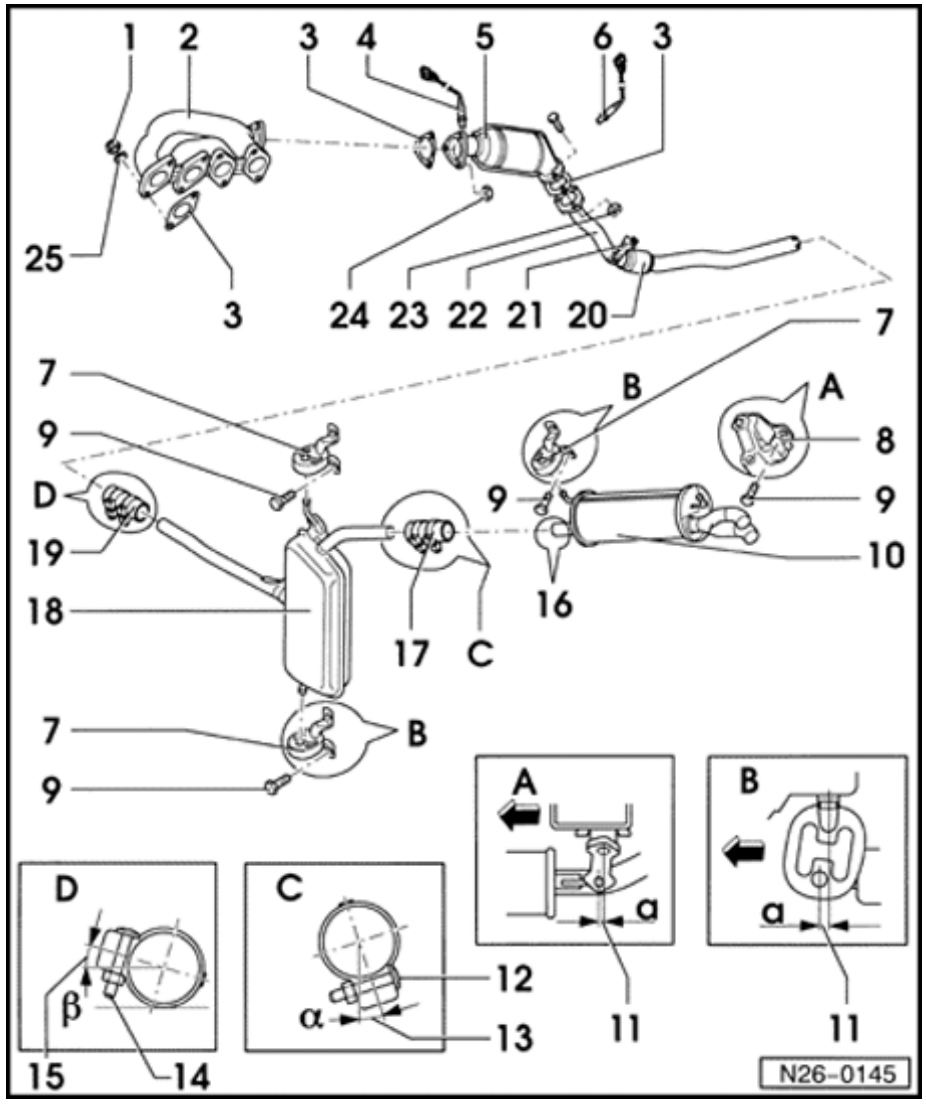
Exhaust system

Exhaust system components, removing and installing

Note:

- *After work on the exhaust system ensure that the system is not under stress and that it has sufficient clearance from the bodywork. If necessary, loosen the double and single clamps and align the muffler and exhaust pipe so that sufficient clearance is maintained to the bodywork and the support rings are evenly loaded.*

- *Always replace self-locking nuts.*



1 - 25 Nm

2 - Exhaust manifold

- With turbocharger ⇒ Page 21-1 , Removing and installing turbocharger and components

3 - Gasket

- Always replace

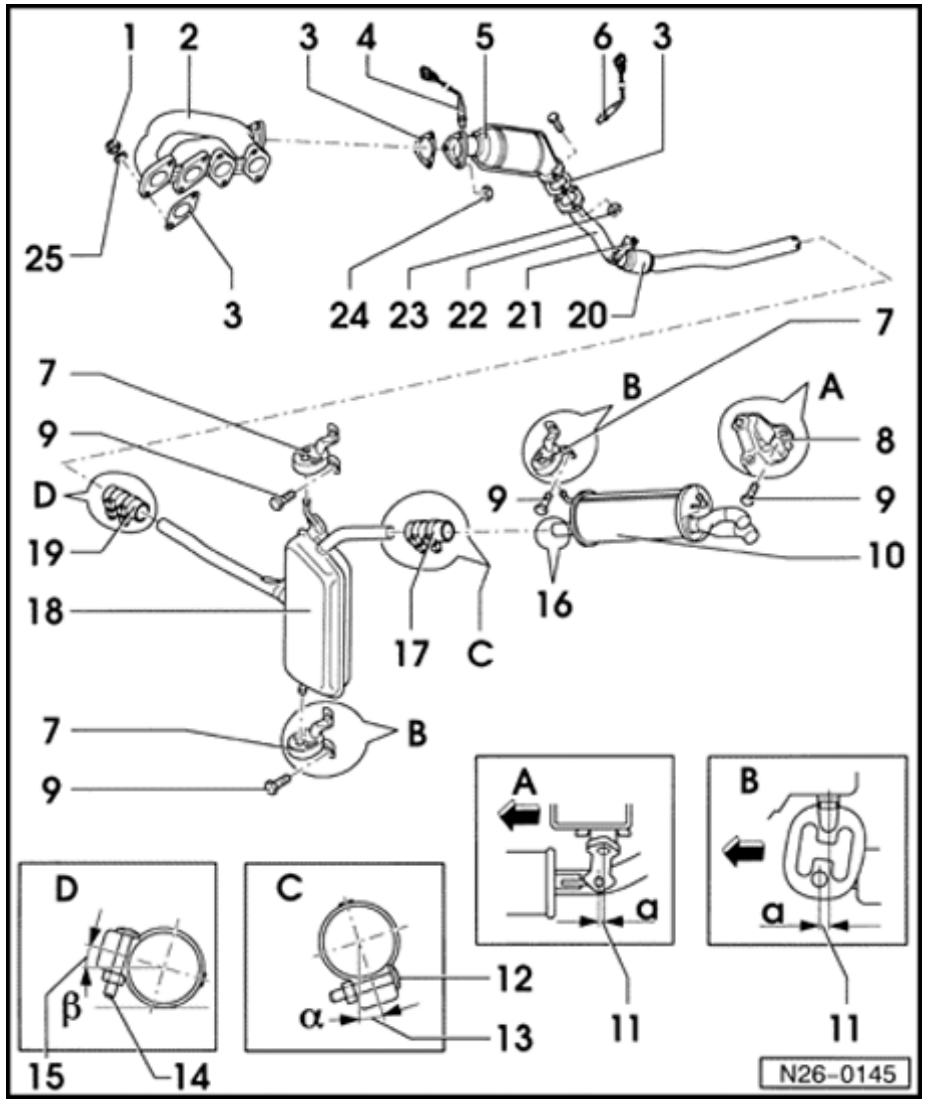
4 - Heated Oxygen sensor (HO2S) -G39-, 50 Nm

- Grease only the threads of sensor with G 052 112 A3
- G 052 112 A3 must not get into the slots on the sensor body
- Remove and install with 3337
- Checking:

⇒ *Repair Manual, 1.8 Liter 4-Cyl. 5V Turbo Fuel Injection & Ignition, Repair Group 24*

5 - Three-Way Catalytic Converter (TWC)

- Checking ⇒ Page 26-8



6 - Oxygen sensor (O2S) behind Three-Way Catalytic Converter (TWC) -G130-

- Grease only the threads of sensor with G 052 112 A3
- G 052 112 A3 must not get into the slots on the sensor body
- Remove and install with 3337
- Checking:

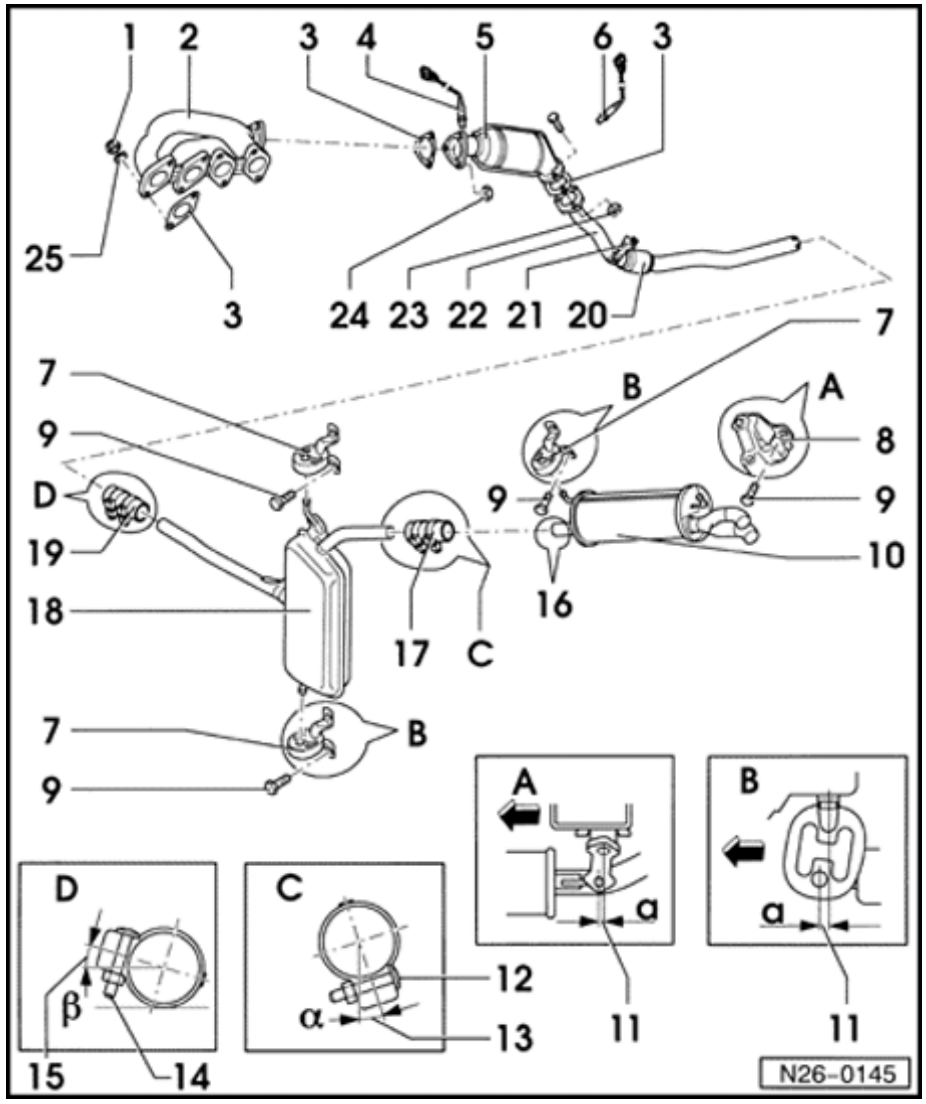
⇒ *Repair Manual, 1.8 Liter 4-Cyl. 5V Turbo Fuel Injection & Ignition, Repair Group 24*

7 - Mounting

- With retaining ring

8 - Mounting

9 - 25 Nm



10 - Rear muffler

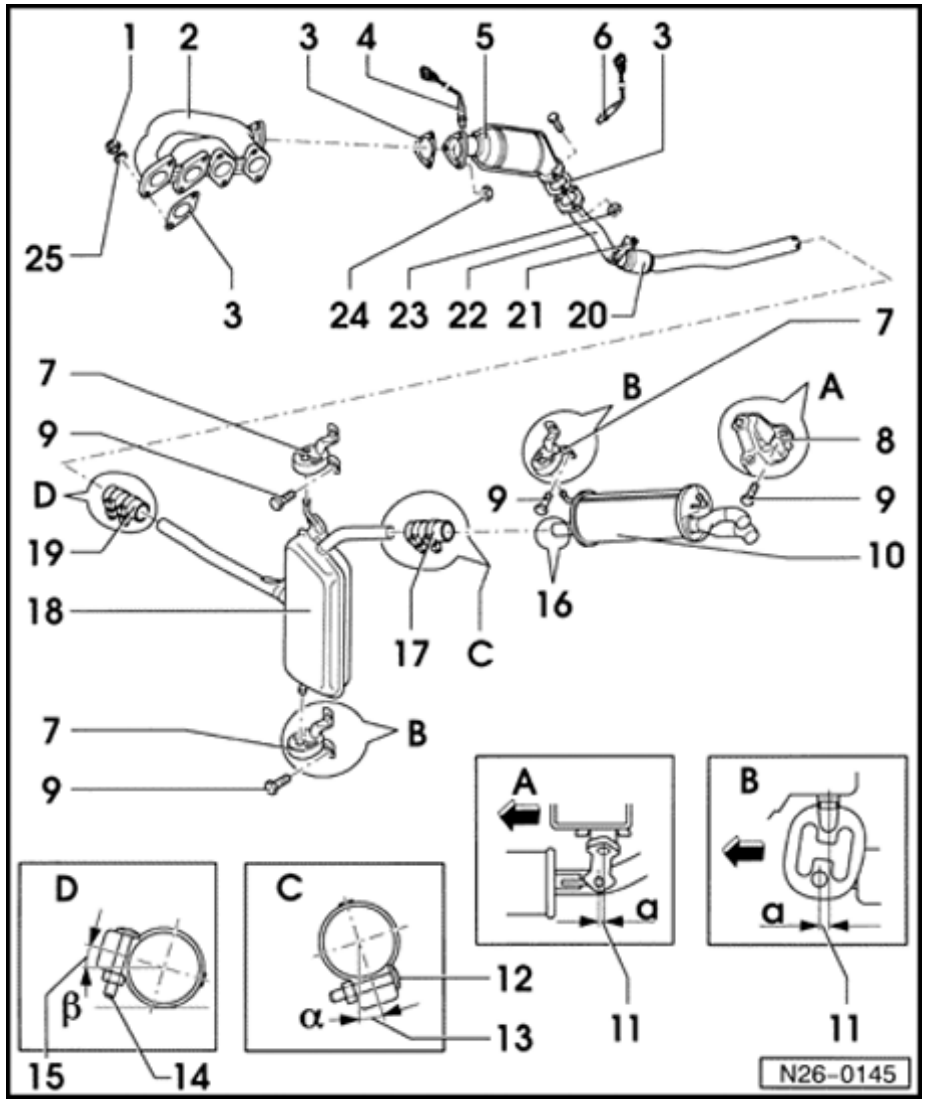
- As standard, center and rear mufflers are installed as a single component. For repairs, the mufflers are supplied individually and with a double clamp for connecting.
- Removing and installing:
  - Cut through connecting pipe separating point, item 16 at right angles with body saw, e.g. V.A.G 1523.

11 - Dimension -a- = approx. 7 to 9 mm

- Exhaust system must be cold
- Arrow points in direction of travel

12 - Bolt head must face fuel tank

13 - Angle -α- = 30 $\pm$5°



14 - End of bolt must not be below double clamp

- Double clamp as seen from normal direction of travel

15 - Angle - β - = 10 + 5°

16 - Separating point

- Approx. 160 to 180 mm before the rear muffler, marked by a crimp in pipe.

17 - Double clamp

- Tighten evenly to 40 Nm

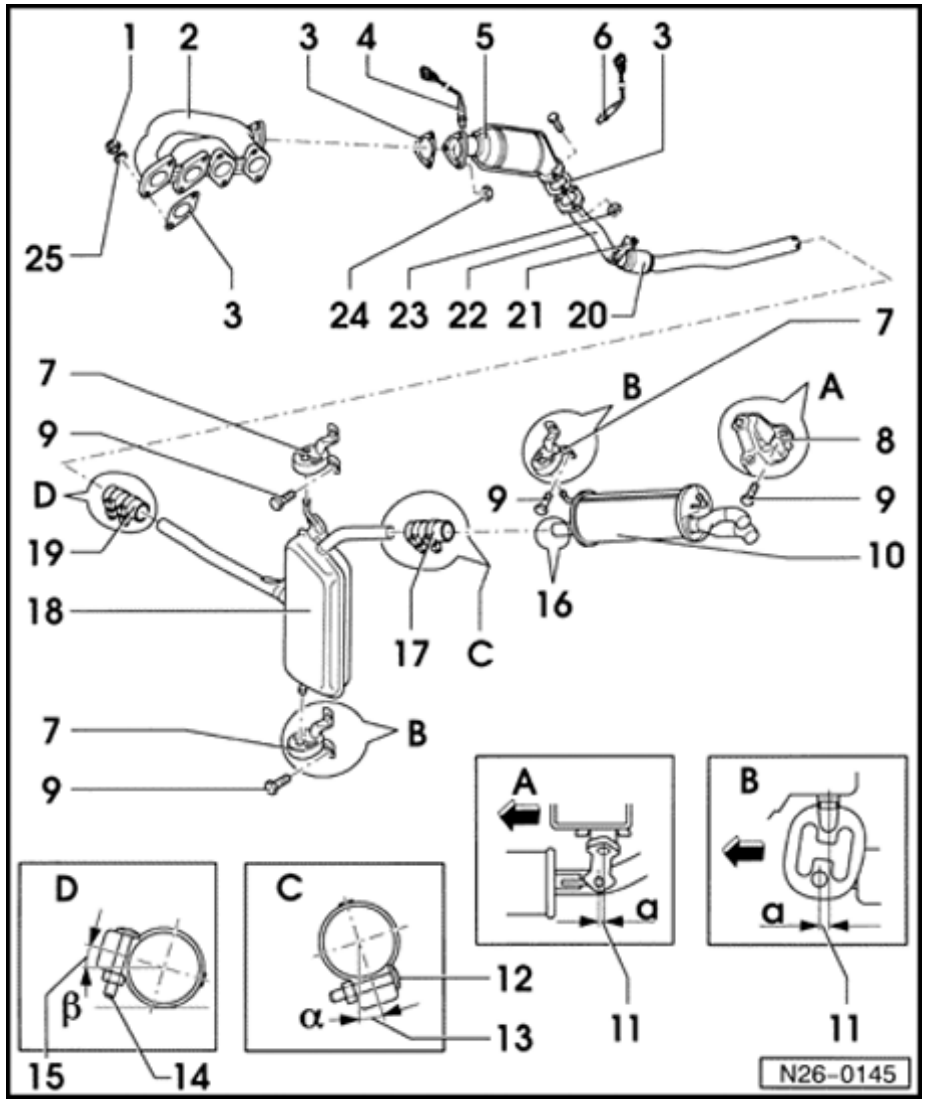
18 - Center muffler

19 - Double clamp

- Tighten evenly to 40 Nm

20 - Decoupling element

- Max. misalignment = 10°



21 - Mounting

- Individual components ⇒ Fig. ⇒ 1

22 - Front exhaust pipe

23 - 25 Nm

24 - 30 Nm

25 - Washer

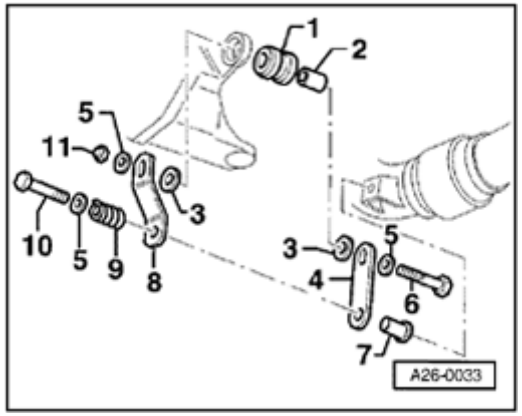


Fig. 1 Individual mounting components

1 - Buffer

2 - Spacer pipe

3 - Washer

4 - Right-hand plate

5 - Washer

6 - Hex bolt

7 - Spacer sleeve

8 - Left-hand plate

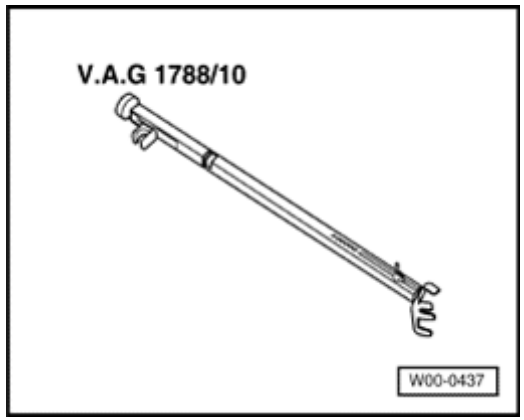
9 - Spring

10 - Hex bolt

11 - Self-locking nut, 25 Nm

Three-Way Catalytic Converter (TWC), checking

Special tools and equipment



- V.A.G 1551 Scan Tool or vehicle system tester V.A.G 1552 with cable V.A.G 1551/3
- V.A.G 1788/10 Engine speed adjuster

Checking sequence

- Connect V.A.G 1551 (V.A.G 1552). Start engine and select engine control module with "Address word" 01.

⇒ *Repair Manual, 1.8 Liter 4-Cyl. 5V Turbo Fuel Injection & Ignition, Repair Group 01*

Rapid data transfer **HELP**

Select function XX

Indicated on display

- Press -0- and -4- buttons to select "Introduction of basic setting" and confirm entry with -Q- button.

Introduce basic setting **HELP**

Input display group number XXX

Indicated on display

- Set engine speed to 1800 to 2200 rpm using speed regulator V.A.G 1788/10.
- Press -0-, -3- and -4- buttons to select "Display group number 34" and confirm entry with -Q- button.

System in basic setting 34 →

1 2 3 4

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

- Maintain engine speed at 1800 to 2200 rpm until display in display field 4 jumps from "Test OFF" to "Test ON".

• Catalyst temperature in display field 2 must be between 350 and 500 ° C.

- Continue to maintain speed at 1800 to 2200 rpm until "B1-P1 OK" appears in display field 4.
- Press -C- button.

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

Basic setting 46 →

1 2 3 4

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

- Maintain engine speed at 1800 to 2200 rpm until display in display field 4 jumps from "Test OFF" to "Test ON".
  - Catalyst temperature in display field 2 must be at least 350 °C.
- Check amplitude ratio in display field 3.
  - Specification: max. 0.4
- Continue to maintain engine speed at 1800 to 2200 rpm until "Cat B1 OK" appears in display field 4.

If "Cat. B1 not OK" appears in display field 4:

- Check Diagnostic Trouble Code (DTC) memory.

⇒ *Repair Manual, 1.8 Liter 4-Cyl. 5V Turbo Fuel Injection & Ignition, Repair Group 01*

If the specification "Cat B1 OK" is obtained:

- Press → button.

Rapid data transfer **HELP**

Select function XX

 Indicated on display

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