

NT 01009
VKMA/C 01130 -
VKMA/C 01251

Audi / Seat / Skoda / Volkswagen

VKMA 01130



VKMC 01130




VKMA 01251

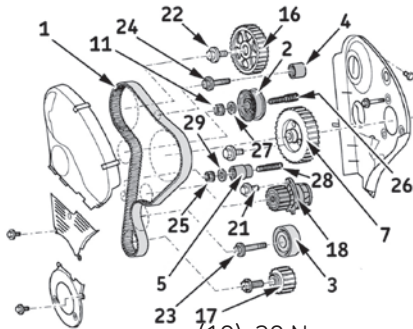


VKMC 01251



A

-  (6): VW.3418/Seat T20038
- (8): VW.3359/Seat U-40074
- (13): VW.V159/ Seat U-30009A



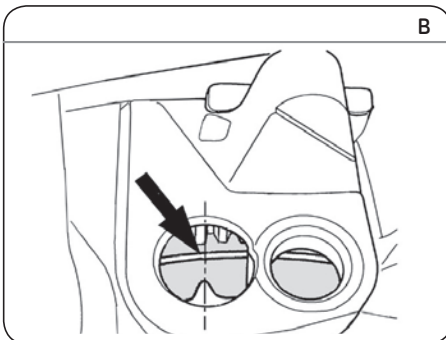
- (10): 20 Nm
- (11): 20 Nm
- (17): 10 Nm + 90°
- (21): 15 Nm
- (22): 45 Nm
- (23): 40 Nm + 90°
- (24): 20 Nm
- (25): 22 Nm
- (26)/(28): 15 Nm



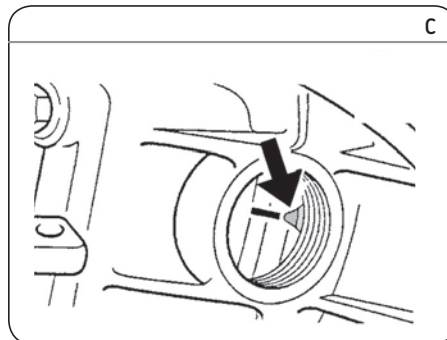
Removal

- 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 cylinder n°1 up to TDC by aligning the marks on the flywheel/clutch casing (Fig. B, C, or D) or drive plate/automatic gearbox (Fig. E).
- 4) Lock the camshaft using tool (6) (Fig. F) the center it **using feeler gauges**.
- 5) Lock the injection pump sprocket (7) using tool (8) (Fig. G).
- 6) While avoiding contact with the central nut (9) on the injection pump, loosen three bolts (10) (Fig. G).
- 7) **Support the engine. Remove the RH engine mounting bolts and bracket.** (except Seat Ibiza /Cordoba).
- 8) Remove the crankshaft pulley and the timing cover.
- 9) Untighten the nut (11) securing the tensioner roller (2) (Fig. A).
- 10) Turn the adjusting plate (12) **counter-clockwise** with the wrench (13) (Fig. H) up to the "8 o'clock" position (Fig. H).
- 11) Tighten slightly the nut (11) securing the tensioner roller (2).
- 12) Remove the timing belt (1), the tensioner roller (2) and its stud (26) (Fig. A).
- 13) Remove the idler rollers (3), (4) and (5) with its stud (28) (according to engine being repaired) (Fig. A).
- 14) **Remove the water pump (VKMC 01130-VKMC 01251):** Firstly bleed the cooling circuit, check it is clean, and clean if required; secondly fully loosen the water pump fastening bolts (21) and remove the pump (18) (Fig. A).

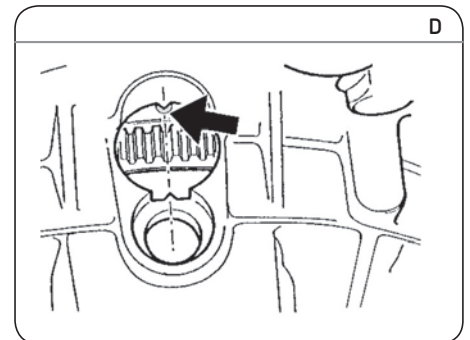
B



C

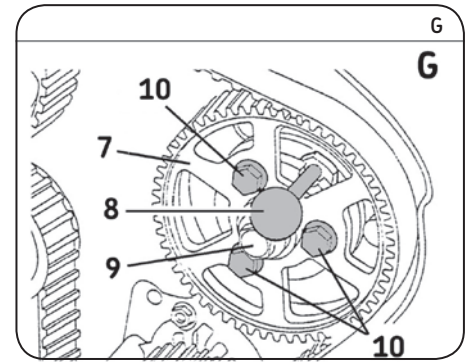
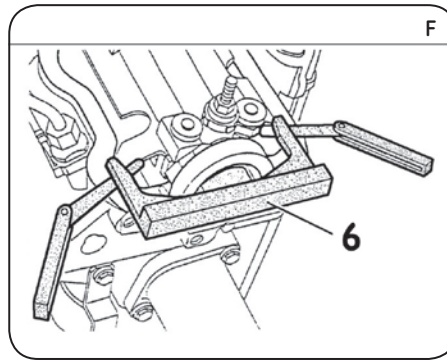
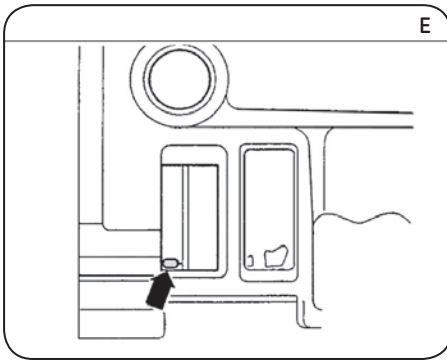


D



Install Confidence





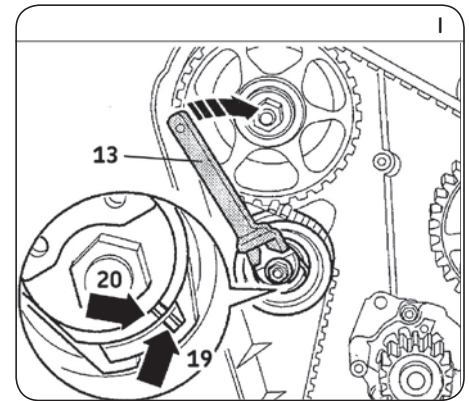
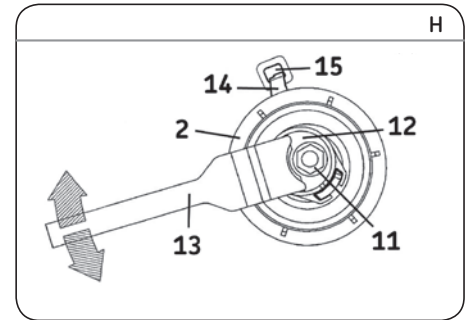
Refitting

Caution! Clean the bearing surfaces of the rollers.

- 15) **Refitting the water pump:** Firstly, fit the new water pump (18), apply the torque **15 Nm** to the waterpump bolts (21): Then check that the water pump pulley runs properly, and has no hard or locking spots.
- 16) Check that cylinder Nr 1 is at the TDC.
- 17) If required, fit the new stud (28) and torque to **15 Nm**. Fit the new idler rollers (3), (4) and (5) with its new stud (28) and washer (29) and tighten their new bolt (23), bolt (24) and nut (25) (according to engine being repaired) at the following torque:
 - Bolt (23) for Idler roller (3): **40 Nm + 90°**
 - Bolt (24) for Idler roller (4): **20 Nm**
 - Nut (25) for Idler roller (5): **22 Nm**
- 18) If required, fit the new stud (26) and torque to **15 Nm**. Fit the new tensioner roller (2) and its new nut (11), washer (27) and stud (26): Fit the positioning pin (14) in the slot (15) in the engine block (Fig. H). Turn the adjusting plate (12) using the wrench (13) **counter-clockwise** up to the "8 o'clock" position (Fig. H) then tighten slightly the nut (11) securing the tensioner roller manually.
- 19) Hold camshaft sprocket! Loosen by a half-turn the bolt (22) (fastening the camshaft sprocket (16) (Fig. A). Separate the sprocket from the hub, tighten the fastening bolt (22) manually, and check the sprocket (16) turns freely around its axis.
- 20) Align the injection pump with the bolts (10) in the center of the oblong holes (Fig. G).
- 21) Refit the timing belt (1) Aon the following elements: crankshaft sprocket (17), idler roller (3), water pump (18), injection pump sprocket (7), idler roller (4), camshaft sprocket (16), tensioner roller (2) and idler roller (5) (according to engine being repaired) (Fig. A).
- 22) Tighten the timing belt (1): turn the adjusting plate (12) on the tensioner roller (2) **clockwise** using the wrench (13), while holding the fastening nut (11) on the roller in position using a hex nut wrench (Fig. H). Continue turning the adjustment plate until the moving pointer (19) is aligned with the notch (20)

(Fig. I). Then tighten the fastening nut (11) (Fig. H) at **20 Nm**.

- 23) With cylinder n°1 at TDC, tighten the bolt (22) on the camshaft sprocket Hold camshaft sprocket! (16) (Fig. A) at **45 Nm**, and the bolts (10) on the injection pump (Fig. G) at **25 Nm**.
- 24) Remove the locking tools (6) (8) (Fig. F and Fig. G)
- 25) Turn the crankshaft by **2 turns** in the engine rotation direction up to TDC on cylinder Nr 1.
- 26) Check the timing marks (Fig. B or Fig. C or Fig. D or Fig. E) and that it is possible to lock the sprocket on the injection pump using tool (8) (Fig. G).
- 27) Check the setting of the moving pointer (19) must be aligned with the notch (20).(Fig. I)
- 28) If the marks on the tensioner roller are not aligned, proceed as follows: hold the tensioner roller (2) in position using the wrench (13) while slightly loosening the fastening nut (11) (Fig. H). Then, turn the adjusting plate (12) **counter-clockwise** to return the moving pointer to the initial position (position before refitting the roller on the engine), then remove the timing belt. Then adjust tension again by returning to step 21).
- 29) Refit the elements removed beforehand in the reverse sequence of removal.
- 30) Tighten the crankshaft pulley (17) at **10 Nm + 90°**.
- 31) It is recommended to replace the **engine mounting bolts** according to manufacturing guideline.
- 32) Fill the cooling circuit with the permanent fluid recommended.
- 33) 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.