

Checking functions

Checking Lambda probe and Lambda regulation after catalyst

Notes:

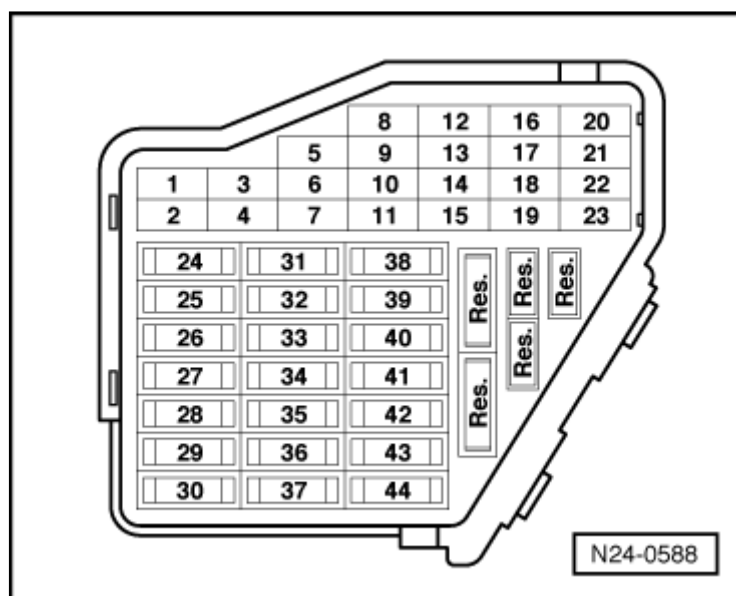
- ☐ Only gold-plated contacts may be used to repair contacts 3 and 4 in the Lambda probe connectors.
- ☐ The Lambda regulation after catalyst is set above the Lambda regulation before catalyst and serves as a means of correction.

Special tools, workshop equipment, testers, measuring instruments and auxiliary items required

- ☐ Hand multimeter V.A.G 1526 or multimeter V.A.G 1715
- ☐ Fault reader V.A.G 1551 or vehicle system tester V.A.G 1552 with cable V.A.G 1551/3
- ☐ Adapter set V.A.G 1594
- ☐ Test box V.A.G 1598/31
- ☐ Current flow diagram

Check conditions

- → All fuses must be OK.
- The battery voltage must be at least 11.5 V.
- All electrical consumers, e.g. lights and rear window heating must be switched off.
- If the vehicle is equipped with an air conditioner, this must be switched off.
- Exhaust system between catalyst and cylinder head must be free of leaks
- No faults must be stored in fault memory => Page [01-21](#), interrogating and erasing fault memory.
- Coolant temperature must be at least 80 °C, => display group 04, display zone 3.



Functional check

- Connect fault reader V.A.G 1551 (V.A.G 1552). Start engine and select "Address word" 01 of engine control unit. When doing this the engine must be running at idling speed.
(Connecting fault reader and selecting engine control unit => Page [01-12](#).)

→ Indicated on display:

Rapid data transfer HELP
Select function XX

- Press keys 0 and 4 for the "Introduce basic setting" function and confirm entry with Q key.

→ Indicated on display:

Basic setting Input display group number XXX

- Press keys 0, 4 and 3 for "Display group number 43" and confirm entry with Q key.

→ Indicated on display:
(1...4 = Display zones)

System in basic setting 43 <input type="checkbox"/>
1 2 3 4

Vehicles ☐ 05.01

- Depress brake pedal and hold it down.

The engine speed is increased by the control unit to about 1400 rpm.

When the diagnosis is initiated by the engine control unit the display in display zone 4 jumps from "Test OFF" to "Test ON"

Note:

This process can take a few minutes.

- Keep brake pedal depressed until result of functional test is displayed in display zone 4:
Specification "B1-P2 OK"

Vehicles 05.01 ☐

- Depress brake pedal and hold.
- Press accelerator pedal to wide-open position.

The engine speed is increased by the control unit to approx. 3000 rpm.

If the diagnosis is initiated from engine control unit the display in display zone 4 jumps from "Test OFF" to "Test ON"

Note:

This process can take a few minutes.

- Keep brake and accelerator pedal depressed until result of functional test is displayed in display zone 4:
Specification "B1-P2 OK"

Continuation for all vehicles:

If "B1-P2 nOK is displayed:

- Check Lambda probe voltage in display zone 3.
The voltage must fluctuate in range of 0.00... 1.00 V.

If the specification is obtained:

- Press ☐ key.
- Press keys 0 and 6 for the function "End output" and confirm entry with the Q key.
- Switch off ignition.
- Carry out a test drive to remove possible residue on Lambda probe and repeat check.

Observe the valid safety precautions when carrying out a road test => Page [24-23](#).

If "B1-P2 nOK" is displayed again:

- Replace Lambda probe after catalyst (G130).
- Interrogate fault memory, if necessary, repair any faults and then erase fault memory => Page [01-21](#), interrogating and erasing fault memory.
- Erase learnt values and adapt engine control unit=> Page [24-128](#)

If the display in display zone 3 remains at a constant value:

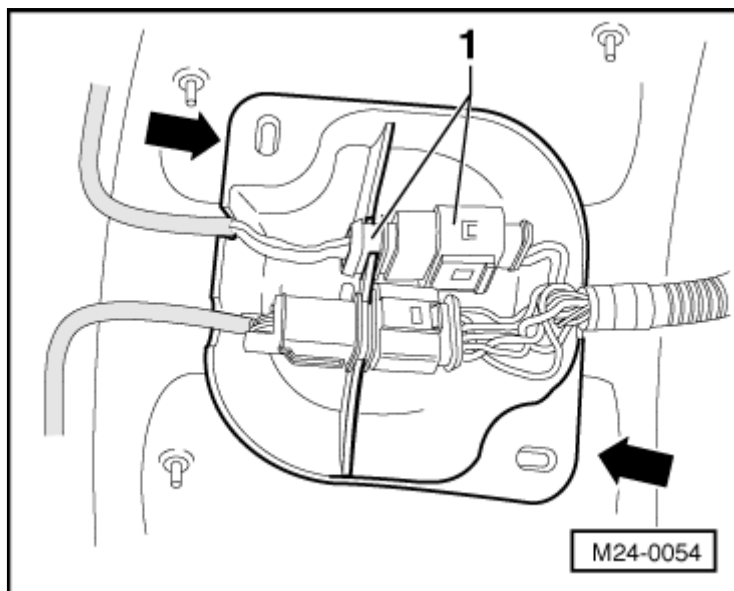
- Continue check according to following table.

Display	Cause	Continuation of check
Between 0.390... 0.500 V	Open circuit	=> Page 24-98 checking Lambda probe wiring
1.105 V	Short to positive	
0.000 V	Short to earth	

Checking basic voltage

- → Unscrew protective cover on underbody -arrows- and disconnect 4-pin connector (brown) -1- to

Lambda probe after catalyst (G130).



- → Connect multimeter using aux. cables from V.A.G 1594 to measure voltage at contacts 3 + 4 (connector to engine control unit).
- Start engine and measure the basic voltage.
Specification: 0.39...0.50 V
- Switch off ignition.

If the specification is not obtained:

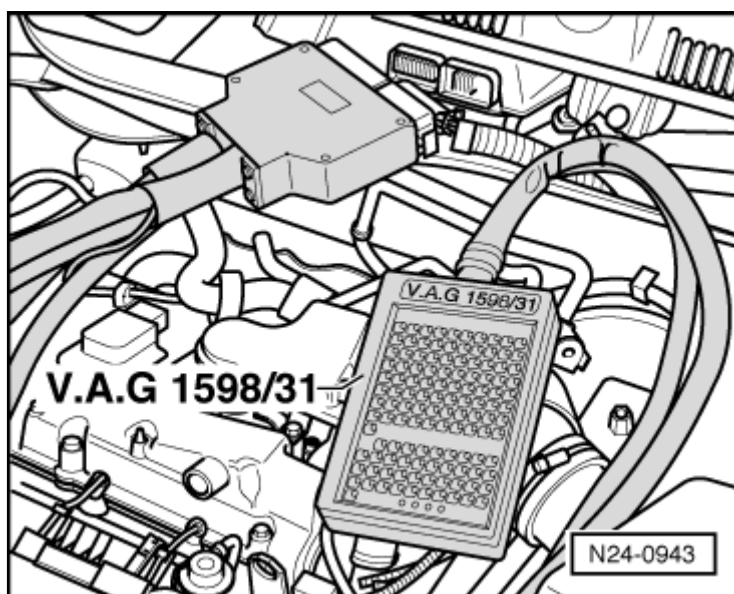
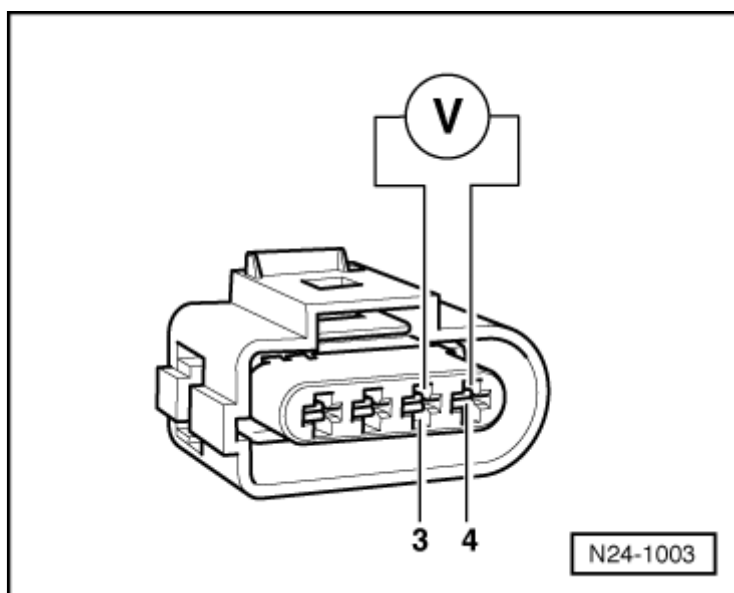
- Check Lambda probe wiring
=> Page [24-98](#)

If the specification is obtained:

- Renew Lambda probe after catalyst (G130).
- Erase learnt values and adapt engine control unit=> Page [24-128](#)

Checking Lambda probe wiring, Lambda probe 2

- → Connect test box V.A.G 1598/31 to control unit wiring harness. The engine control unit remains disconnected.



- → Check wiring between test box and 4-pin connector to engine control unit for open circuit using current flow diagram.
 - Contact 3 and test box socket 35
 - Contact 4 and test box socket 16
 - Wire resistance: max. 1.5 ω
- Additionally check wiring at 4-pin connector for short to one another.
 - Specification: $\infty\omega$

If no fault is detected in the wiring:

- Renew engine control unit => Page [24-120](#).

