

NT 06016

VKMA 06134 - VKMC 06134-1/-2/-3

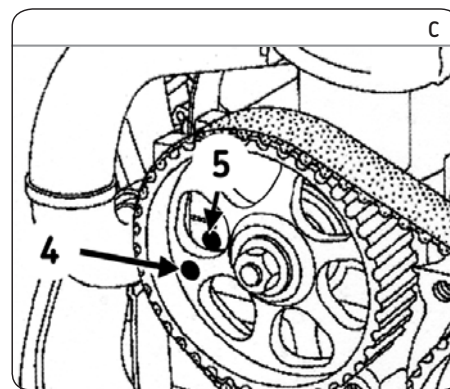
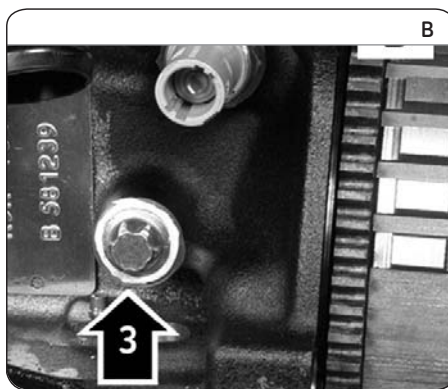
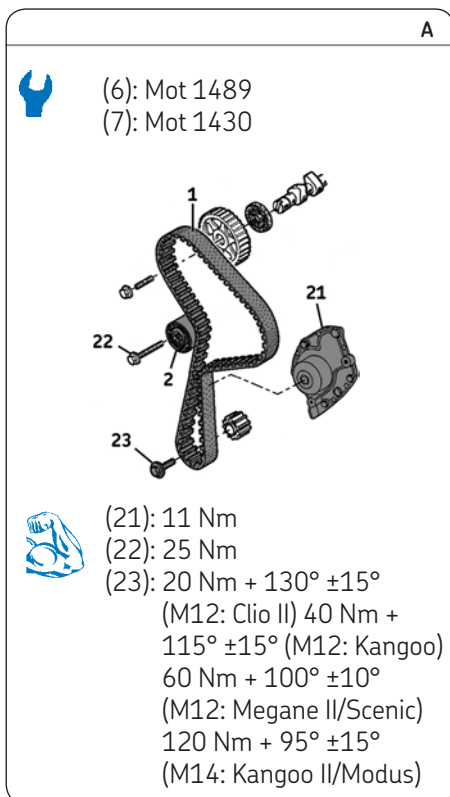
Dacia / Nissan / Renault

VKMA 06134

VKMC 06134-1

VKMC 06134-2

VKMC 06134-3



Note: On some engines, the vehicle manufacturer recommends to renew the auxilliary system and the TVD (Torsional Vibration Damper) at the same replacement interval as the timing system!

Removal

- 1) Disconnecting 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 using an appropriate tool. Remove crankshaft pulley. Using spacers, replace crankshaft pulley bolt. Remove the TDC pin plug (3) (Fig. B).
- 4) Turn the engine clockwise until the hole (4) in the camshaft sprocket is almost aligned with the hole in the cylinder head (5) (Fig. C).
- 5) Insert the crankshaft timing pin (6), then turn the crankshaft slowly and smoothly until it rests against pin (6) (Fig. D).
- 6) Insert camshaft timing pin (7) through the camshaft sprocket and the cylinder head (Fig. E). The pin must slide easily into the holes (4) and (5) (Fig. C).
- 7) Remove crankshaft pulley bolt and spacers.
- 8) Loosen the fastening bolt (22) of the tensioner roller (2), to slacken and remove the timing belt (1) (Fig. A).
- 9) Remove the tensioner roller (2) (Fig. A).

10) Removing the water pump

(in VKMC 06134-1/2/3): firstly bleed the cooling circuit, check it is clean, and clean if required; secondly fully loosen the water pump (21) (Fig. A) fastening bolts and remove the pump.

Refitting

Caution! First clean the bearing surfaces of the tensioner roller. Carefully degrease the end of the crankshaft, the crankshaft sprocket and pulley.

Note: Crankshaft pulley MUST be able to rotate when setting the tension of the system!

11) Refitting the water pump: Firstly, fit the new water pump (21), apply the torque **11 Nm** to the waterpump bolt; then check that the water pump pulley runs properly, and has no hard or locking spots.

12) Fit the new tensioner roller (2).

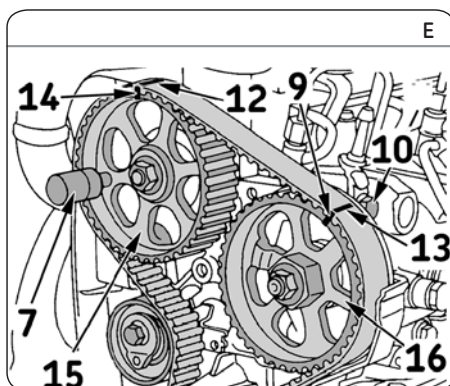
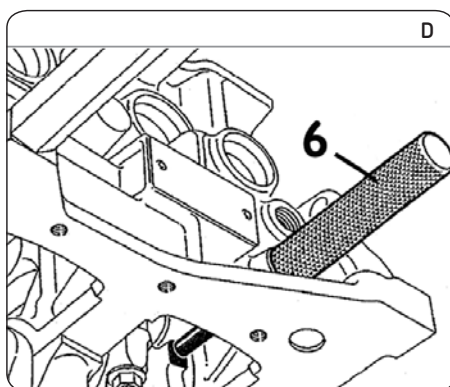
Note: When refitting the tensioner roller (2), check that the positioning pin (8) of the roller plate correctly engages in the slot on the engine block (Fig. F).

13) Ensure that the camshaft timing pin (7) is correctly engaged in the cylinder head (Fig. E).

14) Check that the crankshaft is located correctly against the timing pin (6). (Fig. D).

15) Check that:

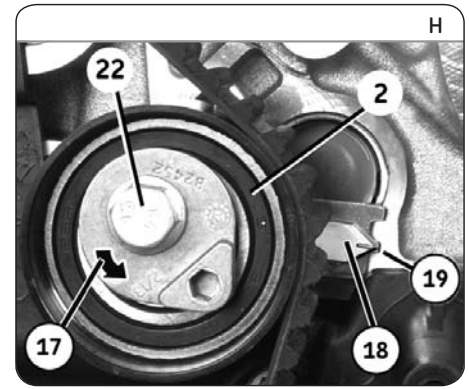
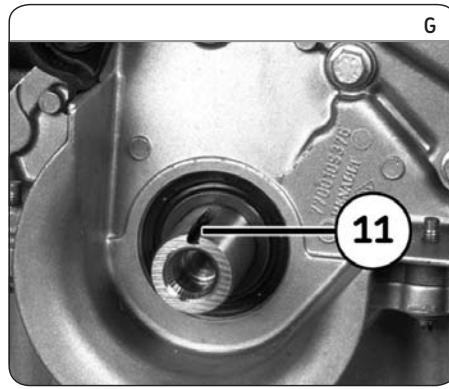
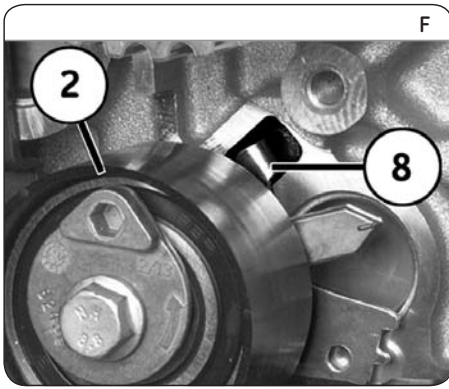
- The mark (9) on the high pressure pump sprocket is aligned with the head of the fastening bolt (10) (Fig. E).
- The crankshaft sprocket retaining pin groove (11) is directed upwards (Fig. G). Refit the crankshaft pulley, ensuring that it can rotate freely.



Install Confidence

VKN 1004



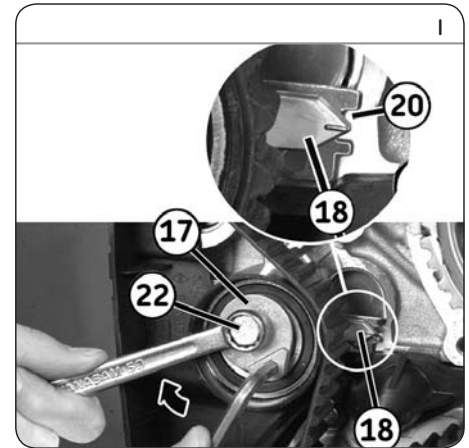


- 16) Refit the timing belt (1), aligning its marks (12) and (13) with the marks (14) and (9) on the sprockets (15) and (16), respectively (Fig. E).
- 17) Turn the dial (17) of the tensioner roller **anticlockwise** using a 6 mm hexagonal key, to the maximum tension position. The moving pointer (18) will then be in position (19) (Fig. H).
- 18) Tighten the tensioner roller fastening bolt (22) to **25 Nm**.
- 19) Refit the crankshaft pulley with a new bolt (23), and tighten to **20 Nm + 130° ± 15°** (M12 Clio II) or **60 Nm + 100° ± 10°** (M12 Megane II/ Scenic) or **40 Nm + 115° ± 15°** (M12 Kangoo) or **120 Nm + 95° ± 15°** (M14 for Kangoo II/ Modus)

Note: SKF provides 2 different crankshaft pulley bolts in the kit according to different car applications.

- 20) Remove pins (6) and (7) (Fig. D and E).
- 21) Turn the crankshaft **clockwise** through two revolutions until the hole (4) in the camshaft sprocket is almost aligned with the hole in the cylinder head (5) (Fig. C).
- 22) Repeat Step 5 and 6.

- 23) Loosen the tensioner roller fastening bolt (22) no more than one turn, while holding its dial in position with a hexagonal key. Next turn the dial (17) **clockwise** to align the moving pointer (18) on the tensioner roller with the centre of the notch (20) (Fig. I).
- 24) Tighten the tensioner roller fastening bolt (22) to **25 Nm**.
- 25) Remove the camshaft and crankshaft locking tools. Turn the crankshaft **clockwise** through two revolutions until the hole (4) in the camshaft sprocket is almost aligned with the hole in the cylinder head (5) (Fig. C).
- 26) Repeat Step 5 and 6.
- 27) Check the tensioner roller setting: the moving pointer (18) must be aligned with the centre of the notch (20) of the tensioner roller (Fig. I).
- 28) If the marks are not aligned, remove the new timing belt and adjust the belt tension again, by returning to step 13).
- 29) Refit the elements removed in the reverse sequence of removal.
- 30) Fill the cooling circuit with the permanent fluid recommended.
- 31) 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).



Car Application	Crankshaft bolt Specification	Tightening Torque
RENAULT Clio II	M12	20 Nm + 130° ±15°
RENAULT Megane II/Scenic/ /Modus/Fluence/ Kangoo	M12	60 Nm + 100° ±10°
NISSAN Kubistar/ Micra/Note/ Qashqai/ Tiida		
RENAULT	M12	40 Nm + 115° ±15°
RENAULT Megane II/Scenic/ /Modus/ Fluence/ Kangoo/Kangoo II	M14	120 Nm + 95° ±15°
NISSAN Kubistar/ Micra/Note/ Qashqai/ Tiida		
DACIA Duster/Logan		
RENAULT Twingo II		80 Nm

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