


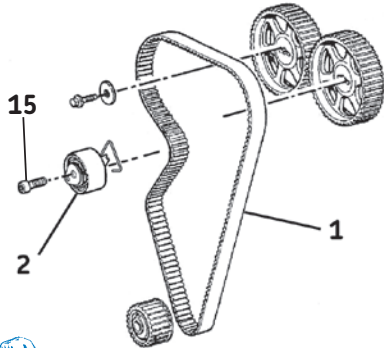
VKMA 07301

VKMC 07301



A

-  (5): Locking tool for camshaft sprockets (ref. 18G1570).
- (6): All types except Rover 75: flywheel locking tool (ref. 18G1571 or 18G1742).
- (6): Rover 75: flywheel locking tool (ref. 12-170).
- (14): 6 mm Allen key.



(15): 25 Nm

Removal

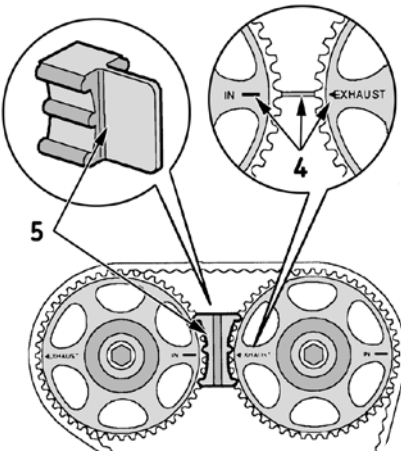
- 1) Disconnect the battery according to the vehicle manufacturing guidelines.
- 2) Prepare the vehicle for the timing replacement according to the vehicle manufacturing guidelines.
- 3) Turn the crankshaft **clockwise** until the timing position is reached: the marks (4) (Fig. B) on the camshaft sprockets are aligned.
- 4) Fit the tool (5) (Fig. B) to lock the camshaft sprockets and tool (6) (Fig. C) to lock the flywheel.
- 5) Remove the auxiliary belt.
- 6) Remove the crankshaft pulley (7) (Fig. D).
- 7) Remove the lower timing casing (8) (Fig. D).
- 8) Loosen the tensioner roller fastening bolt (15), then slacken and remove the timing belt (1) (Fig. D).
- 9) Remove tensioner roller (2).
- 10) **Removing the waterpump (VKMC 07301):** Firstly bleed the cooling circuit, check it is clean, and clean if required; secondly fully loosen the water pump fastening bolts and remove the pump.

Refitting

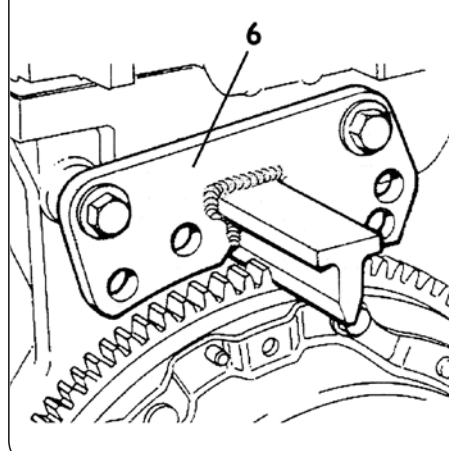
Caution: Clean the bearing surfaces of the rollers.

- 11) **Refitting the water pump:** Firstly fit the new water pump, then check that the water pump pulley runs properly, and has no hard or locking spots.
- 12) Check that the engine is in the timing position: the camshaft sprocket marks (4) and (9) (Fig. B and E) and crankshaft sprocket (10) marks (Fig. E) are aligned.
- 13) Refit the new tensioner roller (2): fit the pin (11) on the locking bolt (12) (Fig. F). Turn the adjustment dial (13) using the Allen key (14) (Fig. D) until it reaches the "9 o'clock" position, then tighten the fastening screw (15) on the tensioner roller slightly by hand (Fig. F).

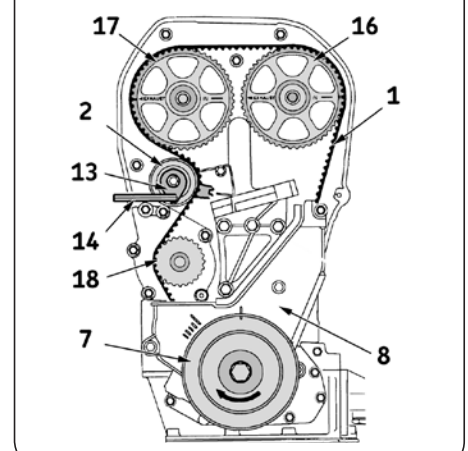
B



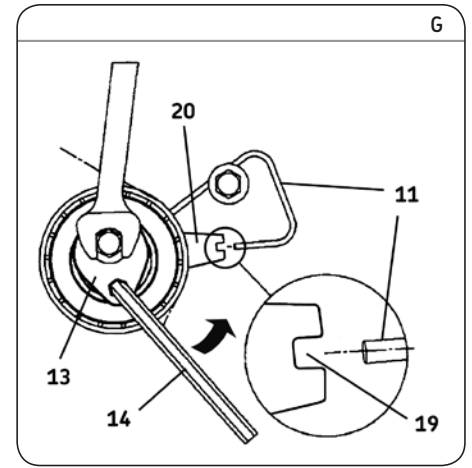
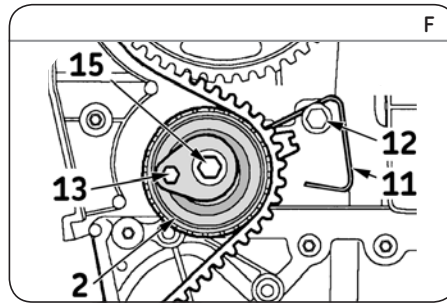
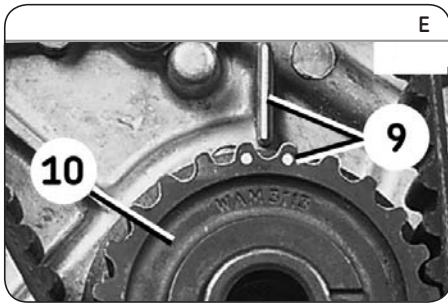
C



D



Install Confidence



- 14) Refit the new timing belt (1) in the following order: crankshaft sprocket, camshaft, camshaft, water pump pulley, and tensioner roller (2) (Fig. D).
- 15) Tighten the timing belt (1): turn the adjusting hub (13) on the tensioner roller (2) **anticlockwise** using the Allen key (14), while holding the roller fastening bolt in position using a hex nut spanner (Fig. G). Continue turning the adjusting hub until the notch (19) in the rear plate (20) of the tensioner roller is aligned with the rod (11) (Fig. G). Then tighten the fastening nut to 25 Nm.

Note: Check that the belt is under tension between the camshaft sprockets, crankshaft sprocket and the water pump pulley.

- 16) Refit the lower timing casing (8) (Fig. D).
- 17) Refit the crankshaft pulley (7) (Fig. D)
- 18) Remove the flywheel locking tool (6) (Fig. C).
- 19) Remove the camshaft sprocket locking tool (5) (Fig. B).
- 20) Rotate the crankshaft two turns in the engine rotation direction until the marks (4) on the camshafts are aligned (Fig. B).

- 21) Check the tensioner roller setting: the notch (19) in the rear plate (20) of the tensioner roller must be aligned with the rod (11) (Fig. G).
- 22) If the notch and rod are not aligned, remove the new timing belt and adjust the belt tension again, by returning to step 14.
- 23) Tighten the tensioner roller fastening bolt (15) to 25 Nm.
- 24) Refit the elements removed in the reverse sequence of removal.
- 25) Fill the cooling circuit with the permanent fluid recommended.
- 26) 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).

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