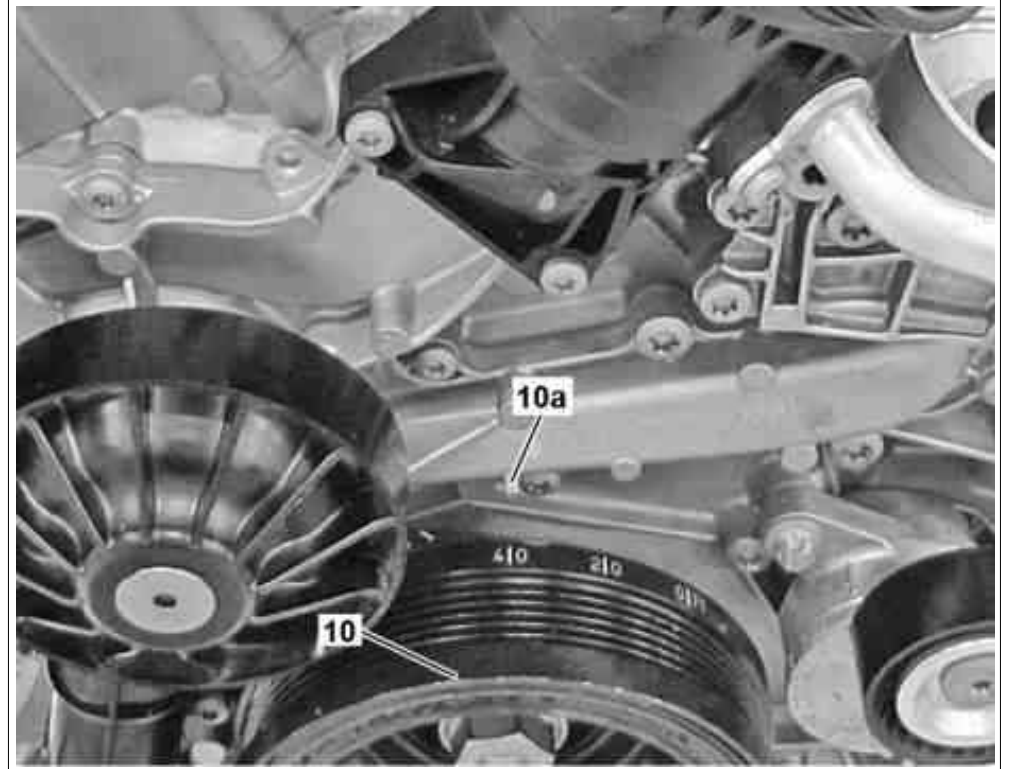


Document title Place engine on cylinder 1 at 40 degrees after top dead center

Document number ar0510p762004mm

Shown on engine 276

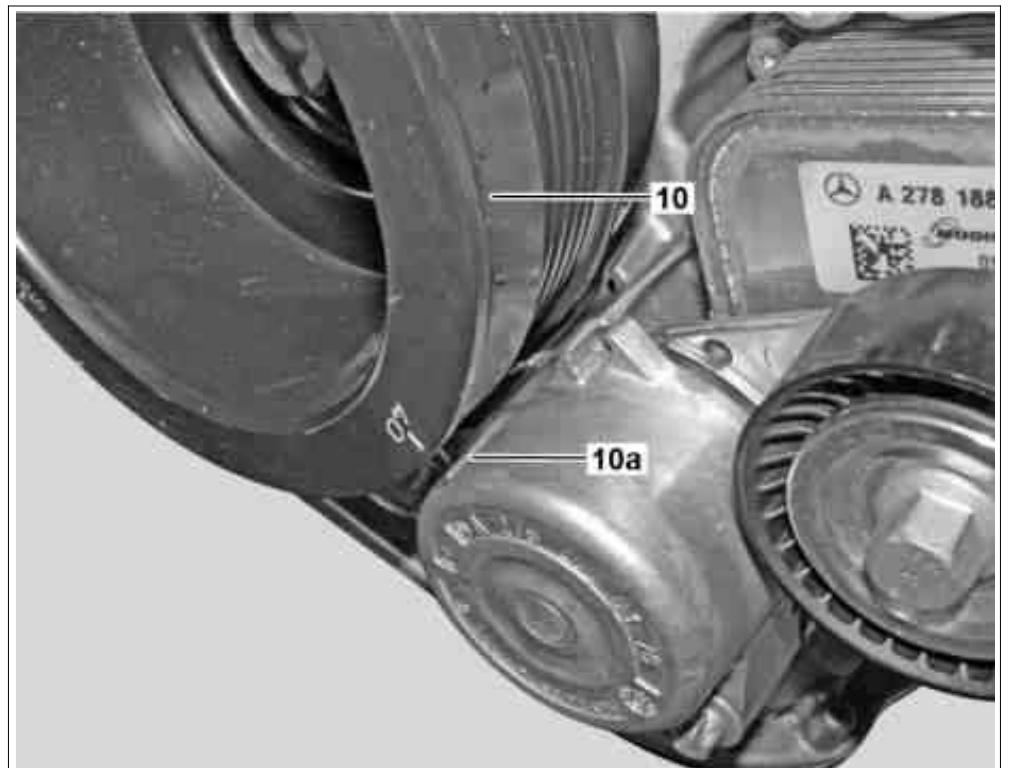
- 10 Belt pulley/vibration damper
 10a Reference edge (coolant pump)



P05.10-2424-11

Engine 152.9, 157, 278, shown on engine 278

- 10 Belt pulley/vibration damper
 10a Reference edge (poly-V belt tensioning device)



P05.10-2423-11



P05.10-2442-08

Shown on engine 276

- 2 Camshaft adjuster

Position of cylinder 1 at 40° after ignition TDC (the laser markings (arrows) are at the top)



P05.10-2443-08

Shown on engine 276

2 Camshaft adjuster

- 1 Rotate engine at the center bolt of the crankshaft in direction of engine rotation until marking for a **40° CKA** on the belt pulley/vibration damper (10) coincides with reference edge (10a).
 - i** The reference edge (10a) is located for engine 276 on the coolant pump and for engines 152.9, 157, 278 on the poly-V belt tensioning device.
 - i** The engine must not be turned against the direction of rotation of engine otherwise the timing chain can get jammed.

*Position of cylinder 1 at **40° after overlap TDC** (the laser markings (arrows) are at the bottom)*

- 2 Check position of camshafts based on the laser marks (arrows).
 - i** If the laser marks on the camshaft adjusters (2) are located at the top (see picture 3) and the mark 40° is at the reference edge (10a), then cylinder 1 is at 40° after ignition TDC.
 - i** If the laser marks on the camshaft adjusters (2) are located at the bottom (see picture 4) and the mark 40° is at the reference edge (10a), then cylinder 1 is at 40° after overlap TDC.
 - i** A complete crankshaft revolution (360°) lies between 40° after ignition TDC and 40° after overlap TDC on cylinder 1.