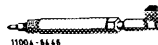


## 03-345 Checking and correcting adjustment of TDC transmitter

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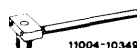
### Special tools

Measuring pin for TDC and 20° ATDC position of the engine on 1st cylinder



115 589 17 21 00

Locating tool for adjusting slide



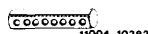
102 589 03 21 00

Socket insert 27 mm, 1/2" drive



001 589 65 09 00

1/2" drive insert, 80 mm long, for rotating the engine

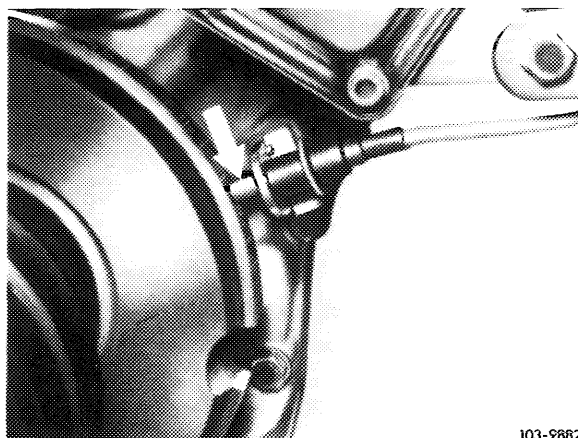


617 589 00 16 00

### Note

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With the crankshaft at 20° after TDC, the TDC transmitter must be positioned exactly above the pin in the vibration damper (arrow).



103-9882

The adjustment of the TDC transmitter must be checked and corrected

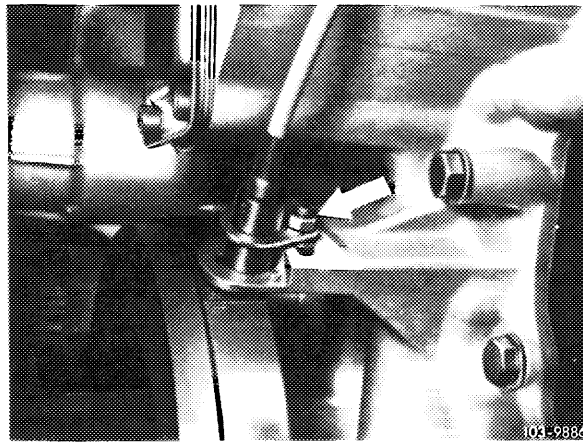
- a) when renewing the TDC transmitter adjusting slide
- b) when renewing the crankshaft with hub and vibration damper
- c) when renewing the timing case cover
- d) when completing partly assembled engines.

### Checking

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- 1 Loosen power steering pump, remove V-belt, swing power steering pump to the inside.
- 2 On vehicles with air conditioning or automatic climate control, remove refrigerant compressor with carrier.

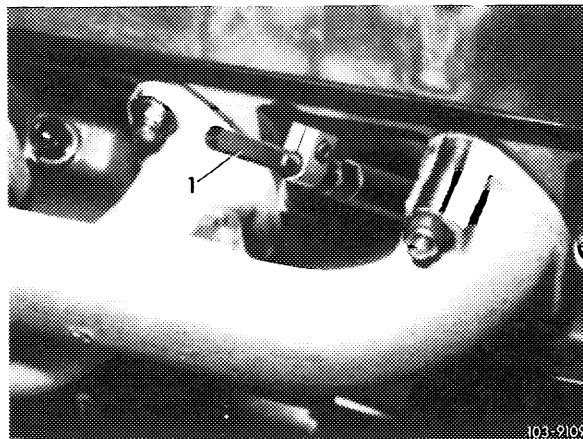
3 Unscrew hex. head nut (arrow) and pull out TDC transmitter.



4 Screw adapter into the spark plug bore of No. 1 cylinder.

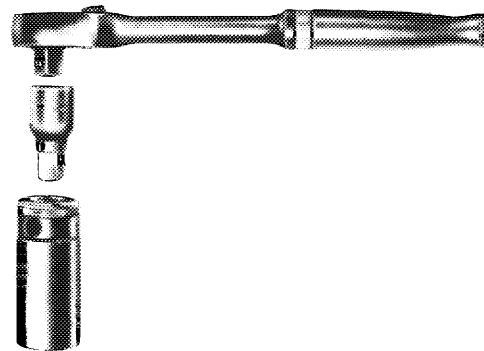
Insert adjusting pin (1) into the adapter and push down fully.

**Note:** With the cylinder head removed, attach a dial gauge holder to the crankcase and position dial gauge pin on the piston crown.



5 Turn crankshaft with the tool combination until the adjusting pin has reached its highest position.

The piston is then at TDC.

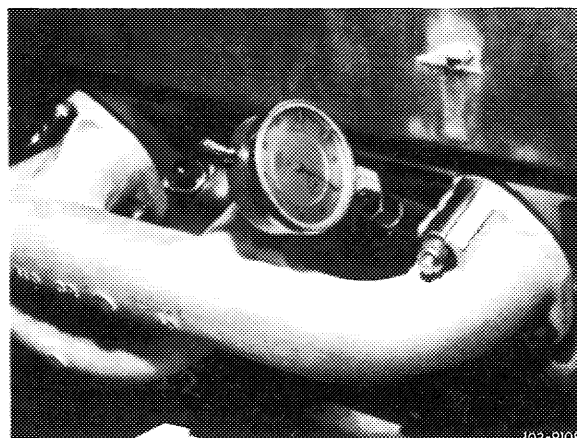


6 Remove adjusting pin.

Clamp dial gauge in position with a preload of approx. 5 mm.

Rotate crankshaft and accurately adjust TDC with the dial gauge.

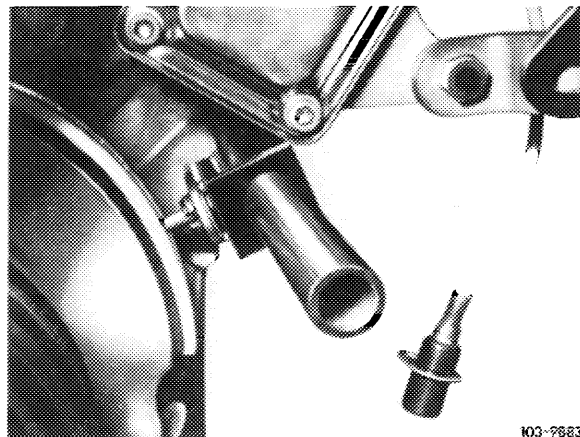
Turn dial gauge scale until the pointer is at 0.



7 Continue rotating the crankshaft in direction of rotation until the dial gauge pointer has moved back by the value specified in the table.

8 Insert locating tool into adjusting slide. The pin of the vibration damper must engage in the slot of the locating tool.

| Engine                                    | Measurement through spark plug bore |
|---|-------------------------------------|
| 116.960/961<br>Standard version           | 2.99                                |
| 116.964/965                               |                                     |
| 116.960/961<br>AUS J S USA                | 3.36                                |
| 116.962/963                               |                                     |
| 117.960/961<br>117.962/963<br>117.964/965 | 3.58                                |
| 117.967/968                               | 4.09                                |

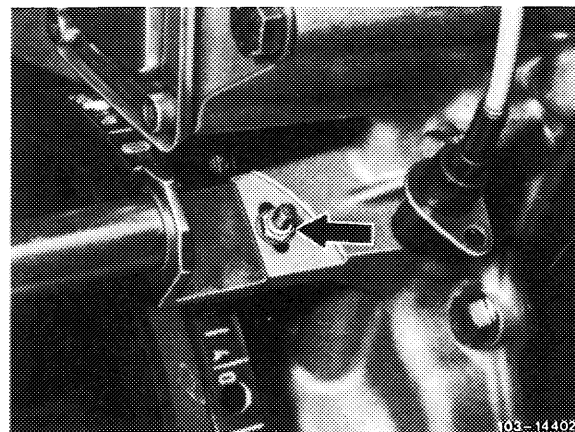


103-9683

### Correcting

9 Loosen adjusting slide (arrow) and slide until the pin engages in the locating tool.

10 Tighten adjusting slide (arrow) and remove locating fixture.

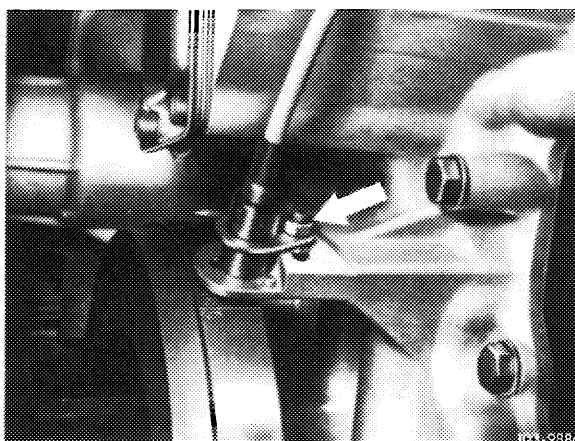


103-14402

11 Insert TDC transmitter and secure (arrow).

12 Remove dial gauge.

13 Briefly turn crankshaft in direction of rotation, then unscrew the adapter from the spark plug bore.



103-9886