NT 95001 VKMA 95660 VKMC 95660-1 VKMC 95660-2 VKMC 95660-3

Hyundai / Kia



#### VKMC 95660-1

## VKMC 95660-2

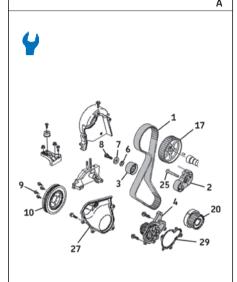
# VKMC 95660-3







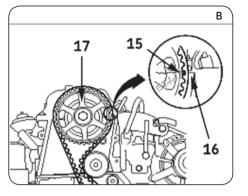






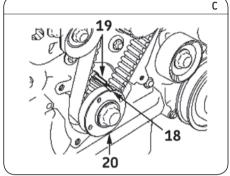
(9): 30-34 Nm (22): 10-12 Nm (25): 50-55 Nm (28): 8-12 Nm (30): 48-52 Nm (31): 10-12 Nm

(8): 45-59 Nm



#### Removal

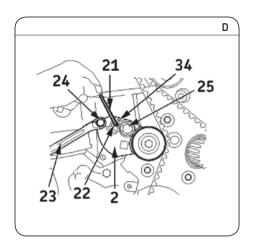
- 1) Disconnect the battery according to the vehicle manufacturing guidelines.
- Prepare the vehicle for the timing replacement according to the vehicle manufacturing guidelines.
- Remove crankshaft pulley and timing belt covers. Using the crankshaft sprocket bolt, turn the crankshaft in a clockwise direction to bring the piston of the No.1 cylinder to end-of compression TDC aligning:
  - Marks (15) and (16) on the camshaft sprocket (17) and on the timing casing (Fig. B),
  - Marks (18) and (19) on the crankshaft sprocket (20) and the oil pump housing (Fig. C).
- 4) Using a 5 mm Allen key (21), slacken the stop bolt (22) (Fig. D)
- 5) Using a 12 mm open ended spanner (23) on the operating nut (24), turn the tensioner roller (2) in a clockwise direction to align the hole (34) in the body of the tensioner roller (2) with the hole in its rear plate. Immobilise the tensioner roller (2) in this position by inserting a suitable pin through the two holes (Fig. D).

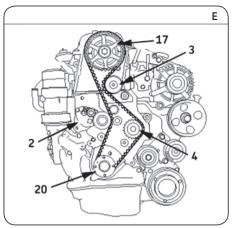


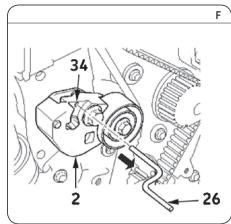
- 6) Remove the timing belt (1) (Fig. A).
- 7) Remove the tensioning roller (2) by removing its fixing bolt (25) (Fig. A).
- 8) Remove the idler roller (3) (Fig. A).
- Removing the water pump (VKMC 95660- 1/-2/-3):
  - Bleed the cooling circuit, check it is clean, and clean if required.
  - Remove the rear timing cover (27) by removing its 3 bolts (28) (Fig. G).
  - Remove the water pump (4) with its gasket
    (29) by removing its bolt (30) and its 3 bolts
    (31) (Fig. H)

# **Install Confidence**









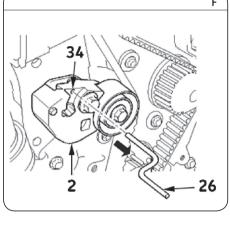
#### Refitting

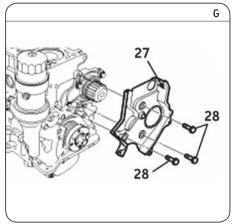
Caution! First of all carefully clean the bearing surfaces of the rollers.

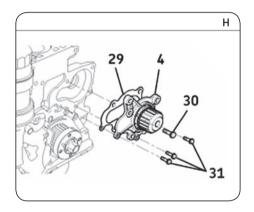
### 10) Refitting the water pump:

- Fit the new water pump (4) and its new gasket (29) by tightening its 3 bolts (31) to between 10 and 12 Nm, and its bolt (30) to between 48 and 52 Nm (Fig. H).
- Check that the water pump pulley runs properly and has no hard or locking spots.
- Refit the rear timing cover (27) by tightening its 3 bolts (28) to between 8 and 12 Nm (Fig. G).
- 11) Fit the new idler roller (3), its new seal (6) and new washer (7) (included in the kit) whilst tightening its new fixing shouldered bolt (8) (included in the kit) to between 45 and 59 Nm (Fig. A).
- 12) Fit the new tensioner roller (2) and tighten its new fixing bolt (25) (included in the kit) to between 50 and 55 Nm (Fig. A).
- 13) Check the alignment of the timing marks (Fig. B and C)
- **14)** Fit the new timing belt (1) in the following order: crankshaft sprocket (20), water pump sprocket (4), idler roller (3), camshaft sprocket (17) and tensioner roller (2) (Fig. E).

- 15) Check that the timing marks are still aligned (Fig. B and C).
- 16) Remove the pin (26) from the tensioner roller hole (34) (Fig. F).
- 17) Fully loosen the stop bolt (22) (Fig. D) to allow the tensioner roller (2) to operate freely against the timing belt (1).
- 18) Turn the crankshaft by 2 turns in a clockwise direction and check the alignment of the timing marks (Fig. B and C).
- 19) Tighten the stop bolt (22) to between 10 and 12 Nm (Fig. D).
- 20) Proceed in the reverse order to removal for the remaining operations, refitting the crankshaft pulley (10) and tightening its 4 fixing bolts (9) to between 30 and 34 Nm (Carens/Sportage) 20 and 30 Nm (Cerato) (Fig. A).
- 21) Fill the cooling circuit with the permanent fluid recommended.
- 22) 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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