

03-3450 Checking, correcting setting of TDC sensor

Preceding work:

Viscous fan shroud removed (20-3120).

Poly V-belt removed (13-1200).

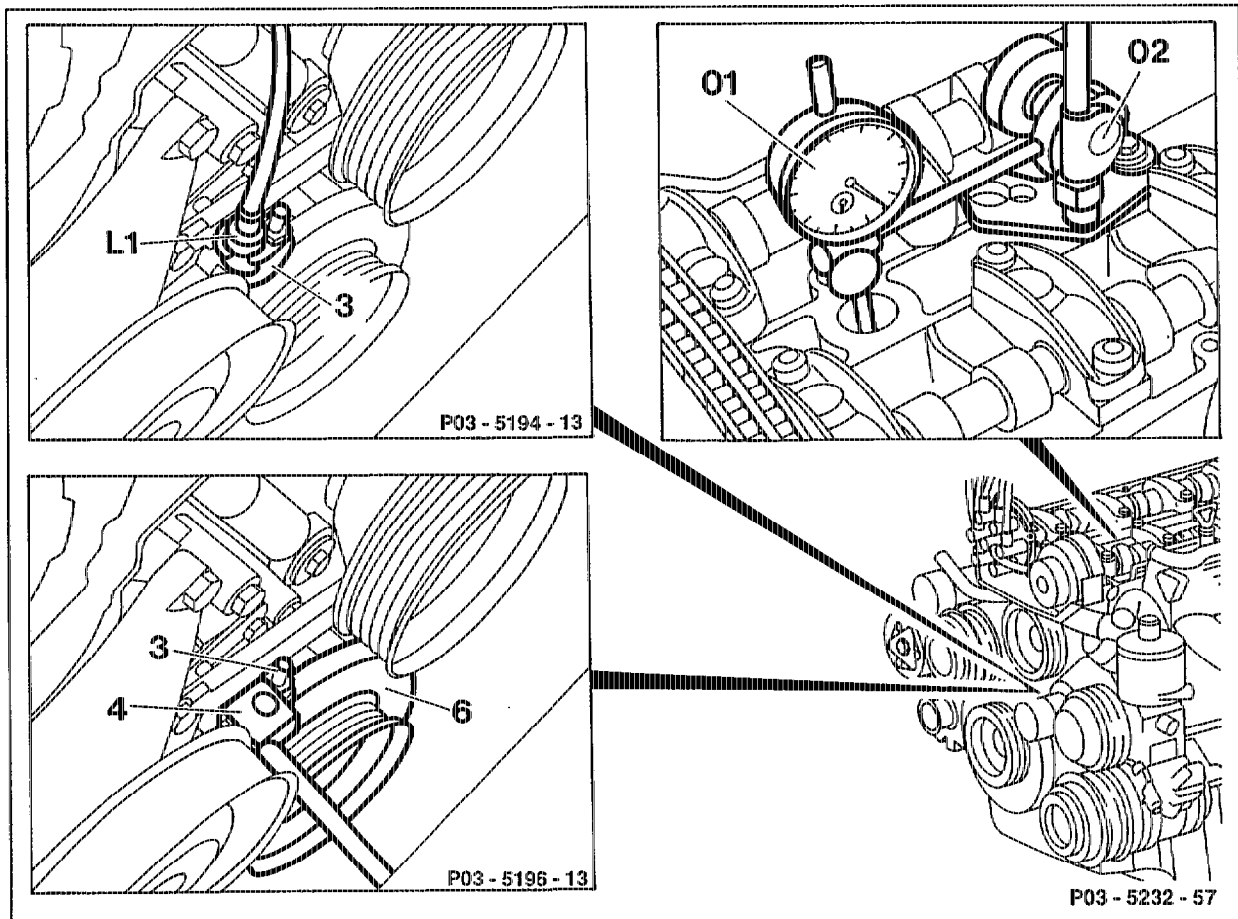
Cylinder head cover removed (01-0500).

Operation no. of operation texts and work units or standard texts

and flat rates

03-1101

Checking setting of TDC sensor



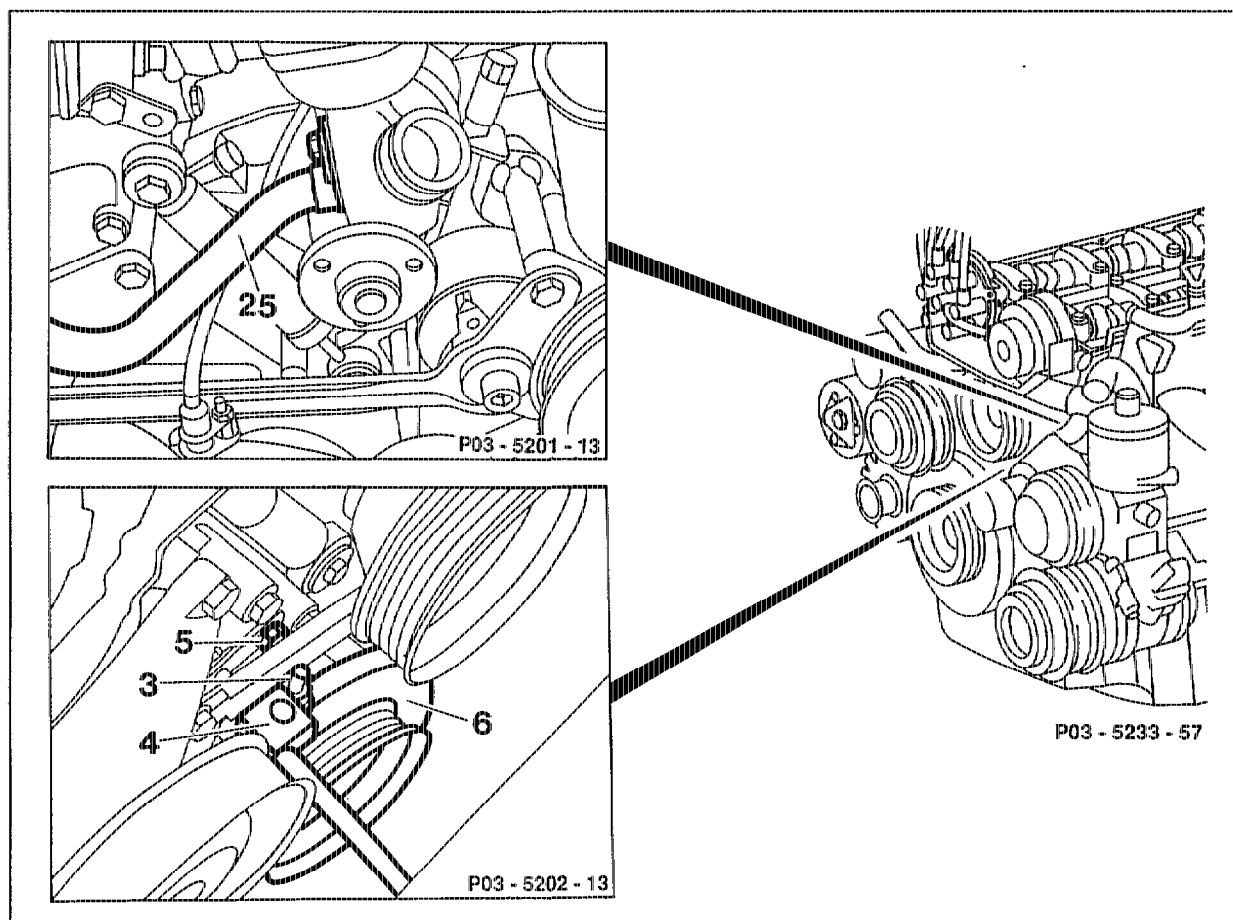
Piston of cylinder 1
 Spark plug of cylinder 1
 TDC sensor (L1)
 TDC sensor (L1)
 Dial gauge holder (02) 136 589 04 21 00

turn to 10° before ignition TDC.
 remove, install.
 unbolt, bolt on.
 remove from adjusting slide (3).
 install.

Dial gauge (01) and extension (length 155 mm) . . .
 Crankshaft
 Large pointer of dial gauge (01)
 Crankshaft
 Locating device (4) 119 589 00 21 00
 Locating device (4) 119 589 00 21 00

insert into dial gauge holder (02) with 4 mm preload.
 rotate in direction of rotation of engine and set TDC on cylinder 1 with dial gauge (01).
 zero.
 rotate in direction of rotation of engine until dial gauge has moved back by the value, see table "piston travel" (20° after TDC of cylinder 1).
 insert into adjusting slide (3).
 must engage over measuring pin on vibration damper (6).

Correcting setting of TDC sensor



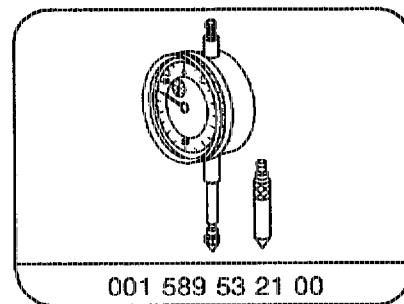
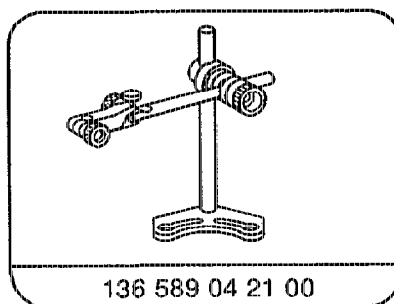
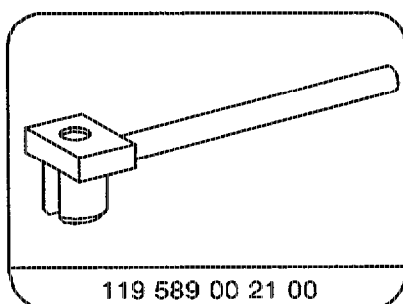
Engine 104.98:	open cap of cooling system (release pressure).
Engine 104.98:	remove heating water return line (25), install; replace seal.
Engine 104.98:	plug opening of coolant pump.
Bolt (5) of adjusting slide (3)	slacken.
Adjusting slide (3)	move until locating device engages over measuring pin (4) on vibration damper (6).
Bolt (5)	tighten.
Engine 104.98:	pour in coolant (20-0100).
Engine 104.98:	check cooling system for leaks (20-0170).

Piston travel with crankshaft in position 20° after TDC of cylinder 1 in mm

Engine 1)	104.94	104.98	104.99
Measurement vertically on piston	2.75	3.07	3.25

1) except AMG engines

Special tools



Shop-made tool

Measuring pin extension for dial gauge	length 155 mm
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Notes

The TDC sensor (L1) with bracket is attached to the timing case cover.

The measuring pin (arrow) in the vibration damper must be positioned in the middle below the TDC sensor (L1) at 20° after TDC in cylinder 1.

The setting of the TDC sensor must be checked and corrected, as necessary:

- When replacing the crankshaft or the vibration damper.
- When replacing the timing case cover.
- When adding parts to short engines.

With the cylinder head removed, attach a dial gauge holder to the crankcase and place dial gauge pin vertically onto the piston crown.

