

Camshaft Position (CMP) sensor (bank 2), checking

The camshaft position sensor is located on the left rear of the cylinder head ⇒ [page 28-1](#) .

Checking voltage supply

A

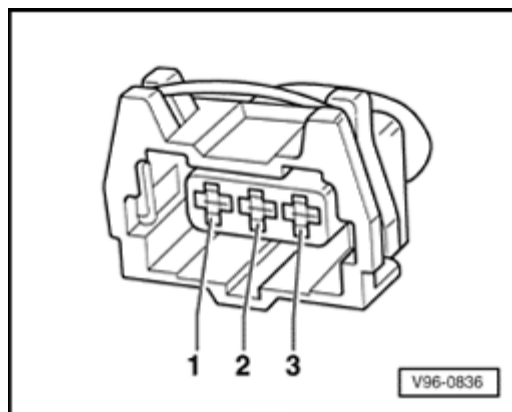
- Disconnect camshaft position sensor harness connector.
- Switch Fluke 83 multimeter to 20 volt range and connect between terminal 1 (B+) and terminal 3 (GND).
- Switch ignition on.

Specified value: min. 9 volts

If the specified value is not obtained:

- Check wiring for continuity or short between camshaft position sensor and ECM using wiring diagram.
- Connect VAG 1598/19 test box to ECM harness connector ⇒ [page 01-255](#) .
- Check camshaft position sensor Ground (GND) wire for continuity between connector terminal 3 and engine Ground.

Specified value: 1 Ω



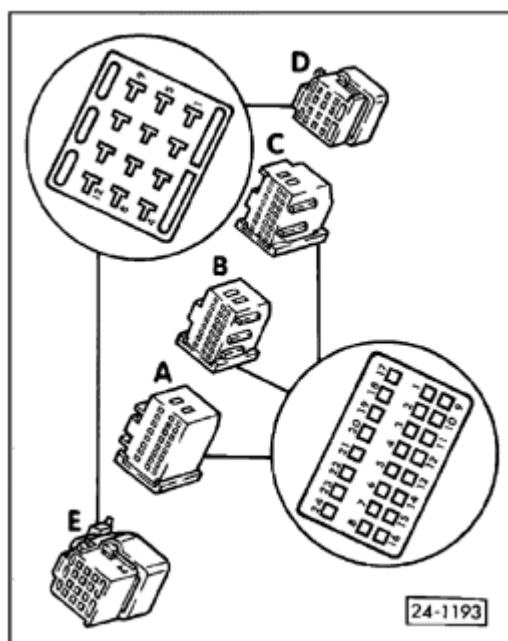
- Check camshaft position sensor B+ wire for continuity between connector terminal 1 and test box socket A2.

Specified value: max. 1 Ω

- Check both wires for possible short to each other.

If the specified values are not obtained:

- Check for open or short circuit in wiring between the camshaft position sensor connector and ECM connector -A- or engine Ground (GND), eliminate as necessary.



| Camshaft position sensor connector terminal number | ECM connector A terminal number or engine ground (GND) |
|--|--|
| 1 (B+) | A2 |
| 3 (Ground) | Engine Ground (GND) |

If there is neither an open nor short circuit:

- Replace ECM ⇒ [page 01-265](#) .

Function, checking

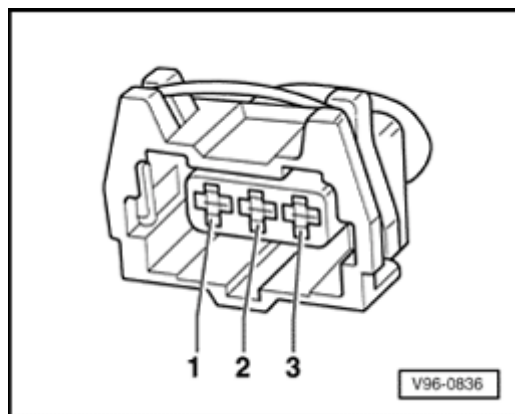
Note:

For functional check of camshaft position sensor, disconnect the 4-pin connector from the ignition coil power output stage and check DTC memory.

- Camshaft position sensor voltage supply OK
⇒ [page 28-33](#)
- Push back rubber boot on camshaft position sensor connector (sensor remains connected).
- Connect VAG 1527B voltage tester between terminal 1 (B+) and 2 (signal).
- Operate starter for several seconds.
- Voltage tester must flash briefly every second engine rotation

If voltage tester does not flash:

- Switch ignition off and disconnect 3-pin harness connector from camshaft position sensor.
- Connect VAG 1598/19 test box to ECM harness connector ⇒ [page 01-255](#) .



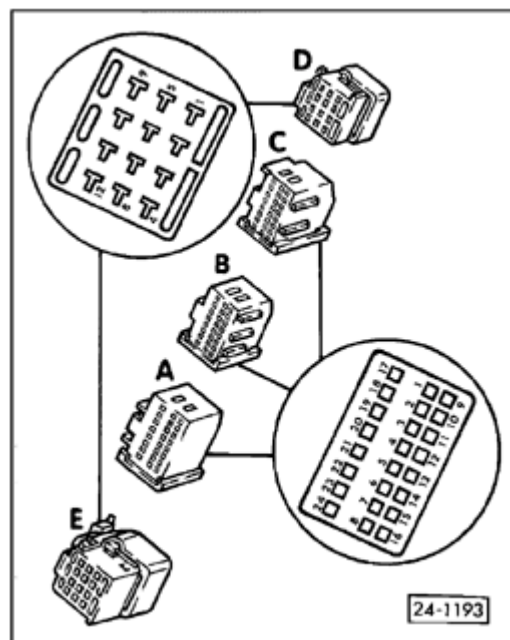
A

- Check signal wire for continuity between harness connector terminal 2 and test box socket B2.

Specified value: max. 1 Ω

If the specified value is not obtained:

- Eliminate short or open circuit in wiring between camshaft position sensor harness connector ...



A

... and ECM harness connector -B-.

| Camshaft position sensor connector terminal number | ECM connector A terminal number or engine ground (GND) |
|--|--|
| 2 (signal) | 8 |

If wiring is OK:

- Connect Fluke 83 multimeter between test box socket B2 and vehicle Ground (GND).
 - Switch ignition on.
- Specified value: min. 4.0 volts

If the specified value is not obtained:

- Replace ECM ⇒ [page 01-265](#) .

If the specified value is obtained:

- Replace Camshaft Position (CMP) sensor.