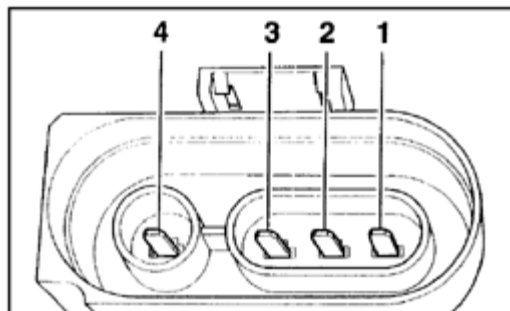


24-53

## Heated Oxygen Sensor (HO2S) after Three Way Catalytic Converter (TWC), checking

### Notes:

- ◆ *G130 = O2S behind three way catalytic converter, bank 1*
- ◆ *G131 = O2S behind three way catalytic converter, bank 2*
- ◆ *For functional check of O2S behind three way catalytic converter -G130- or -G131- ⇒ Repair Group 01, Read measuring value block, display group 041*
- Disconnect connector for O2S behind three way catalytic converter -G130- or -G131- (component locations ⇒ [page 24-1](#) ).



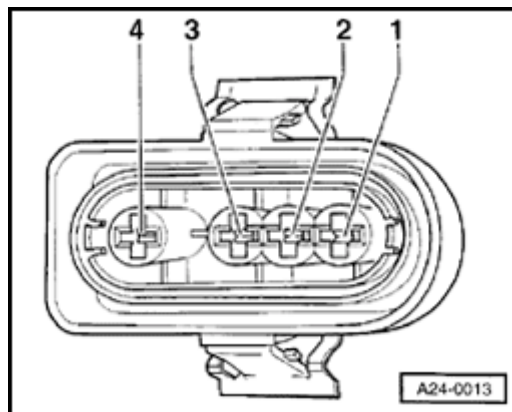
A

- Using multimeter (Fluke 83 or equivalent) set for measuring resistance ( $\Omega$ ), check for continuity (short circuit) between oxygen sensor terminals 3 (GND wire) and 4 (signal wire).

If there is continuity:

- Replace heated oxygen sensor.

If the wiring is OK (no continuity):



A

- Switch multimeter (Fluke 83 or equivalent) to measure voltage (2 volt range) and connect between harness connector terminals 3 (GND) and 4 (signal wire).

- Switch ignition ON.

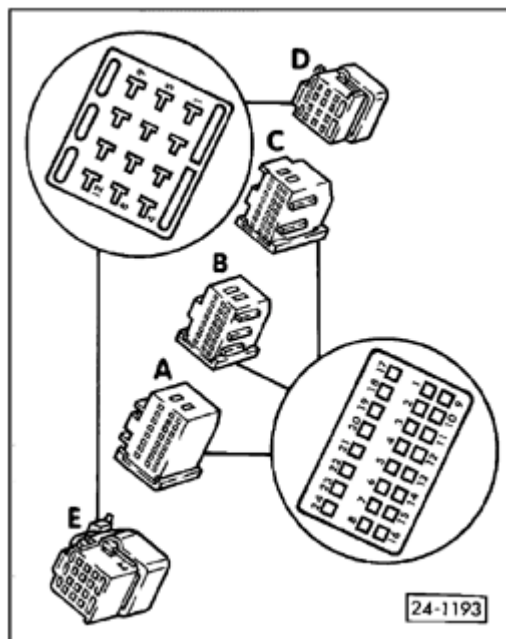
Specified value:  $400 \pm 50$  mV

If the specified value is not obtained, check wiring to ECM as follows:

- Switch ignition OFF.
- Connect VAG 1598/19 test box to ECM wiring harness  $\Rightarrow$  [page 01-255](#) .
- Check following wiring connections for continuity.

Specified value: max. 1  $\Omega$

Heated oxygen sensor	Connector terminal	VAG 1598/19 test box socket number
-G130-	3	C17
	4	C20
-G131-	3	C17
	4	C21



If the specified value is not obtained:

**A**

- Eliminate open or short circuit using wiring diagram.

If wiring OK:

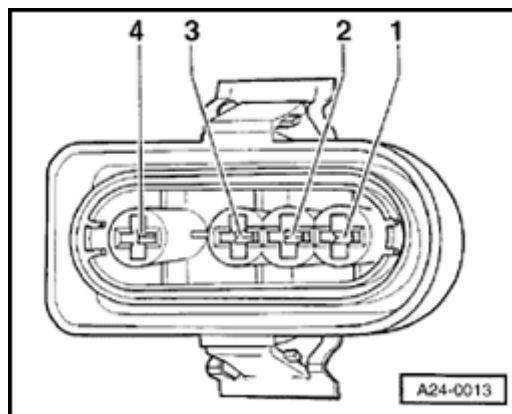
- Replace ECM ⇒ [page 01-265](#) .

## Oxygen sensor heater, checking

### Notes:

- ◆ Z29 = Oxygen Sensor (O2S) heater, bank 1
- ◆ Z30 = Oxygen Sensor (O2S) heater, bank 2
- ◆ For functional check of O2S heater -Z29- or -Z30- ⇒ Repair Group 01, Read measuring value block, display group 040

- Disconnect heated oxygen sensor harness connector (component locations ⇒ [page 24-1](#) )



A

- Switch multimeter (Fluke 83 or equivalent) to 20 volt range and connect between terminals 1 (B+) and 2 (GND).
- Start engine and let idle.  
Specified value: approx. 12 to 14 V

If the specified value is not obtained:

- Check oxygen sensor heater fuse.
- Check fuel pump relay ⇒ [page 24-24](#) .



A

- Check wiring for continuity between terminal 1 and fuse in fuse holder using wiring diagram, if necessary check terminal assignments.

Specified value: max. 1  $\Omega$

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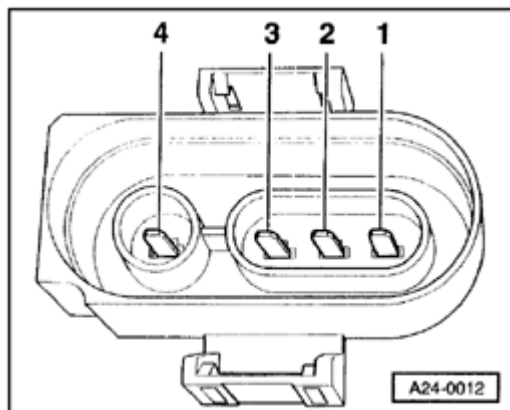
- Check wiring for continuity between terminals 2 and 8 on ECM connector E.

Specified value: max. 1  $\Omega$

- Check wiring for continuity between terminals 2 and 3 of ECM connector E (O2S heater -Z30-).

Specified value: max. 1  $\Omega$

If the specified value is obtained:



A

- Switch multimeter (Fluke 83 or equivalent) to measure resistance ( $\Omega$ ) and connect between terminals 1 and 2.

Specified value (room temperature): approx. 2 to 5  $\Omega$

**Note:**

*With small increases in temperature, resistance will increase sharply.*

If the specified value is not obtained:

- Replace heated oxygen sensor.