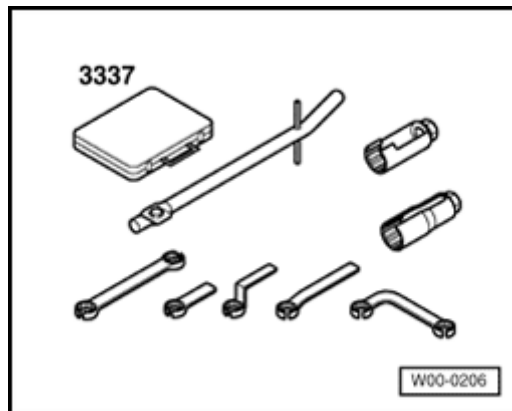


Exhaust system components, removing and installing

Special tools and equipment

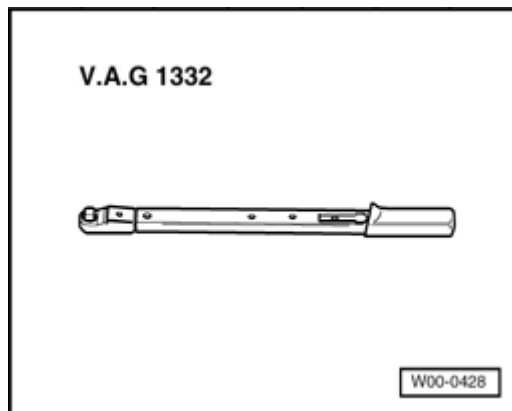
A

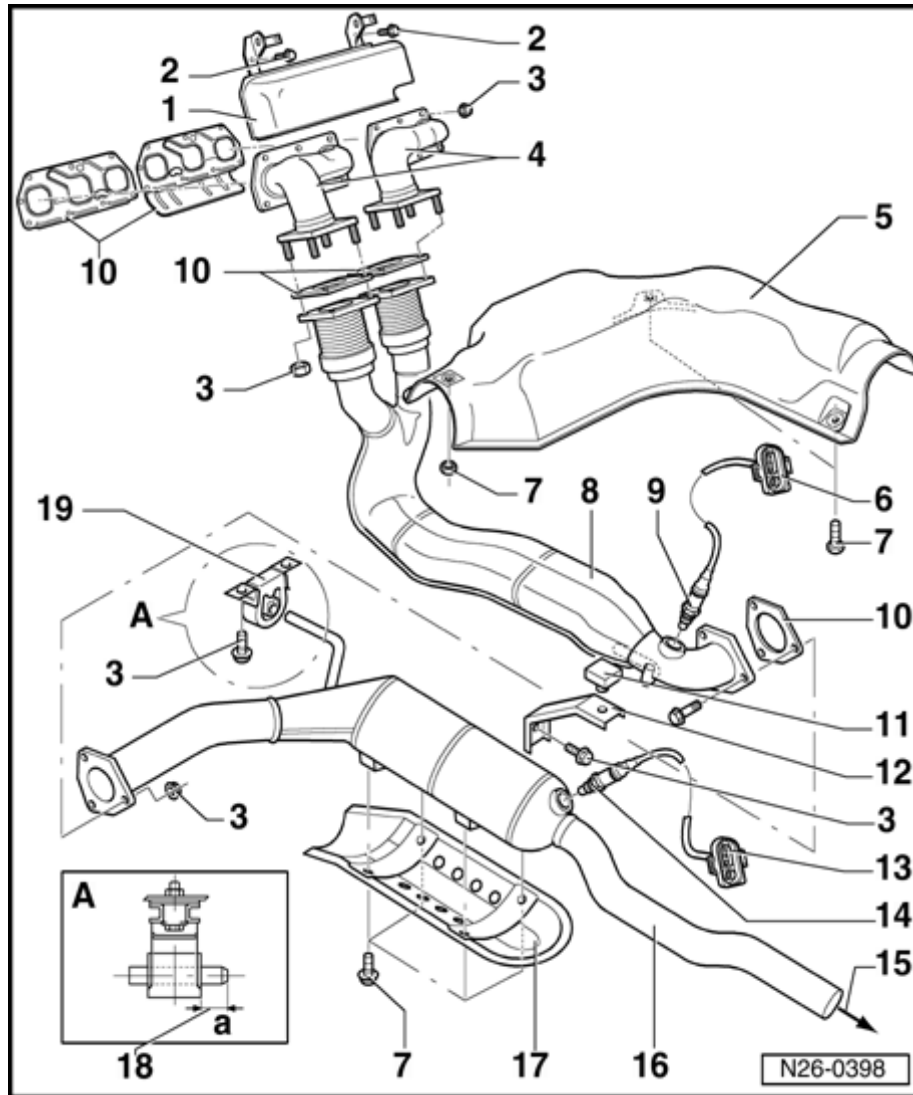
- ◆ 3337 ring spanner set



A

- ◆ VAG1332 torque wrench (40 to 200 Nm)





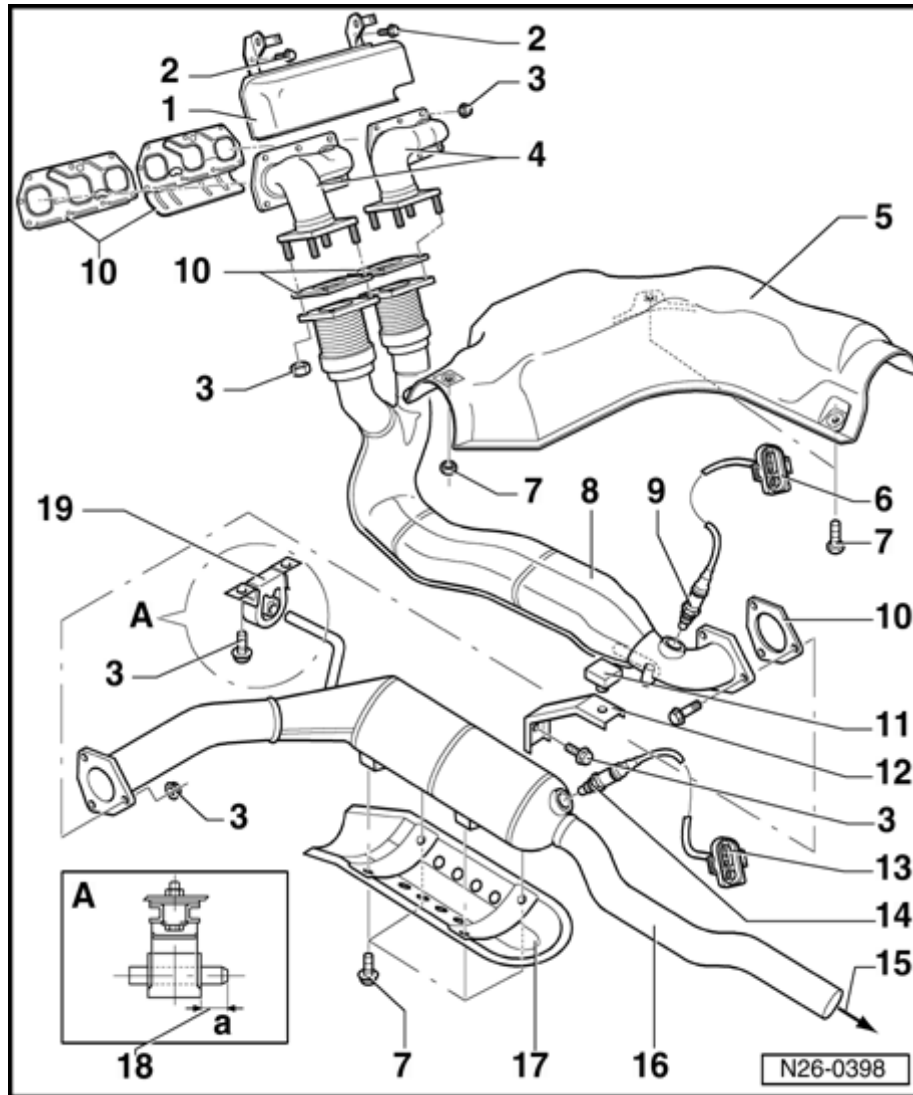
Exhaust manifold, front exhaust pipe and Three Way Catalytic Converter (TWC) with attachments

Note:

- ◆ Components marked with * are checked via On Board Diagnostic (OBD):

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01, DTC memory; DTC memory, checking and erasing](#)

- ◆ After exhaust system repairs, make sure exhaust system is not under stress and that it has sufficient clearance from the bodywork. If necessary, loosen double clamps and clamp and align exhaust pipe so that sufficient clearance is maintained to the bodywork and support rings carry uniform loads.
- ◆ Always replace self-locking nuts.
- ◆ Align exhaust system lengthwise so that dimension -a- is maintained.



1 - Heat shield

2 - 10 Nm

3 - M8 - 25Nm, M10 - 40Nm

4 - Exhaust manifold

◆ 2-piece

◆ Always replace

5 - Heat shield

◆ for catalytic converter

6 - Connector

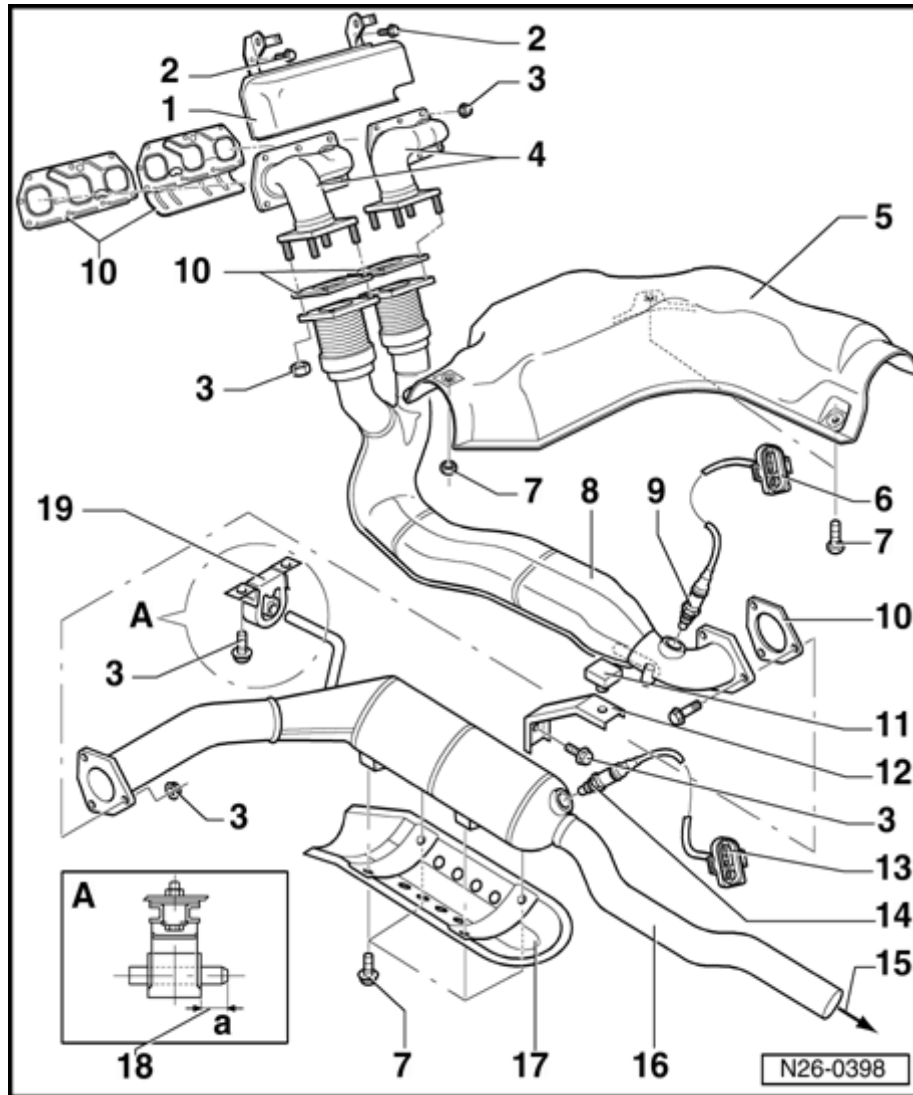
◆ Black, 6-pin

◆ secured to subframe

7 - 10 Nm

8 - Front exhaust pipe

◆ for removing and installing: Remove Vehicle Speed Sensor (VSS) at transmission



9 - Heated Oxygen Sensor (HO2S) -G39-*, 50 Nm

- ◆ Only use "G 052 112 A3" to grease thread; do not let "G 052 112 A3" get onto slit of oxygen sensor
- ◆ use 3337 ring spanner to remove and install
- ◆ Checking:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01, DTC memory; DTC memory, checking and erasing](#)

- ◆ Oxygen sensor and oxygen sensor control, checking

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 24; Motronic Fuel Injection and Ignition; Fuel injector, servicing](#)

- ◆ Check oxygen sensor heating:

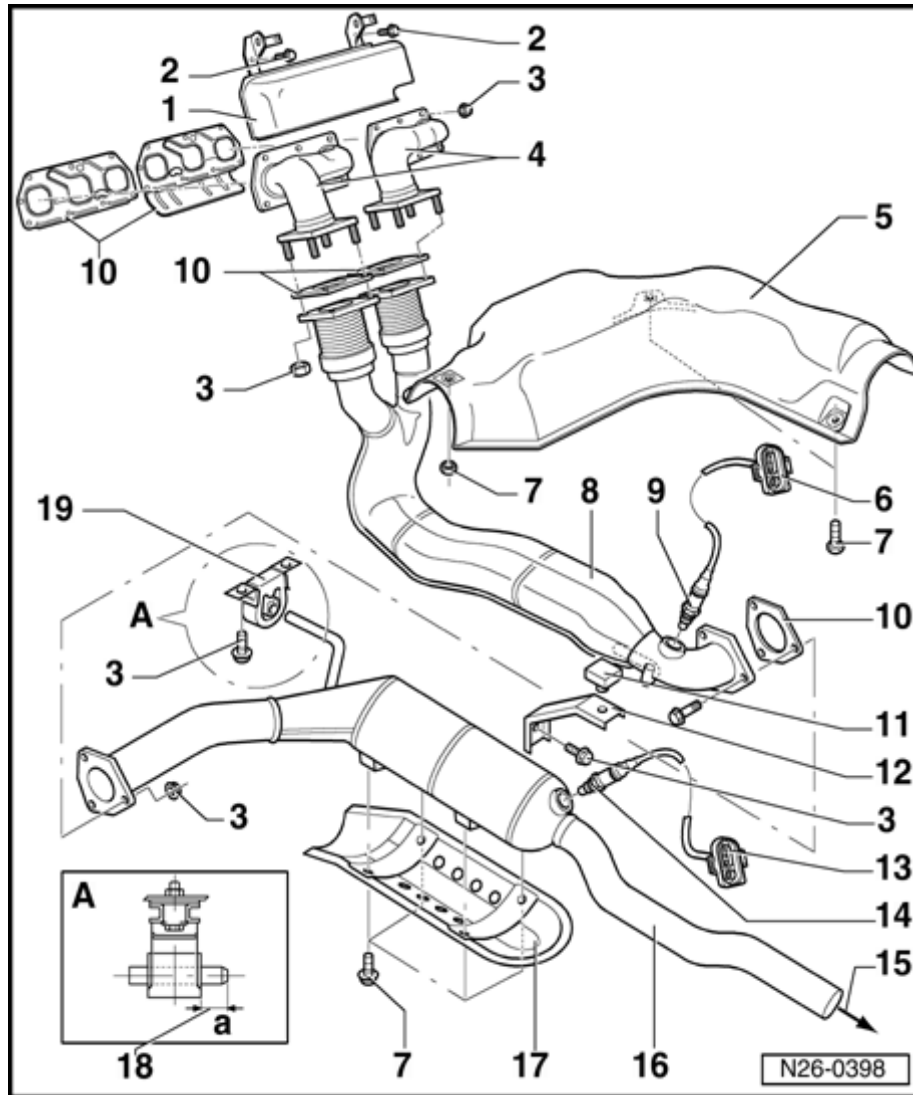
⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 24; Motronic Fuel Injection and Ignition; Fuel injector, servicing](#)

10 - Gasket

- ◆ Always replace

11 - Rubber damper

- ◆ for front exhaust pipe, item 8
- ◆ secured to subframe



12 - Support

- ◆ for rubber damper
- ◆ secured to subframe

13 - Connector

- ◆ Brown, 4-pin

14 - Heated Oxygen Sensor (HO2S) 2 -G108-*, 50 Nm

- ◆ Installation location: in catalytic converter
- ◆ Only use "G 052 112 A3" to grease thread; do not let "G 052 112 A3" get onto slit of oxygen sensor
- ◆ use 3337 ring spanner to remove and install
- ◆ Checking:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01, DTC memory; DTC memory, checking and erasing](#)

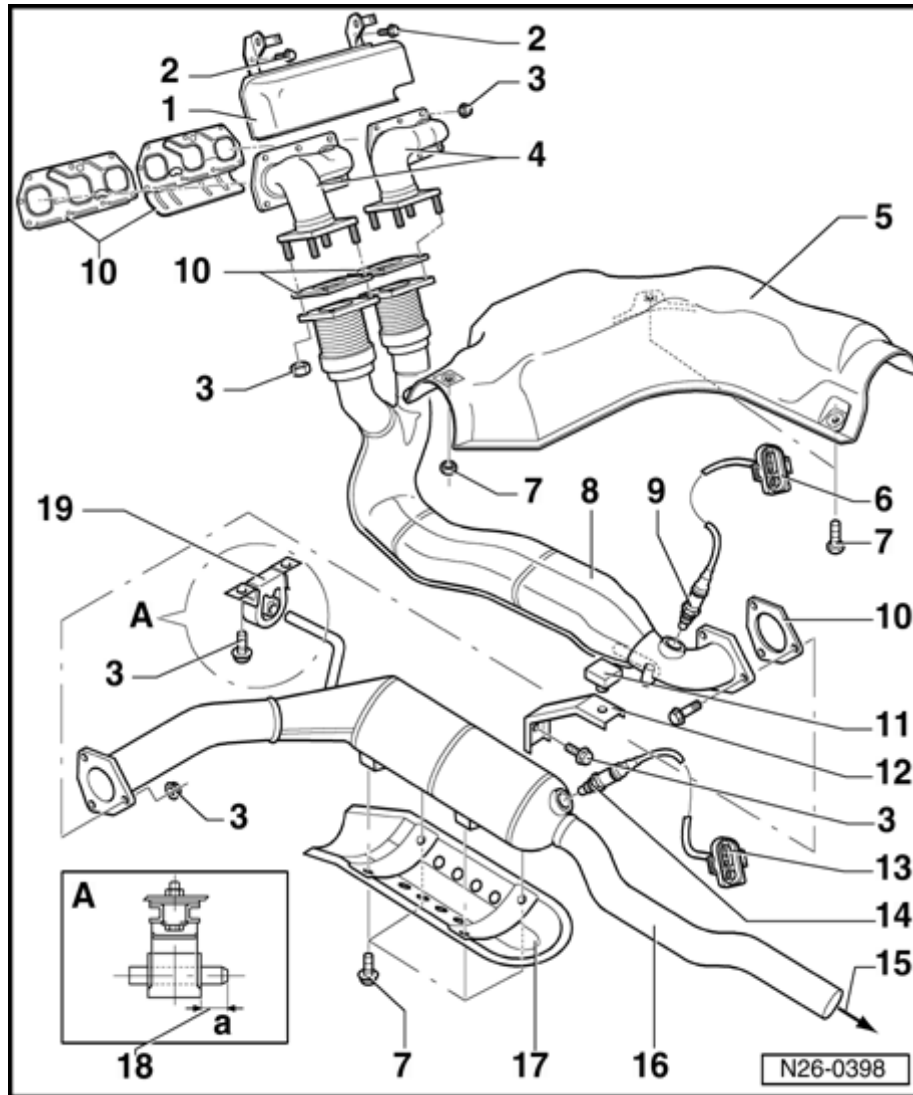
- ◆ Oxygen sensor and oxygen sensor control, checking

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 24; Motronic Fuel Injection and Ignition; Fuel injector, servicing](#)

- ◆ Check oxygen sensor heating:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 24; Motronic Fuel](#)

Injection and Ignition; Fuel injector, servicing



15 - to front muffler

◆ ⇒ [Page 26-8](#) , item no. 11

16 - Catalytic converter

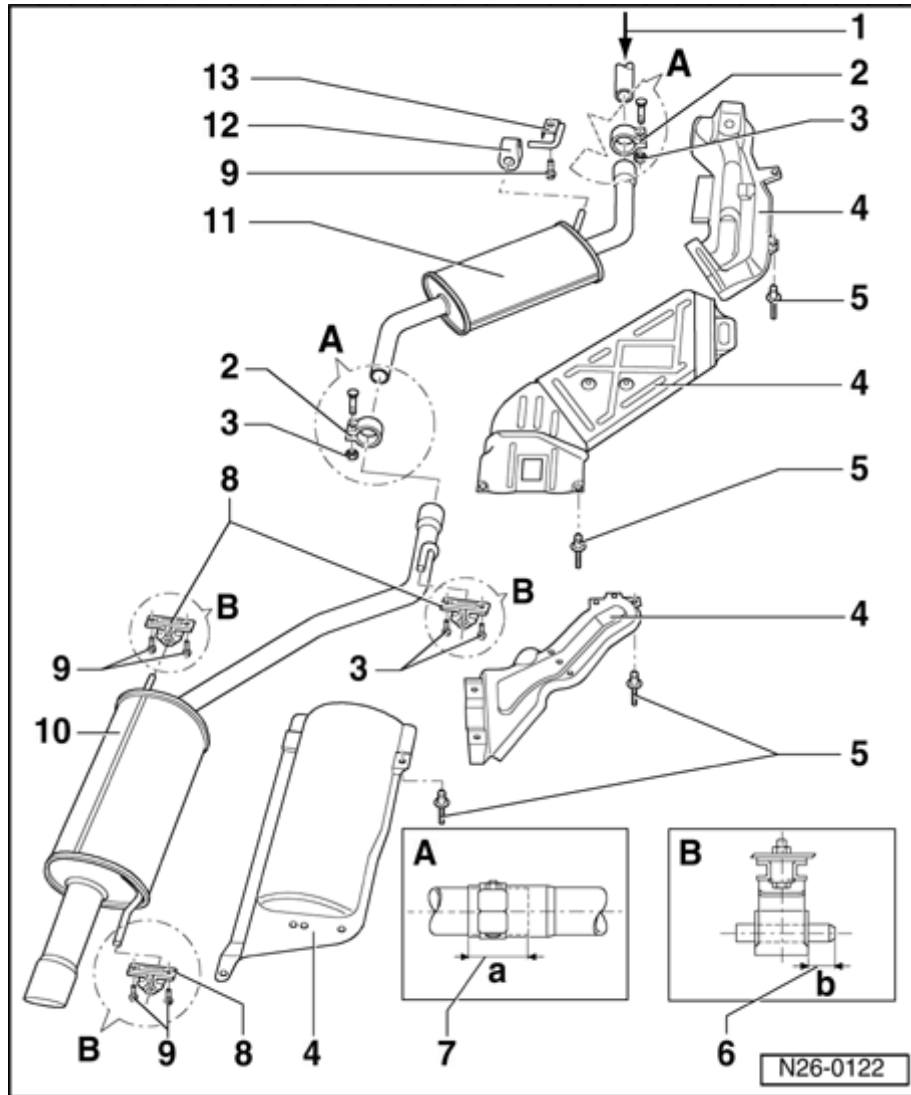
17 - Heat shield

18 - Dimension -a- = at least 10 mm

19 - Support ring

◆ Replace if damaged

◆ Note installed position



Mufflers with mounts

Note:

Align exhaust system lengthwise so that dimensions -a- and -b- are maintained.

1 - From Three Way Catalytic Converter (TWC)

◆ ⇒ [Page 26-6](#) , item no. 16

2 - Clamp

3 - 40 Nm

◆ Always replace

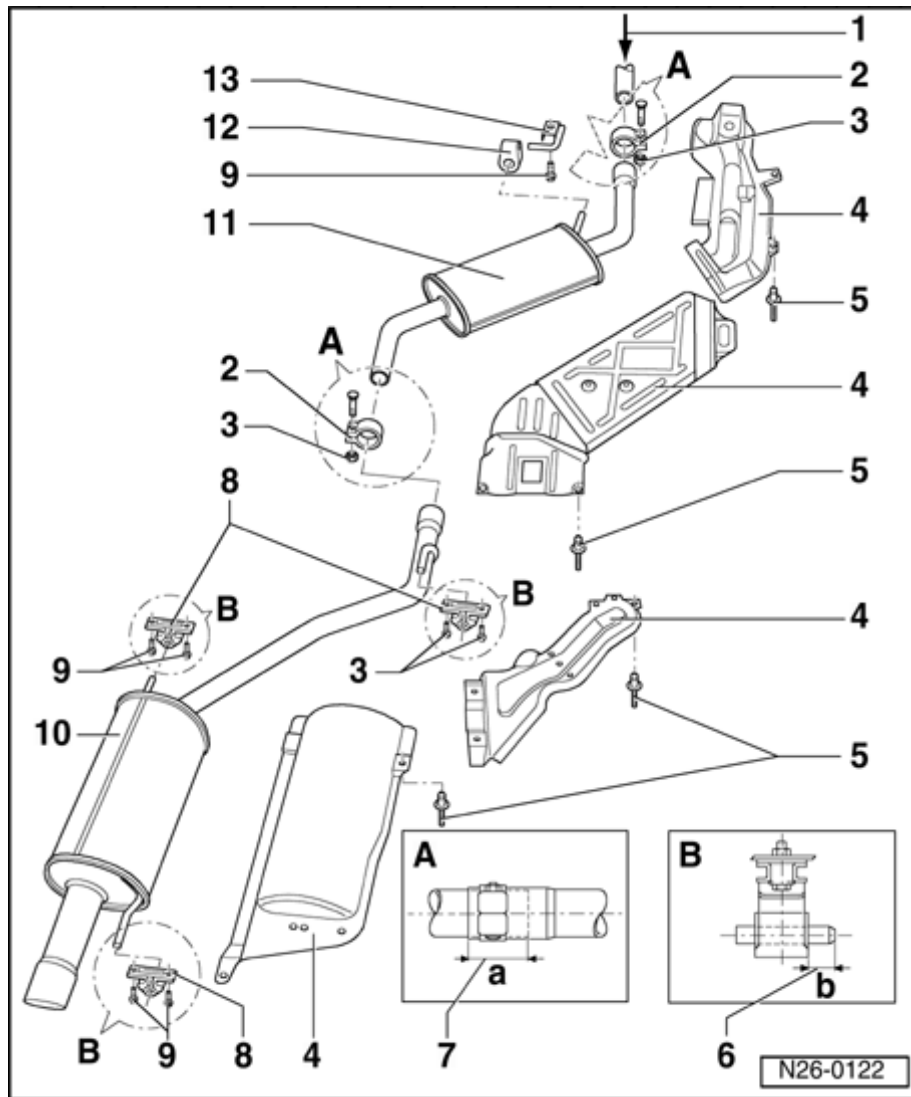
4 - Heat shield

5 - Pop rivet

6 - Dimension -b- = at least 10 mm

7 - Dimension -a- = 50 ± 5 mm

N26-0122



8 - Support ring

- ◆ Replace if damaged
- ◆ Note installed position

9 - 25 Nm

10 - Rear muffler

11 - Front muffler

12 - Retaining ring

- ◆ Replace if damaged

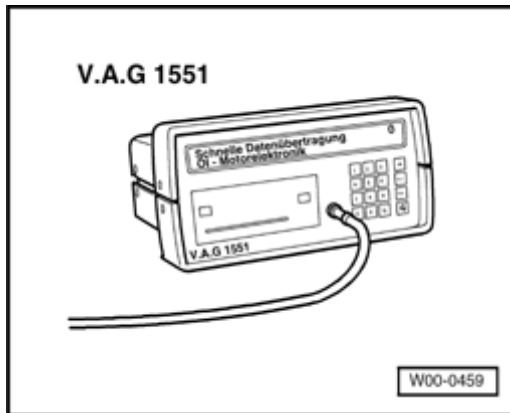
13 - Bracket

N26-0122



Three Way Catalytic Converter (TWC), checking

Special tools and equipment

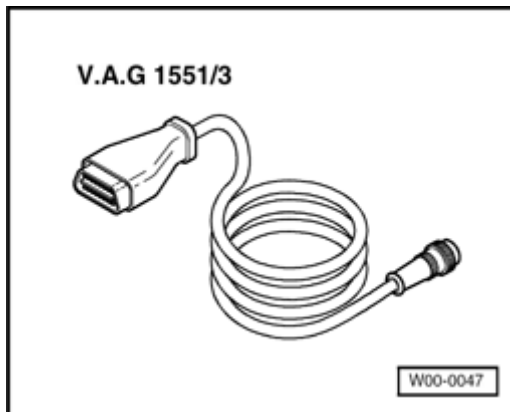


A

- ◆ VAG1551 Scan Tool (ST)

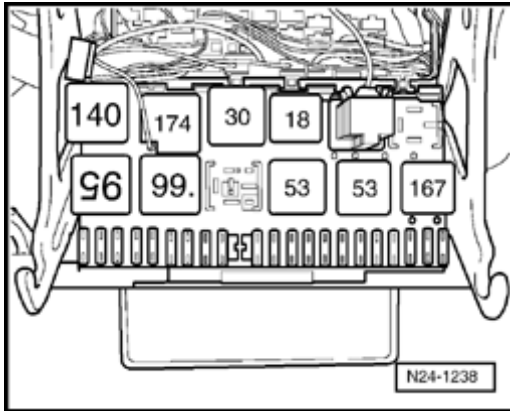
Note:

If VAG1551 Scan Tool (ST) is not available, use VAG1552 Mobile Scan Tool (ST) instead, although this tool cannot produce a print-out.



A

- ◆ VAG1551/3B cable



A

Test requirements

- All fuses must be OK.
- Exhaust system must be properly sealed between catalytic converter and cylinder head.
- Parking brake must be engaged or else daylight driving lights will be switched on.
- Coolant temperature must be at least 80 ° C, ⇒ Display group 04, display field 3
- Catalytic converter temperature must be at least 350 ° C ⇒ Display group 46, display field 2
- All electrical consumers like, for example, lights and rear window heating must be switched off.
- If vehicle is equipped with an A/C system, it must be switched off.

Note:

This diagnostic can only be completed if the diagnostic of oxygen sensor aging has already been performed successfully.

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 24; Checking Function; Oxygen sensor aging of oxygen sensor before catalytic converter, checking](#)



Test sequence

- Connect VAG 1551 scan tool (VAG1552). Start engine and select the Engine Control Module (ECM) using address word 01. Connecting scan tool and selecting Engine Control Module (ECM):

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01; General information for On Board Diagnostic \(OBD\): Connecting VAG1551 and selecting control module for engine electronics.](#)

- Check DTC memory, repair malfunctions if necessary and then erase DTC memory:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01, DTC memory; Engine Control Module \(ECM\) DTC memory, checking and erasing](#)

- Then:

◆ Connect Scan Tool (ST) VAG1551



Select function XX

- Press buttons -0- and -4- to select "Basic Setting" function 04. Press -Q- button to confirm input.

Basic Setting

HELP

Enter display group number XXX



Indicated on display:

- Press buttons -0-, -4- and -6- to select "Display group number 46". Press -Q- button to confirm input.

Basic setting 46



1 2 3 4



Indicated on display: (1 to 4 = display fields)

- Depress brake pedal and hold down.



- Depress accelerator pedal until it is in Wide Open Throttle (WOT) position.

The Engine Control Module (ECM) raises the engine speed to about 2300 RPM.

- Maintain brake pedal and accelerator pedal depressed until the display in display field 4 jumps from "Test OFF" to "Test ON". Catalytic converter temperature in display field 2 must be at least 350 ° C.

Note:

Diagnostic takes approx. 1 minute.

- Maintain brake pedal and accelerator pedal depressed until the result of the function test is indicated in display field 4. Specification: "Cat B1 OK"
- Release brake and accelerator pedal.

If display field 4 indicates "Cat B1 not OK":

- Check DTC memory:

⇒ *Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code(s): AXK, Repair Group 01, DTC memory; Engine Control Module (ECM) DTC memory, checking and erasing*

- Repeat test.

If display field 4 indicates "Cat B1 not OK" again:

- Check DTC memory again.



If no other malfunctions were recognized by the Engine Control Module (ECM), catalytic converter damage could be the cause.

Note:

This test is designed for vehicles with On Board Diagnostic (OBD) and mentions possible catalytic converter damage. If "Cat B1 not OK" is indicated, the catalytic converter does not generally need to be replaced, only if the following emissions test is not passed or visible damaged to the catalytic converter can be detected.

If the emissions test is not passed or damage to the catalytic converter is detected:

- Replace catalytic converter.

- Read readiness code:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01; Readiness code; Read readiness code](#)

- If DTC memory was erased, readiness code must be re-generated:

⇒ [Repair Manual, 2.8 Liter VR6 4V Fuel Injection & Ignition, Engine Code\(s\): AXK, Repair Group 01; Readiness code; Generate readiness code](#)

If specified value "Cat B1 OK" is obtained:

- Press → button.

Rapid data transfer
Select function XX

HELP



Indicated on display:

- Press buttons -0- and -6- to select "End data transfer" function 06. Press -Q- button to confirm input.