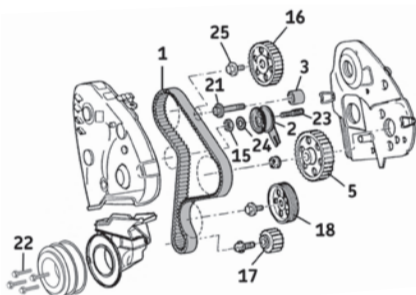




- (4): Camshaft timing ruler (ref. VAG 2065A).
- (6): Locking rod (ref. VW 3359 or Seat U-40074).
- (7): Locking rod (ref. VW 2064).
- (13): Spanner wrench (ref. VW V159 or Seat U-30009A).



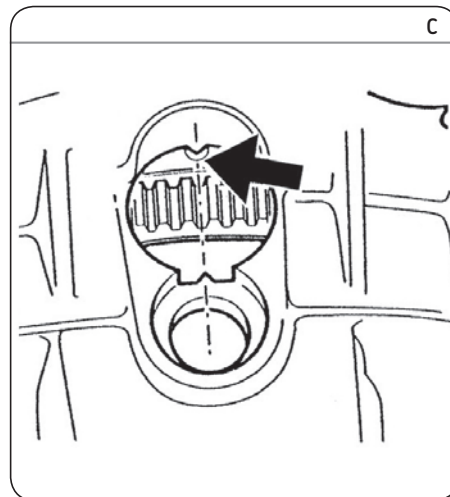
- (8): 25 Nm
- (21): 22 Nm
- (25): 45 Nm
- (23): 15 Nm

A

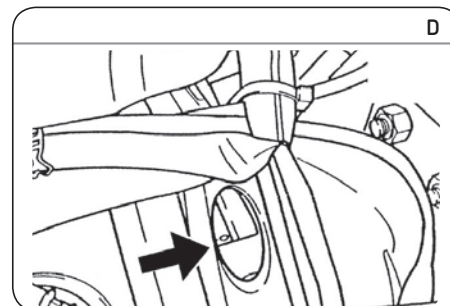
B



C



D



Removal

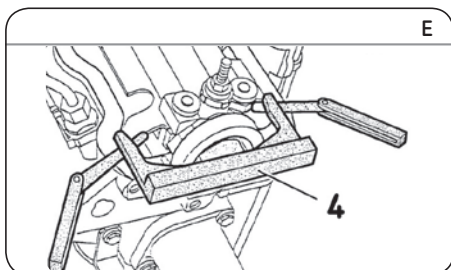
- 1) Disconnect the battery according to the vehicle manufacturing guidelines.
- 2) Prepare the vehicle for the timing replacement according to the vehicle manufacturing guidelines.
- 3) Bring cylinder n°1 to TDC aligning the flywheel/clutch housing markers or drive plate/automatic transmission markers (Fig. B or Fig. C or Fig. D).
- 4) Remove the cylinder head cover and lock the camshaft using the locking ruler (4), by centering it (Fig. E).
- 5) Block the sprocket (5) of the injection pump (Fig. A) with the gauge (7) (Fig. F).
- 6) Remove the crankshaft pulley, loosen the nut (15) fastening the tensioner roller (2) (Fig. A), then remove the timing belt (1) as well as the tensioner roller.
- 7) Remove the idler roller (3) (Fig. A).
- 8) Remove the stud (23) (Fig. A).

Refitting

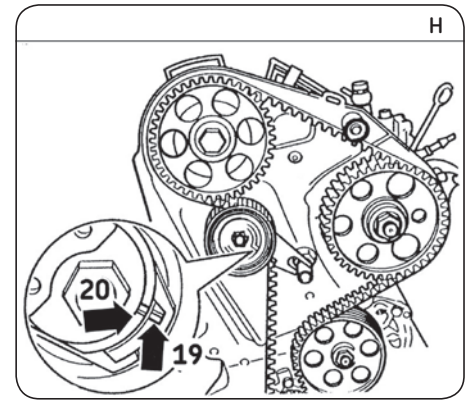
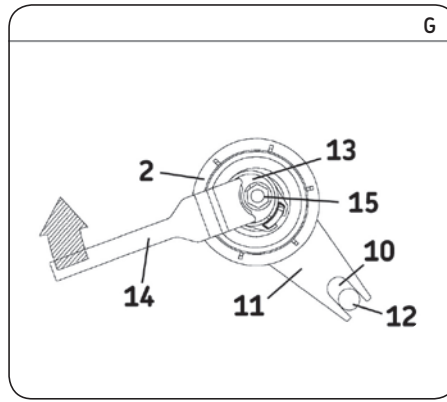
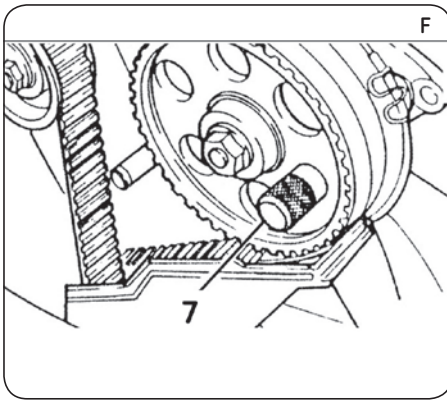
Caution! Clean the bearing surfaces of the rollers.

- 9) Fit and tighten the new stud (23) to the torque of 15 Nm (Fig. A).
- 10) Check that cylinder n°1 is at TDC.
- 11) Reassemble the new idler roller (3) and tighten its new bolt (21) to a torque of 22 Nm (Fig. A).

E



Install Confidence



- 12) Reassemble the new tensioner roller (2) with its new washer (24) and new nut (15). Set the notch (10) on the rear plate (11) on the roller on the pin (12) located on the engine block (Fig. G). Turn the adjustment dial (13) using the wrench (14) until the wrench reaches the "8 o'clock" position (Fig. G) then tighten slightly by hand the securing nut (15) (Fig. G) on the tensioner roller.
- 13) Loosen by a half-turn the mounting bolt (25) of the camshaft gear (16) (Fig. A).
- 14) Pull the camshaft sprocket from the hub and ensure it rotates freely around its shaft.
- 15) Fit the new timing belt (1) on the following elements: crankshaft sprocket (17), oil pump pulley (18), injection pump sprocket (5), idler roller (3), camshaft sprocket (16) and tensioner roller (2) and (Fig. A).
- 16) Tighten by hand the camshaft sprocket fitting bolt (25) (Fig. A).
- 17) Tighten the timing belt (1): turn the adjustment dial (13) on the tensioner roller (2) clockwise using the wrench (14), while holding the fastening nut (15) hold the roller in position using a hex nut wrench (Fig. G). Until the

- mobile index (19) is aligned with the notch (20) (Fig. H). Then tighten the fastening nut (15) (Fig. G) at 20 Nm.
- 18) Tighten the fastening bolt (25) of the camshaft sprocket at 45 Nm (Fig. A).
- 19) Remove the shimming ruler (4) (Fig. E) and the gauges (7) (Fig. F).
- 20) Rotate the crankshaft by 2 turns in the direction of rotation of the engine until the TDC for cylinder Nr 1 is reached.
- 21) Check the timing setting marks (Fig. B or Fig. C or Fig. D) and that it is possible to lock the injection pump sprocket using the gauge (7) (Fig. F).
- 22) Check the setting of the moving index (19) must be aligned with the notch (20) (Fig. H).
- 23) If the marks on the tensioner roller are not aligned, proceed as follows: turn the adjustment dial (13) counter-clockwise to set the moving index in the initial position, then remove the timing belt. Then restart the tension setting operation at step 15).
- 24) Refit the elements removed beforehand in the reverse removal sequence while observing the following point:

- Tighten the 4 crankshaft sprocket bolts (22) at:**
- 25 Nm (12)
 - For the other engines, refer to manufacturer recommendations.
- 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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