

Digifant injection and ignition system

Checking Lambda probe and Lambda control

Special tools, testers and auxiliary items

- ☐ Fault reader V.A.G 1551 or vehicle system tester V.A.G 1552 with
 - ☐ 07.93: Cable V.A.G 1551/1
 - 08.93 ☐: Cable V.A.G 1551/3
- ☐ CO tester V.A.G 1363 A or 4 gas tester V.A.G 1788
- ☐ Adapter V.A.G 1363/3
- ☐ Test box V.A.G 1598/18
- ☐ Hand multimeter V.A.G 1526 or multimeter V.A.G 1715
- ☐ Adapter set V.A.G 1594
- ☐ Current flow diagram

Check conditions

- Idling adjustment OK.
- Exhaust system between catalyst and cylinder head free of leaks

Test sequence

- Connect fault reader V.A.G 1551 (V.A.G 1552) and select engine electronics control unit with the "Address word" 01. When doing this the engine must be running at idling speed.
(Connecting fault reader and selecting engine electronics control unit => Page [01-4](#) .)
- When the engine electronics control unit registers, note the control unit version.

→ Indicated on display:

Rapid data transfer HELP
Select function XX

- Input 08 for "Read measured value block" function and confirm with Q key.

→ Indicated on display:

Read measured value block HELP
Input display group number XX

- Input 01 for "Display group number" and confirm with Q key.

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

Read measured value block 1 ☐
1 2 3 4

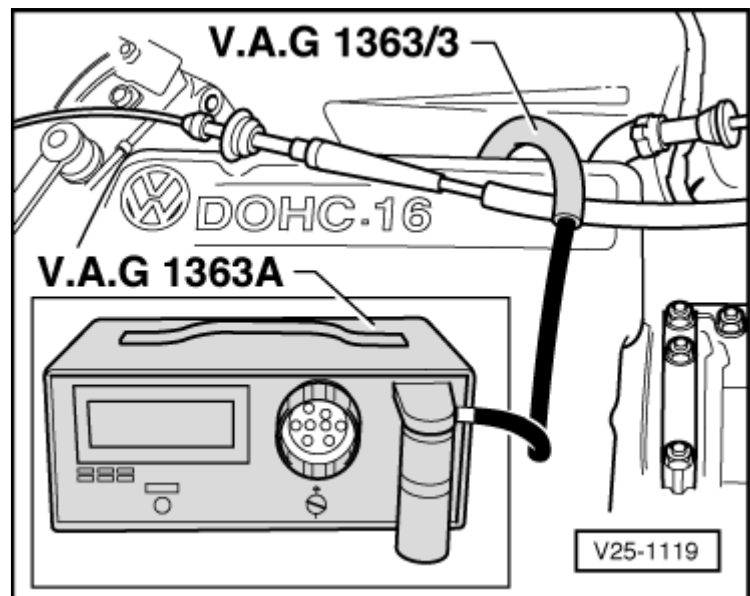
Only continue with the test when

- The coolant temperature is above 80 °C
Digifant 3.0 = Display zone 1
Digifant 3.2 = Display zone 2
- The engine has then run for a further 2 minutes at idling speed
- → Connect CO tester V.A.G 1363A or 4 gas tester V.A.G 1788 with adapter V.A.G 1363/3 to CO sampling pipe.
- Check CO content.

Specification: 0.3...1.2 Vol.%

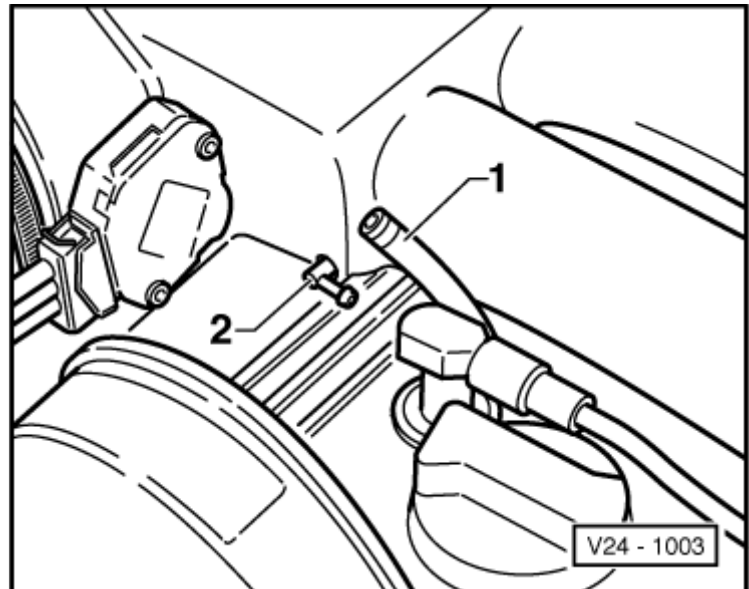
- Note Lambda probe voltage in display zone 3. The voltage must fluctuate at least 30 times per minute in range of 0... 1.0 V.

If the voltage fluctuation is slower, determine cause of fault. => Page [24-34](#)



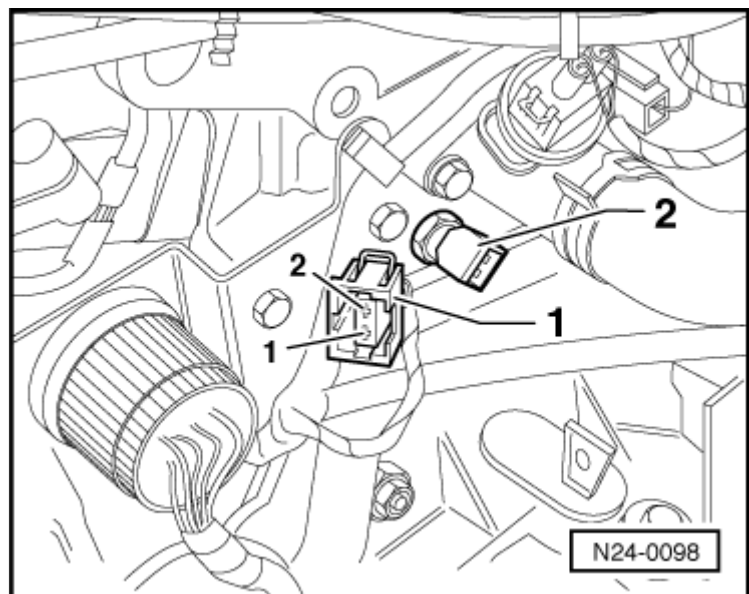
Continuation for Digifant 3.0 (□ 09.94)

- → Pull vacuum hose -1- off connection -2-. The probe voltage must increase and then fall back to the original figure.
- Reconnect vacuum hose -1-. The probe voltage must decrease and then increase to the original figure.



Continuation for Digifant 3.2 (10.94□)

- → Pull 2 pin connector -1- off coolant temperature sender (G62) -2-. The probe voltage must increase and then drop back to the old control range.
- Reconnect connector. The probe voltage must drop back and then increase to the old control range.



Note:

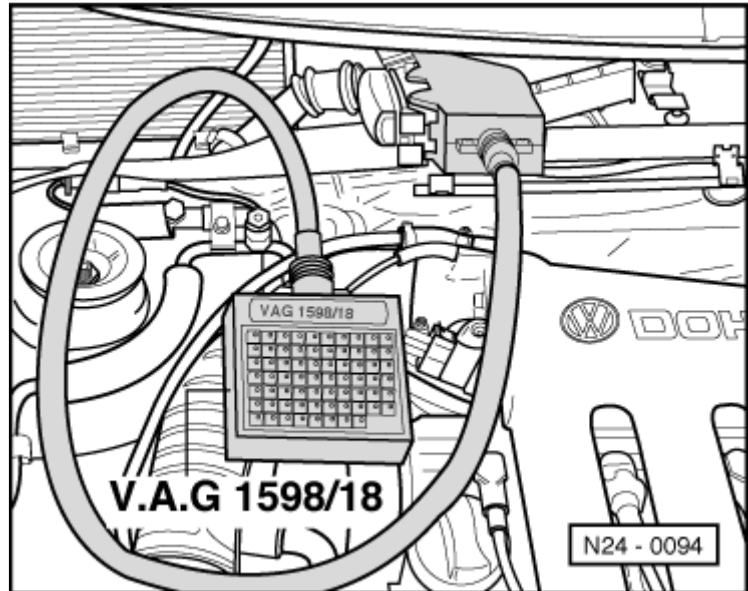
The engine speed must not exceed 1500 rpm during the check, otherwise the connector disconnected from the control unit will be recognised as a fault.

Continuation for Digifant 3.0 and 3.2

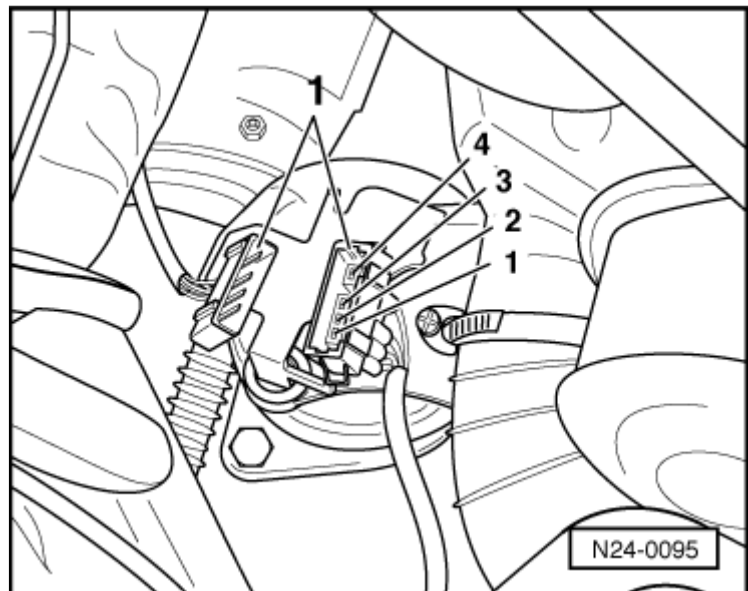
- Press ☐ key.
- Input 06 for "End output" and confirm with Q key.
- Switch off ignition.

If no control is detected:

- Check Lambda probe heating => Page [24-34](#) .
- → Connect test box V.A.G 1598/18 to control unit wiring loom.



- → Separate 4 pin connector to Lambda probe -1-.
- Check wiring between test box and 4 pin connector for open circuit according to current flow diagram.
 - Contact 3+socket 42
 - Contact 1+socket 20
 - Wire resistance: Max. 1.5 ω
- Check wiring at 4 pin connector for short to one another.
 - Specification: $\infty\omega$
- Check screening -test box socket 65- for short to the probe wiring according to current flow diagram.
 - Specification: $\infty\omega$



If no fault in wire is detected:

- Renew Lambda probe (G39).

Possible causes of fault if probe control frequency is too slow:

- ☐ The slots or holes in probe body are blocked
- ☐ The probe vent hole in area of connecting wire is blocked
- ☐ The probe has been overheated

(glazed)

- ☐ The probe has been damaged by
leaded fuel