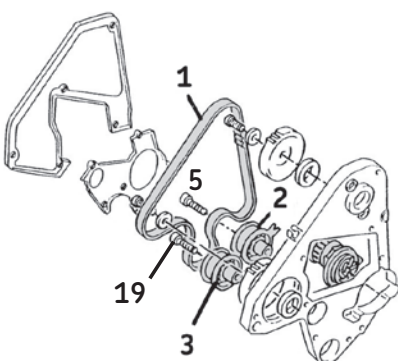



VKMC 05202

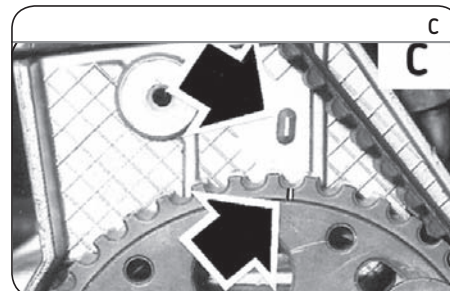
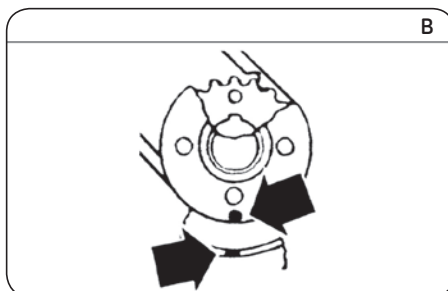


**A**

 (4): TDC setting tool (KM-851).



 (5): 20 Nm  
(19): 40 Nm



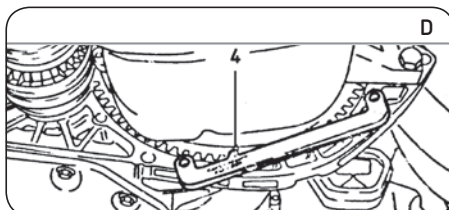
### Removal

- 1) Disconnect the battery according to the vehicle manufacturing guidelines.
- 2) Prepare the vehicle for the timing replacement according to the vehicle manufacturing guidelines.
- 3) Lock the flywheel and remove the crankshaft pulley.
- 4) Remove the upper and lower timing covers.
- 5) Engage 4th gear and lift the right front wheel.
- 6) Turn the raised wheel to bring the cylinder n° 1 piston to TDC by aligning:
  - 17DR engines: the marks on the crankshaft sprocket (**Fig. B**) and the injection pump sprocket (**Fig. C**) with the indicator marks on the timing casing;
  - X17DTL engine: the mark on the flywheel opposite the point of the tool (4) (**Fig. D**). The mark on the injection pump sprocket must then be aligned with the indicator mark on the timing casing (**Fig. C**).
- 7) Loosen the fastening bolt (5) of the tensioner roller (2) and rotate the setting plate (6) **clockwise** (**Fig. E**). Loosen and remove the timing belt (1).
- 8) Remove the tensioner roller (2) and idler roller (3) (**Fig. A**).
- 9) **Removing the water pump (VKMC 05202):** firstly bleed the cooling circuit, check it is clean, and clean if required; secondly full loosen the water pump fastening bolts and remove the pump.

### Refitting

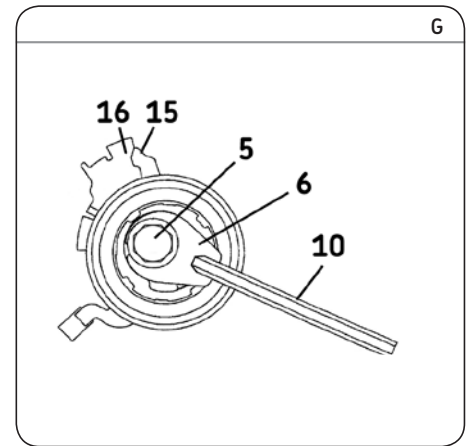
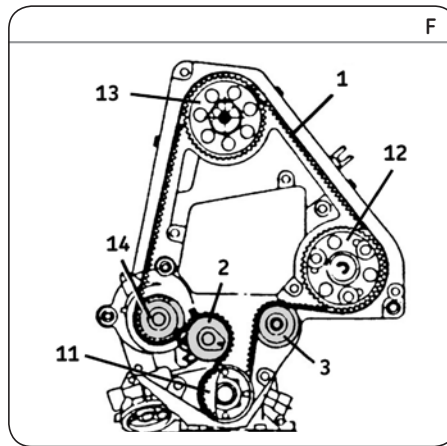
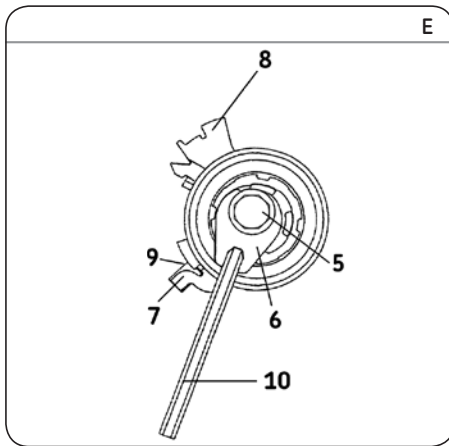
**Caution!** First carefully clean thoroughly the bearing surfaces of the rollers and of the tensioning device.

- 10) Refitting the water pump: firstly fit the new water pump, apply TORQUE to manufacturer recommendations then check that the water pump pulley runs properly, and has no hard or locking spots.
  - 11) Fit the new idler roller (3) and tighten its fastening bolt (19) to **40 Nm**.
  - 12) Fit the new tensioner roller (2).
- Note:** When refitting the new tensioner roller (2), check that the positioning stud (7) on the roller plate (8) is correctly engaged in the slot (9) of the engine block (**Fig. E**).
- 13) Using the Allen key (10), set the setting plate (6) of the tensioner roller to the "7 o'clock" position (**Fig. E**). Using an open-ended spanner, loosen the fastening bolt (5) slightly (**Fig. E**).
  - 14) Fit the timing belt in the following order: crankshaft sprocket (11), idler roller (3), injection pump sprocket (12), camshaft sprocket (13), water pump sprocket (14) and tensioner roller (2) (**Fig. F**).



**Install Confidence**



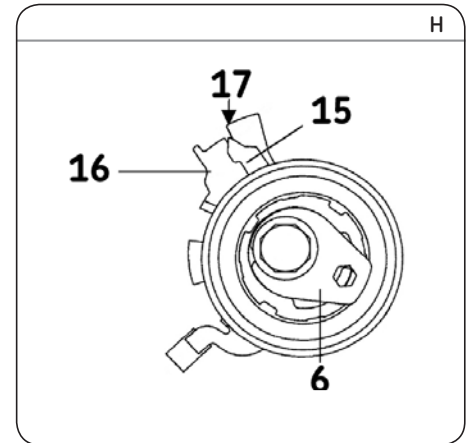


- 15) Lock the fastening bolt (5) using an opened spanner. Rotate the setting plate (6) on the tensioner roller in an **anti-clockwise** direction using the Allen key (10) until it reaches the maximum tension position. The moving pointer (15) is then aligned with the right edge of the plate (16) (Fig. G)

**Note:** The moving pointer must not go past the right edge of the plate.

- 16) Lock the tensioner roller in this position by tightening the fastening bolt (5) to **20 Nm**.
- 17) Rotate the crankshaft two turns in the engine rotation direction (**clockwise**) until the timing point is reached, cylinder Nr 1 at TDC. Check that the various marks are aligned (Fig. B), (Fig. C) and (Fig. D).
- 18) Place the Allen key (10) in the tensioner roller setting plate (6) and loosen the fastening bolt (5) using an opened spanner (Fig. E).
- 19) Rotate the setting plate (6) **clockwise** to align the moving pointer (15) with the notch (17) in the tensioner roller plate (16) (Fig. H).
- 20) Tighten the tensioner roller fastening bolt (5) to **20 Nm** by locking the setting plate (6) with the Allen key.

- 21) Rotate the crankshaft two turns in the engine rotation direction up to TDC.
- 22) Check the tensioner roller setting: the moving pointer (15) must be aligned with the notch (17) on the tensioner roller plate (16) (Fig. H).
- 23) If the marks are not aligned, remove the new timing belt and adjust the belt tension again, by returning to step 12).
- 24) Refit the timing casings.
- 25) Lock the flywheel and refit the crankshaft accessory pulley.
- 26) Refit the removed elements in reverse order to removal :
- 27) Fill the cooling circuit with the permanent fluid recommended.
- 28) Check the circuit's leak-tightness when the engine reaches its running temperature and secure the level of coolant when the engine is at ambient temperature (20 °C).



**Notice:** Always follow the vehicle manufacturer instructions when working on the engine. The SKF KITS are designed for the automotive repair professional and must be fitted using tooling used by these professionals. These instructions are to be used as a guideline only. This document is the exclusive property of SKF. Any representation, partial or full reproduction, is forbidden without prior written consent from SKF.