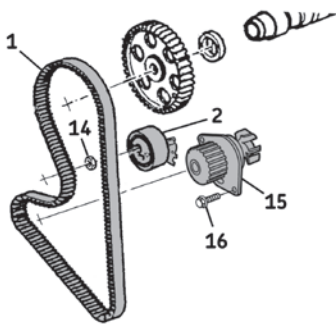




A



- (3): Camshaft timing pin (PEU ref. 0132-RZ / CIT ref.4507-T.B).
- (4): Crankshaft locking pin (PEU ref. 0132-QY / CIT ref 4507-T.A).
- (6): Timing belt assembly tool (CIT ref. 4533-T.AD).

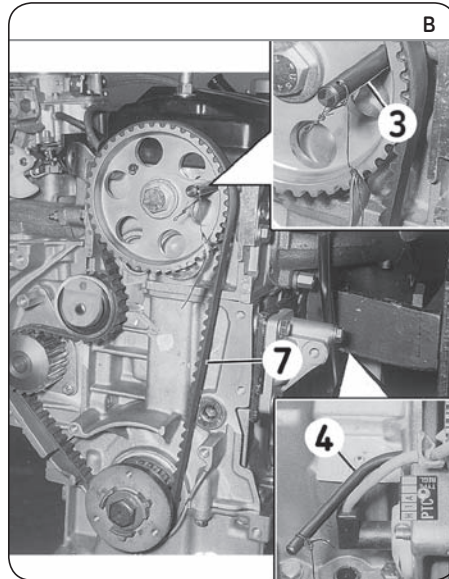


- (14): tensioner nut:
21 Nm ± 2
- (16): waterpump
bolts:

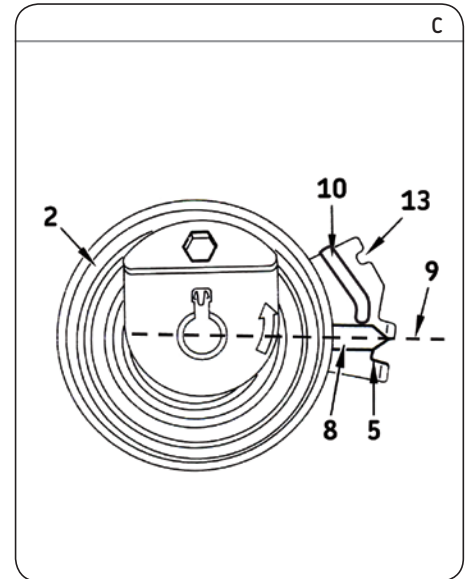
Removal

- 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 in the engine rotation direction up to timing position. Lock the camshaft sprocket with the pin (3) and the flywheel with the pin (4) (Fig. B).
- 4) Loosen the tensioner roller fastening nut (14) (Fig. A). Turn the tensioner roller (2) with an Allen key to slacken and remove the timing belt (1).
- 5) Remove the tensioner roller (2).
- 6) **Removing the water pump (VKMC 03253):** firstly bleed the cooling circuit, check it is clean, and clean if required; secondly fully loosen the water pump fastening bolts (16) and remove the pump (15) (Fig. A).

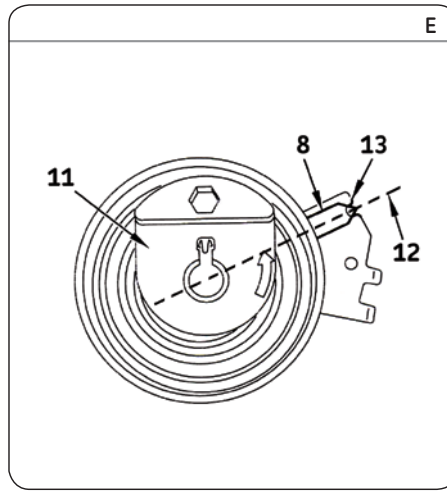
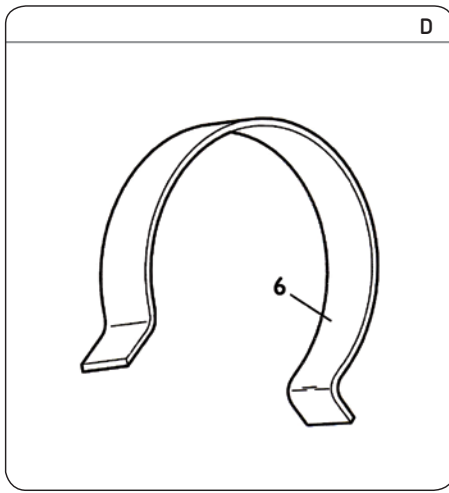
B



C



Install Confidence



Refitting

Caution! Clean the bearing surfaces of the rollers.

- 7) **Refitting the water pump:** Firstly fit the new water pump (15), apply the torque **16 Nm** (Cast iron cylinder block), **65 Nm** (M 10 for Aluminium cylinder block) or **30 Nm** (M 8 for Aluminium cylinder block) to the waterpump bolts (16); then check that the water pump pulley runs properly, and has no hard or locking spots.
- 8) Check that pins (3) and (4) (Fig. B) are correctly in place.
- 9) Fit the new tensioner roller (2) and tighten its fastening nut (14) at **10 Nm**.

Note: When refitting the new tensioner roller (2), check that the slot (5) on the rear plate on the roller is correctly placed on the engine block (Fig. C).

- 11) Fit the new timing belt (1) on the crankshaft sprocket. Hold the belt on the sprocket using the tool (6) (Fig. D).
- 12) Place the timing belt with the edge (7) tightened (Fig. B) between the crankshaft sprocket and the camshaft sprocket, in the following order: camshaft sprocket, water pump sprocket and tensioner roller.
- 13) Check that the moving pointer (8) of the tensioner roller is in position (9) (Fig. C).
- 14) Remove the pins (3) and (4) (Fig. B) and the tool (6) (Fig. D).
- 15) Rotate the crankshaft 4 times in the engine rotation direction up to timing position and insert the pins (3) and (4) (Fig. B).
- 16) Remove the pin (10) from the tensioner roller (Fig. C).

- 17) Slacken the tensioner roller fastening nut (14).
- 18) Turn the adjustment dial (11) on the tensioner roller using an Allen key until the moving pointer (8) is in position (12) (Fig. E).

Note: the moving pointer (8) must be aligned with the notch (13) on the tensioner roller plate (9) (Fig. C and Fig. E).

- 19) Tighten the tensioner roller fastening nut (14) to **21 Nm ± 2** while holding the adjusting dial (11) in position with an Allen key (Fig. E).
- 20) Remove the timing pins (3) and (4) (Fig. B).
- 21) Rotate the crankshaft 2 times in the engine rotation direction up to timing position and insert the pins (3) and (4) (Fig. B).
- 22) Check the tensioner roller setting (2): the moving index (8) must be aligned with the notch (13) (Fig. E).
- 23) If the marks are not aligned, remove the new timing belt, replace the tensioner roller (2) in position (9), insert the pin (10) on the rear plate (Fig. C) and re-start the tension adjustment operation from step 11).
- 24) Remove the timing pins (3) and (4) (Fig. B).
- 25) Refit the elements removed in reverse order to removal.
- 26) Fill the cooling circuit with the permanent fluid recommended.
- 27) 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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