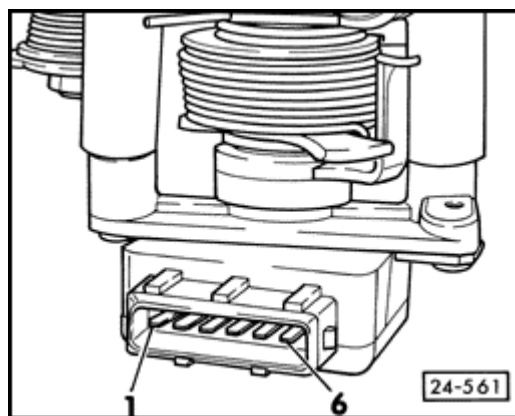


Throttle Position (TP) sensor, checking and adjusting

Notes:

- ◆ To functionally check the Throttle Position (TP) sensor ⇒ Repair Group 01, Read measuring value block, display group 002.
- ◆ Component locations ⇒ [page 24-1](#) .

Checking resistance



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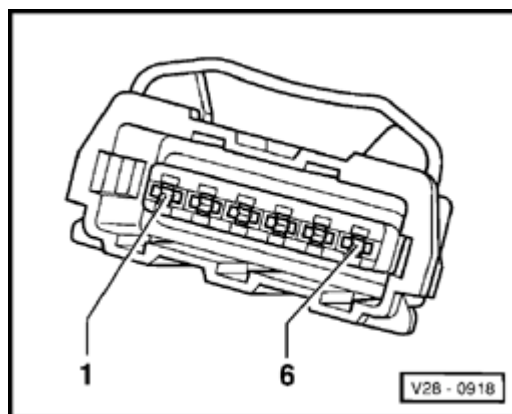
- Switch multimeter (Fluke 83 or equivalent) to measure resistance (Ω) and connect between terminals 1 and 2.
Specified value: 1500 to 2600 Ω
- Measure resistance between terminals 2 and 3.
Specified value (closed throttle): approx. 750 to 1300 Ω
- Slowly move throttle from closed throttle position to wide open throttle position.
 - Resistance must increase gradually to max. 3600 Ω

If any one of the specified values is not obtained:

- Replace throttle position sensor.

Checking voltage supply

- Disconnect TP sensor harness connector.
- Switch ignition ON.



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- Switch multimeter (Fluke 83 or equivalent) to measure resistance (Ω) and connect in sequence between terminals 1 (B+) and 2 (GND), then between terminals 1 (B+) and 3 (signal).

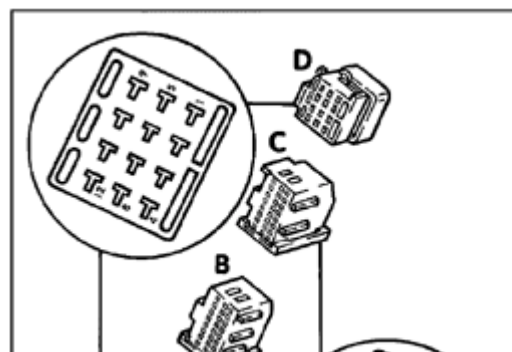
Specified value: 4.5 to 5.5 volts

If neither specified value is obtained:

- Check TP sensor resistance \Rightarrow [page 24-77](#) .

If one of the specified values is not obtained, check ECM wiring as follows:

- Connect VAG 1598/19 test box to ECM harness connector \Rightarrow [page 01-255](#) .



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- Check Ground (GND) wire for continuity between TP sensor connector terminal 2 and test box socket D12.

Specified value: max. 1 ohm (Ω)

- Check B+ wire for continuity between TP sensor connector terminal 1 and test box socket A3.

Specified value: max. 1 ohm (Ω)

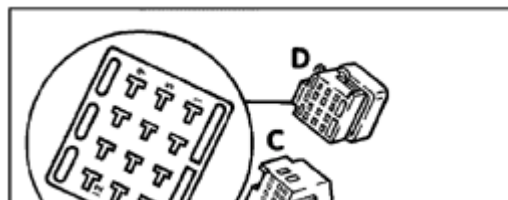
- Check signal wire for continuity between TP sensor connector terminal 3 and test box socket A24.

Specified value: max. 1 ohm (Ω)

If the specified value is not obtained:

- Determine open or short circuit in wiring using wiring diagram; repair as necessary.

6-pin TP sensor connector terminal	ECM connector A terminal or Ground
1	A3
3	A24
2	Intake manifold Ground (GND)



A

Note:

If it becomes necessary to repair or replace any of the throttle position sensor electrical terminals, ONLY replace with gold-plated terminals.

If the wiring is OK:

- Replace ECM ⇒ [page 01-265](#) .

Adjusting Throttle Position (TP) sensor

Notes:

- ◆ *By adjusting the Closed Throttle Position (CTP) switch, the Throttle Position (TP) sensor becomes automatically adjusted.*

- ◆ *Adjusting Closed Throttle Position (CTP) switch
⇒ [page 24-73](#).*