

NT 06014 VKMA/C 06010

Renault / Nissan

VKMA 06010

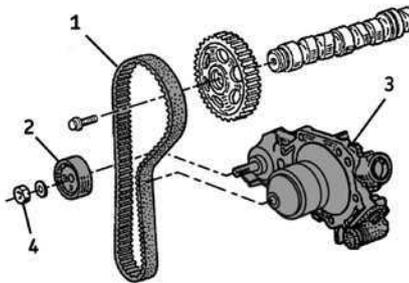
VKMC 06010



A



- (9): Mot. 1054
- (10): Mot. 1386
- (12): Mot. 1273 / 1505 / Mot. 1715
- (14): Mot. 1135-01



- (3): 9 Nm
- (4): 50 Nm

Removal

- 1) Disconnect the battery according to the manufacturing guidelines.
- 2) Prepare the vehicle for the timing replacement according to the manufacturing guidelines.
- 3) Set the engine to TDC by aligning the marks (6) on the crankshaft sprocket and (7) on the camshaft sprocket with the fixed marks on the rear cover (Fig. B).

Note: the camshaft sprocket can have five marks; only the rectangular mark (7) on the face of one tooth represents TDC (Fig. C).

- 4) Lock the flywheel using tool (9) (Fig. D).
- 5) Remove the timing covers, tensioner roller (2) then the timing belt (1) (Fig. A).
- 6) **Removing the water pump (for VKMC 06010):** firstly, bleed the cooling circuit, check it is clean, and clean if required; secondly, fully loosen the water pump (3) (Fig. A) fastening bolts and remove the pump.

Note: If the vehicle is equipped with air conditioner, remove the AC compressor and alternator firstly.

Refitting

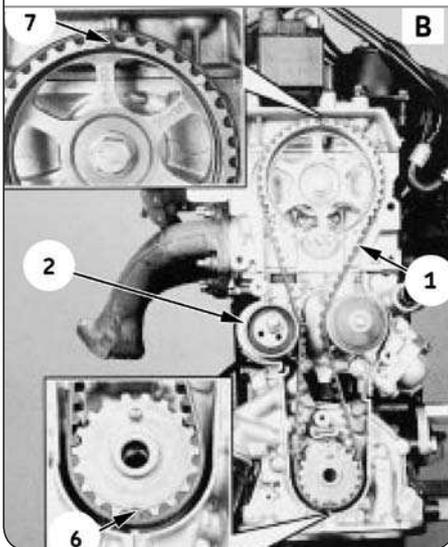
Caution! Clean carefully the bearing surfaces of the roller.

- 7) **Refitting the water pump:** Firstly, fit the new water pump (3), tighten the waterpump bolts to the torque 9 Nm, then check that the water pump pulley runs properly, and has no hard or locking spots.
- 8) Fit the new tensioner roller (2).
- 9) Check the alignment of marks (6) and (7) (Fig. B) and the position of the tool (9) (Fig. D).
- 10) Fit the new timing belt (1) starting with the crankshaft sprocket and by **aligning the marks on the belt** with the marks on the camshaft sprocket, crankshaft sprocket and covers.

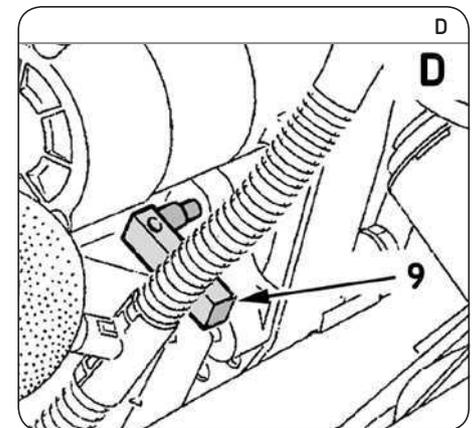
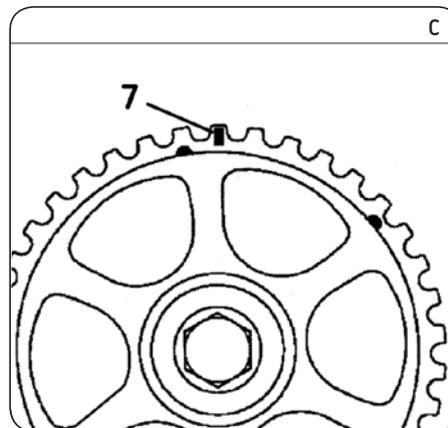
Note: the timing belt (1) bears an arrow indicating the rotation direction

- 11) Remove the flywheel tool (9) (Fig. D).
- 12) Fit only the spacer (5) of the tool (10) (Fig. E) then fit and tighten the bolt of the crankshaft sprocket.

B

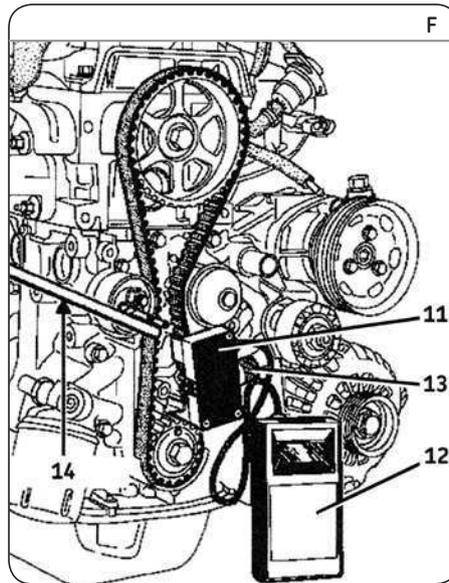
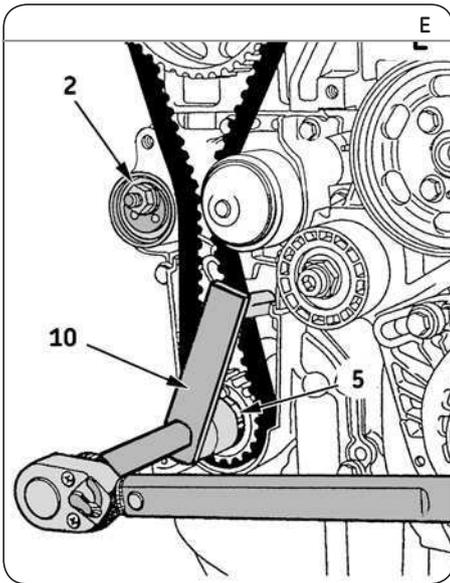


B



Install Confidence





- 13) Pre-tighten the timing belt using the tool (10) and a torque wrench set at **10 Nm (Fig. E)**.
- 14) Fit the sensor (11) of the tension controller (12) between the crankshaft sprocket and the water pump pulley (Fig. F).
- 15) Turn the tensioner roller using tool (14) **counter-clockwise** up to a tension of 20 units SEEM on the tension controller (12) (Fig. F).
- 16) Tighten the nut (4) of the tension roller (2) to a torque of **50 Nm (Fig. A)**.
- 17) Remove the sensor (11) (Fig. F).
- 18) Pre-tighten the timing belt using the tool (10) and a torque wrench set at **10 Nm (Fig. E)**.
- 19) Remove the tool (10) and the torque wrench.
- 20) Refit the sensor (11) (Fig. F).
- 21) Check the value is **20 +/- 3 units SEEM** on the tension controller (12) (Fig. F). If not, loosen the tensioner nut (4) and adjust the value using the tool (14) to turn the tensioner (2) (Fig. F) then tighten the tensioner nut (4) to a torque of **50 Nm (Fig. A)**.
- 22) Turn the crankshaft by 4 turns **clockwise**.
- 23) Repeat the steps 19) to 24).
- 24) Check the alignment of marks (6) and (7) (Fig. B) and the position of the tool (9) (Fig. D).
- 25) Remove all the tools.
- 26) To refit the removed elements, proceed 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).

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PUB 80/11 15003 EN · September 2014

