

NT 02009

VKMA 02151
VKMA 02152
VKMA 02153
VKMA 02154
VKMA 02161

Alfa Romeo / Seat / Fiat / Lancia

VKMA 02151



VKMA 02152



VKMA 02153



VKMA 02154



VKMA 02161

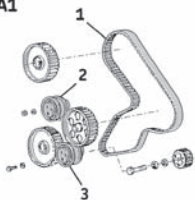


A

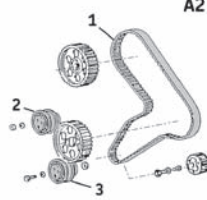


- (4): Flywheel tool (ref. 1820095000).
- (5): Timing tool (ref. 1842128000).
- (6): Timing tool leg (ref. 1860745200/186745300).
- (7): Tensioning tool (ref. 1860745100/1824016000).
- (8): Tensioning tool (ref. 1860722000/1824017000).
- (-): Flywheel tool (ref. 1860766000).

A1



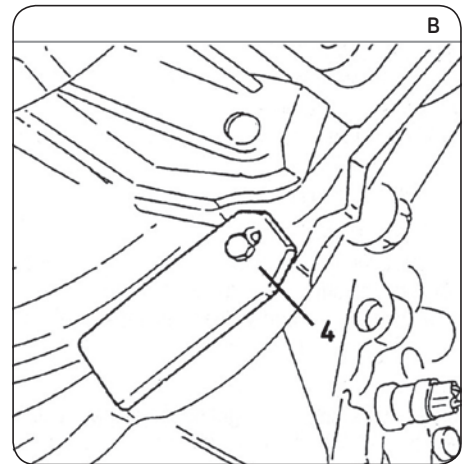
A2



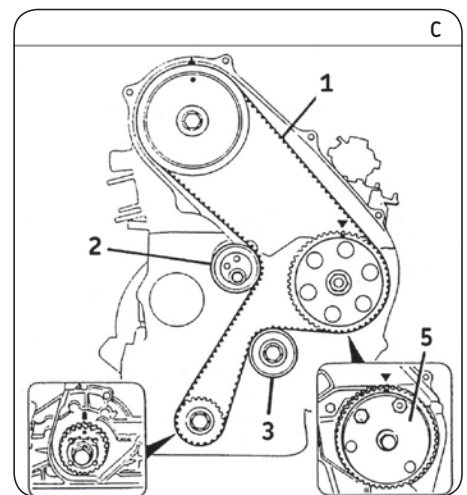
Removal

- 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) Lock the flywheel. For the Alfa 145/146, use tool (4) (Fig. B), for the Fiat Punto/Bravo and Brava use flywheel tool ref. 1860766000.
- 4) Remove the crankshaft pulley.
- 5) Remove the timing system casings.
- 6) For the Alfa 145/146, Fiat Punto/Bravo and Brava, remove the flywheel locking tool.
- 7) Turn cylinder No. 1 to TDC.
- 8) **All models except Fiat Bravo/Brava**
– Align the mark on the crankshaft sprocket with the mark on the timing casing (Alfa 145/146) or the engine block (other models), and the marks on the injection pump sprocket and camshaft sprocket with the indicator marks on the timing casing (Fig. C).
- 9) **Fiat Bravo/Brava**
– Align the marks (notches) of the camshaft sprocket and the injection pump sprocket with those on the rear timing casing, and the flyshaft mark with that of the clutch casing.
- 10) Place the timing tool (5) on the injection pump sprocket (except Fiat Uno, Fiorino, Bravo, Brava /Alfa 145, 146) and block the rotation of the sprocket by tightening the bolt of the tool (Fig. C).
- 11) Loosen and push back the tensioner roller (2).
- 12) Remove the timing belt (1).
- 13) Remove the tensioner roller (2) and the idler roller (3).

B

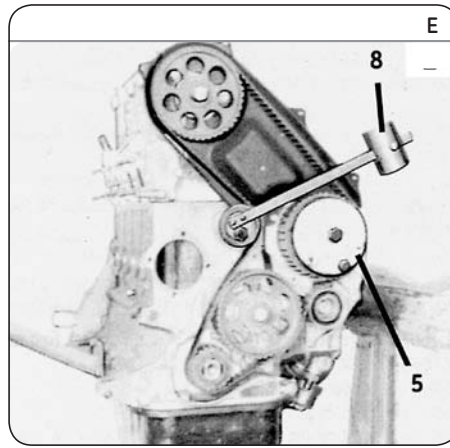
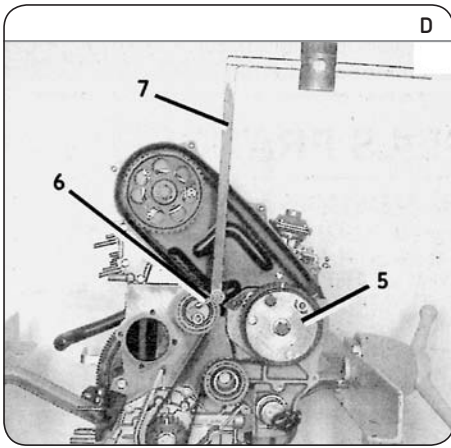


C



Install Confidence





Refitting

Caution: First carefully clean thoroughly the bearing surfaces of the rollers and of the tensioning device.

- 14) Refit the new idler roller (3).
- 15) Refit the new tensioner roller (2) and tighten in the pushed position.
- 16) Refit the new timing belt (1).
- 17) Check that cylinder #1 is at the TDC.
- 18) Check the alignment of the different sprockets with the corresponding marks (Fig. C)
- 19) **Fiat Ritmo 1714 cm3 Diesel**
 - Loosen the tensioner roller fasteners, the timing belt will tighten automatically.
 - Tighten the tensioner roller fasteners to **44 Nm**.
 - Remove the timing tool (5).
 - Turn the crankshaft through two revolutions in the engine rotation direction to TDC (check the alignment of the marks).
- 20) **1697 cm3 (Fiat Punto), 1929 cm3 Diesel and 1929 cm3 Turbo Diesel engines**
 - Fit the leg (6) on the timing tool (7).
 - Place the tensioning tool on the tensioner roller (2) (Fig. D).
 - Position and lock the weight in position at 120 mm on the graduated rod, 60 mm for the Fiat Punto.
 - Set the graduated rule to a horizontal position by rotating the hinge of the tensioning tool and block the hinge fastener.
 - Remove the timing tool (5), for the models concerned.
 - Turn the crankshaft through two revolutions in the engine rotation direction to TDC (check the alignment of the marks).
 - Check the timing belt tension in accordance with the manufacturer's instructions.

Note: if the graduated rule is no longer horizontal, adjust it again and turn the crankshaft through another two rotations.

- 21) Tighten the tensioner roller to a torque of **37 to 46 Nm** for the Alfa 145/146, **57 Nm** for the Fiat Uno, and **44 Nm** for the other models.
- 22) **1697 cm3 engines (except Fiat Punto)**
 - Place the tool (8) on the tensioner roller (2) (Fig. E).
 - Tighten the tensioner roller (2) to **44 Nm**.
 - Remove the timing tool (5).
 - Turn the crankshaft through two revolutions in the engine rotation direction and check the alignment of the timing marks (Fig. C).
 - Check the timing belt tension in accordance with the manufacturer's instructions.
- 23) **All models**
 - Refit the elements removed in reverse order to removal.
 - Fill the cooling circuit with the permanent fluid recommended.
 - 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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