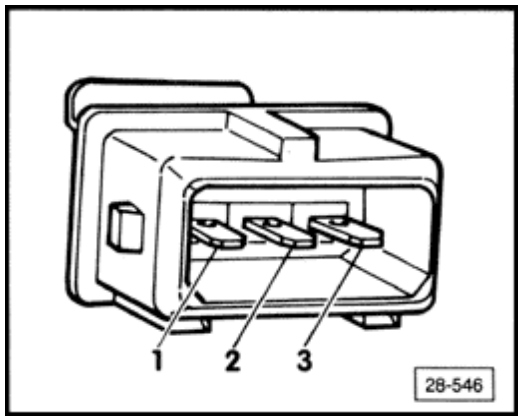
Knock sensors, checking

Notes:

- *To functionally check knock sensors ⇒ Repair Group 01, Read measuring value block, display group 015 and/or 016.*
- *Component locations ⇒ page 28-1 .*
- *Knock sensors can not be checked electrically, check DTC memory ⇒ page 01-13 .*
- *Use connector insertion tool 3247 for knock sensor removing and installing.*
- *It is important that exact knock sensor tightening torque of 20 Nm (15 ft lb) be maintained to make sure that there is proper knock sensor function.*
- *Visually check the knock sensor connector for corrosion.*
- *When repairing or replacing knock sensor connector terminals, ONLY replace with gold plated terminals.*

Checking knock sensor wiring



- Disconnect knock sensor harness connectors in engine compartment.

- Check all three terminals in knock sensor harness connector for shorting to each other.

  - Wires must not be short circuited to each other

If there is a short circuit:

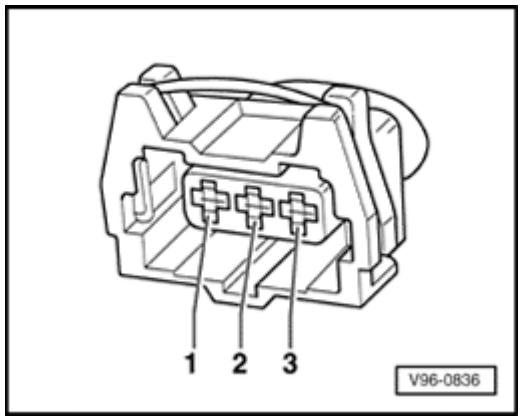
- Replace knock sensor.

28-30

Checking wiring between knock sensor and ECM

- Connect VAG 1598/19 test box to ECM harness connector ⇒ page 01-255 .

- Check wiring for continuity or short between knock sensor and ECM using wiring diagram.



➢ Terminal assignments (inside connector)

1 - Ground (GND) wire

2 - Signal wire

3 - Shield

Knock Sensor (KS) 1 -G61-

- Check signal wire for continuity between harness connector terminal 2 (in engine compartment) and test box socket A13.

  Specified value: max. 1 Ω

- Check Ground (GND) wire for continuity between harness connector terminal 1 and test box socket A14.

  Specified value: max. 1 Ω

- Check shielding for continuity between harness connector terminal 3 (in engine compartment) and engine Ground.

  Specified value: max. 1 Ω

If specified values are not obtained, repair open or short circuit.

28-31

Knock Sensor (KS) 2 -G66-

- Check signal wire for continuity between harness connector terminal 2 (in engine compartment) and test box socket A15.

  Specified value: max. 1 Ω

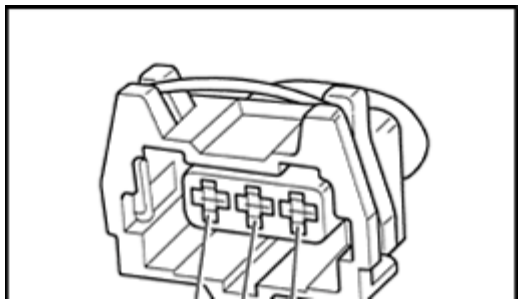
- Check Ground (GND) wire for continuity between harness connector terminal 1 and test box socket A14.

  Specified value: max. 1 Ω

- Check shielding for continuity between harness connector terminal 3 (in engine compartment) and engine Ground.

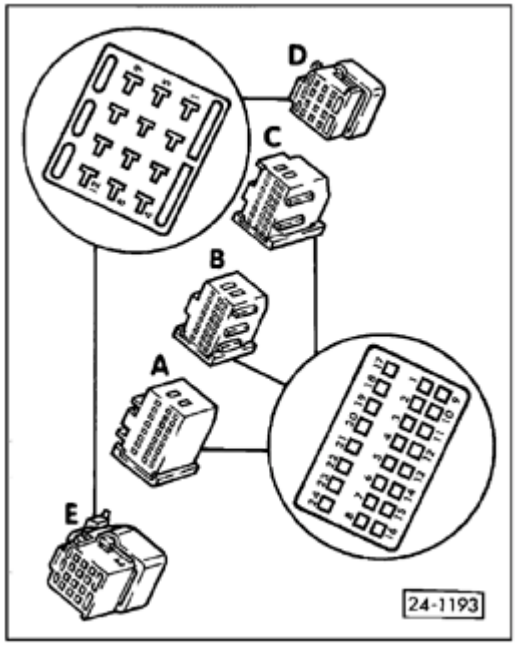
  Specified value: max. 1 Ω

If the specified values are not obtained:



- Eliminate open or short circuit in wiring.

28-32



- Knock sensor 1 (bank 1):

Knock sensor terminal number	ECM connector A or engine ground (GND)
1 (Signal)	A13
2 (Ground)	A14
3 (shield)	Engine Ground (GND)

- Knock sensor 2 (Bank 2):

Knock sensor terminal number	ECM connector A or engine ground (GND)
1 (Signal)	A15
2 (Ground)	A14
3 (Shield)	Engine Ground (GND)