

**Sport Exhaust System (I-no. 176)**

Revision: This bulletin replace bulletin Group 2, #27/14, dated May 21, 2014..  
The coding of the sport exhaust system with the PIWIS Tester was changed and updated under Tools.

Model Year: **As of 2014 up to 2016**

Vehicle Type: **Panamera S/Panamera 4S**

Engine Type: **MCW.DA = 3.0 liter/309 kW (420 hp) – Panamera S/Panamera 4S**

Concern: **Retrofitting**

Restriction: **NOT** for Panamera S E-Hybrid/Panamera S Executive/Panamera 4S Executive

Note: In the sport exhaust system, the signal for activating the flaps in the rear mufflers comes from the respective current map in the DME control unit. This depends on the driving status and the accelerator pedal position among other things.

The sport exhaust system can be activated using a new switch console with the additional "Twin tailpipe" button (close to the center console).

The regulating time after pressing the button, determined by the response time of the pneumatics, is approx. 2 – 3 seconds. The sport exhaust system is active when the diode in the "Twin tailpipe" button lights up.

Engine power and exhaust behavior of the vehicle are not affected. The sports exhaust system is also available as a factory installed option for new vehicles by requesting optional equipment "176".



Figure 1

Parts Info: **970.044.200.29** ⇒ Sport exhaust system - Panamera S/4S, set

**Also** order the following in accordance with vehicle equipment:

**970.613.XXX.XX.FFF<sup>1</sup>** ⇒ Button module with "sport exhaust system" (switch console)

<sup>1</sup> See Porsche Electronic Parts Catalog – PET, illustration 903–05

Parts List:

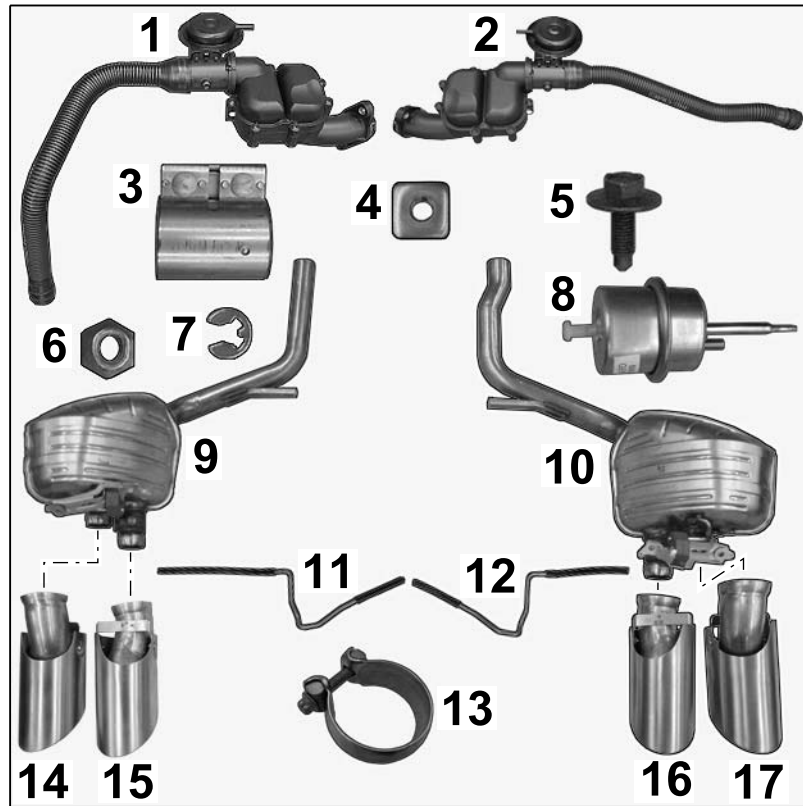


Figure 2

|                |     |   |
|----------------|-----|---|
| 970.110.541.65 | 1 x | Sound symposer assembly (ASSY), left ⇒ Figure 2-1-          |
| 970.110.542.65 | 1 x | Sound symposer ASSY, right ⇒ Figure 2-2-                    |
| 958.111.220.10 | 2 x | Clamping sleeve, Ø 65 mm, 88 mm long ⇒ Figure 2-3-          |
| 970.111.360.00 | 2 x | Square nut, M8 (transverse strut) ⇒ Figure 2-4-             |
| N 908.797.02   | 2 x | Hexagon-head bolt, M8 x 25 (transverse strut) ⇒ Figure 2-5- |
| 970.111.547.00 | 4 x | Lock nut, M6 ⇒ Figure 2-6-                                  |
| 7PP.253.080    | 2 x | Circlip ⇒ Figure 2-7-                                       |
| 7PP.253.835    | 2 x | Vacuum unit for rear muffler ⇒ Figure 2-8-                  |
| 970.111.923.51 | 1 x | Rear muffler, left ⇒ Figure 2-9-                            |
| 970.111.912.62 | 1 x | Rear muffler, right ⇒ Figure 2-10-                          |
| 970.111.316.51 | 1 x | Control line, left ⇒ Figure 2-11-                           |
| 970.111.317.51 | 1 x | Control line, right ⇒ Figure 2-12-                          |
| 958.111.240.00 | 4 x | Ball clamp, Ø 60 mm ⇒ Figure 2-13-                          |
| 970.111.685.51 | 1 x | Tailpipe, outer left ⇒ Figure 2-14-                         |
| 970.111.687.51 | 1 x | Tailpipe, inner left ⇒ Figure 2-15-                         |
| 970.111.686.51 | 1 x | Tailpipe, inner right ⇒ Figure 2-16-                        |

|                |     |   |
|----------------|-----|---|
| 970.111.688.51 | 1 x | Tailpipe, outer right ⇒ <i>Figure 2-17-</i>                   |
| N 909.686.02   | 4 x | Hexagon-head bolt, M8 x 40 (rear silencer bracket, not shown) |

## Notes:

**Identifying features when installed**

- 1** – Rear muffler, right
- 2** – Tailpipe, inner right
- 3** – Tailpipe, outer right

The Porsche logo and type number corresponding to vehicle and engine type are shown on the underside of the rear mufflers as follows (⇒ *Figure 3*):

- Rear muffler – left (970.111.923.51): 948 / 58 Left
- Rear muffler – right (970.111.912.62): 948 / 59 Right

The Porsche logo, part number and week/year of manufacture are shown on the underside of the tailpipes. See example in list below:

- Tailpipe, inner right = 970.111.686.51/production week/year: 24W13
- Tailpipe, outer right = 970.111.688.51/production week/year: 24W13

The markings on the rear mufflers can only be read by removing the rear underbody cover. The markings on the tailpipes can be read using a mirror.

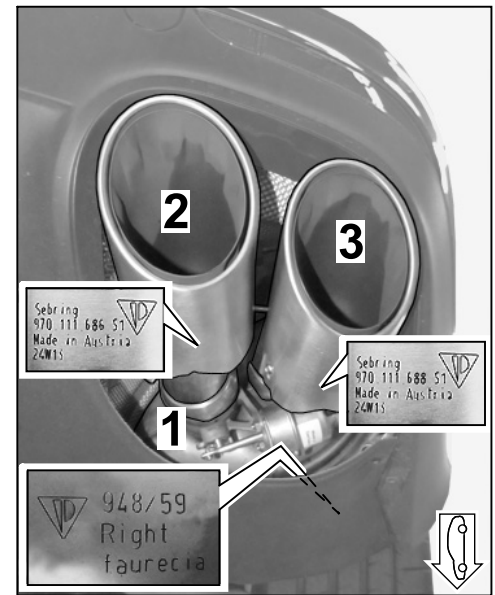


Figure 3

## Tools:

Shop light

**9900 - PIWIS Tester 3****Nr. 166-1 - Ratchet-type pipe cutters**

Plastic wedge

**Nr. 166 - Chain-type pipe cutters**

Work Procedure: 1 Convert –front– button module

- 1.1 Drive the vehicle onto a lifting platform.
- 1.2 Connect battery charger ( ⇒ *Workshop Manual '2X00IN Battery trickle charging'*).
- 1.3 Cover the area you are working on with protective covers.

- 1.4 Remove switch console ( ⇒ *Workshop Manual '962719 Removing and installing switch console* ).
- 1 – Switch console, front
  - 2 – Button module with “sport exhaust system”

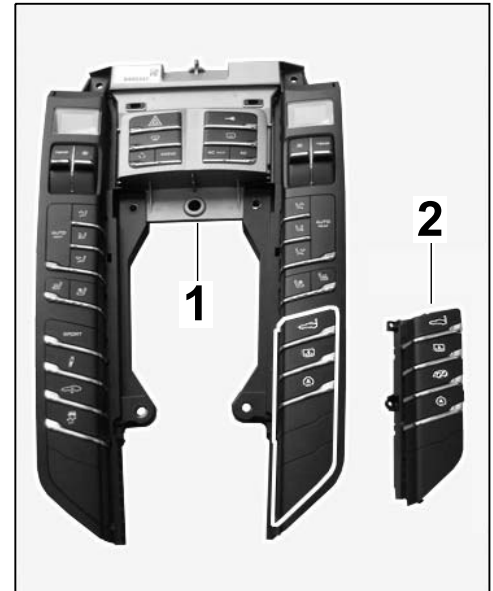


Figure 4

- 1.5 Replace button module (bottom right) ( ⇒ *Workshop Manual '962755 Replacing switch console* ).
- 1 – Switch console, front
  - 2 – Button module with “sport exhaust system”
  - 3 – Connector
  - arrows – Screw, 2.5 x 12 (self-tapping)

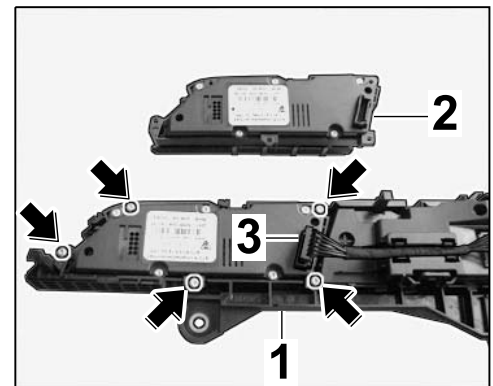


Figure 5

- 1.5.1 Disconnect plug connection.
  - 1.5.2 Remove screw (2.5 x 12, self-tapping, 5 ea.).
  - 1.5.3 Replace button module with new button module with “sport exhaust system”.
  - 1.5.4 Fit screw (2.5 x 12, self-tapping, 5 ea.).
  - 1.5.5 Connect plug connection.
- 1.6 Install front switch console ( ⇒ *Workshop Manual '962719 Removing and installing switch console* ).

- 2 Replace sound symposer assembly (see also ⇒ *Workshop Manual '260219 Removing and installing acoustic simulator*).

- 1 – Engine cover (design cover)
- 2 – Sound symposer, right
- 3 – Sound symposer, left

- 2.1 Remove engine cover (design cover) (⇒ *Figure 6*).

- 2.2 Remove sound symposer at the left/right

2.2.1 Pull off and unclip vacuum hose.

2.2.2 Release and disconnect plug connections.

2.2.3 Remove screw (2 x) on the flange for the charge air line (intake-air distributor).

2.2.4 Remove sound symposer.

- 2.3 Install new sound symposer at the left/right in reverse order.

Flange screw, TP 6 x 20-Q: **Tightening torque 3.5 Nm (2.5 ftlb.)**

- 2.4 Install engine cover (design cover) ( ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover)*).

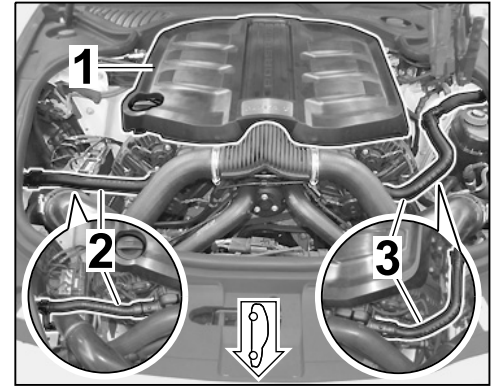


Figure 6

- 3 Install new sport exhaust system

- 3.1 Preparatory work



#### Hot components

- Risk of burns
- ⇒ Let hot components cool down.
- ⇒ Wear personal protective gear.



#### Heavy components

- Risk of squashing
- ⇒ Wear personal protective gear.
- ⇒ Get someone to help if necessary.

3.1.1 Remove rear mufflers ( ⇒ *Workshop Manual '263319 Removing and installing rear silencer', ⇒ Figure 7).*

- 1 – Rear muffler connection point, right
- 2 – Chain-type pipe cutters

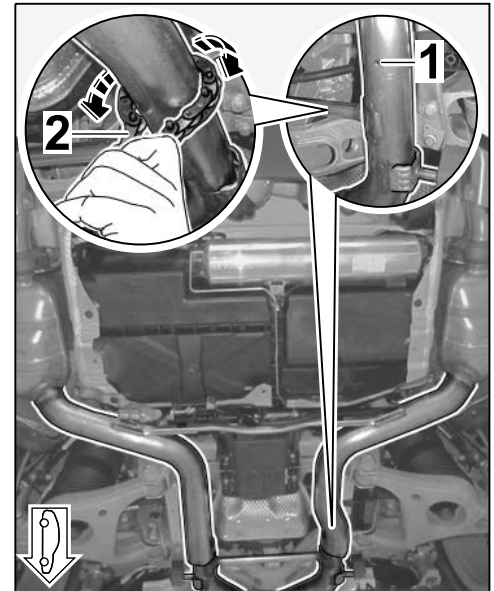


Figure 7

3.1.2 De-burr cut on inside and outside of exhaust pipe. If necessary, remove rust from exhaust pipe using suitable polishing agents and manually restore its round shape.

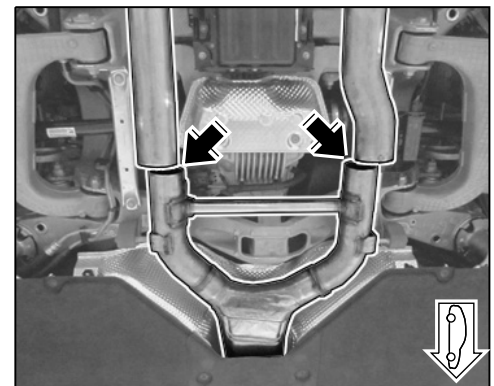


Figure 8

3.2 Install new rear mufflers (see also ⇒ *Workshop Manual '263319 Removing and installing rear silencer'*).

- 1 – Rear muffler, left
- 2 – Rear muffler, right
- 3 – Rear muffler vacuum unit
- 4 – Lock nut, M6
- 5 – Control line, left
- 6 – Control line, right

3.2.1 Fit new rear muffler vacuum unit on the left/right rear silencer for the sports exhaust system with new lock nuts (M6, 2 x) and a new lock washer (1 x) (⇒ *Figure 9*).

3.2.2 Position left control line (⇒ *Figure 9-5-*)/right control line (⇒ *Figure 9-6-*) on the relevant rear silencer and fit them into the clamps.

3.2.3 Fit left/right rear muffler with a new clamping sleeve –Ø 65 mm, 88 mm long– (2 x) on the front muffler (⇒ *Figure 10*).

**Tightening torque 23 Nm (17 ftlb.)**

- 1 – Front muffler
- 2 – Clamping sleeve –88 mm long–
- 3 – Transverse strut

3.2.4 Fit rubber line for control lines at least 10 mm onto the relevant connection for the change-over valve ASSY.

3.2.5 Install transverse strut with a new hexagon-head bolt (M8 x 25, 2 x) and square nut (M8, 2 x) between the left and right rear muffler (⇒ *Figure 10*).

**Tightening torque 23 Nm (17 ftlb.) +/- 3 Nm (+/- 2 ftlb.)**

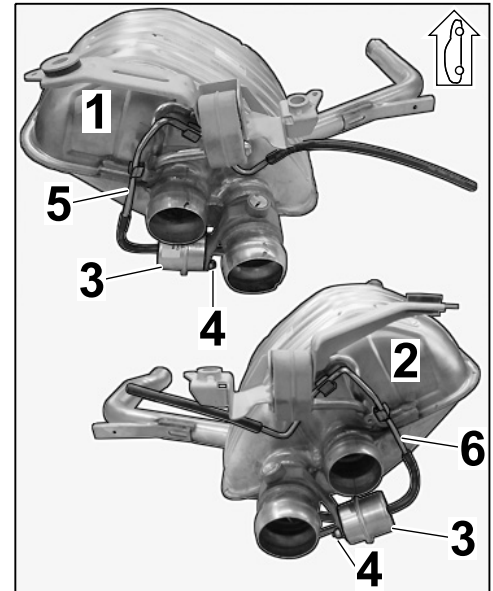


Figure 9

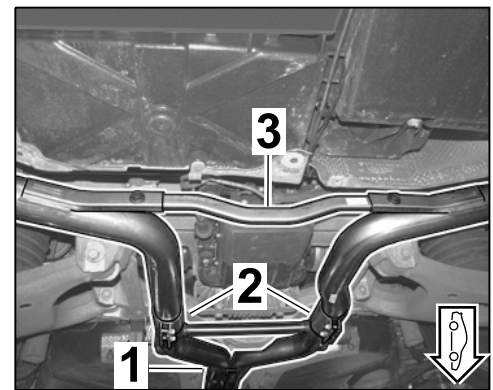


Figure 10

3.3 Install new tailpipes at the left/right side (⇒ *Workshop Manual '263419 Removing and installing tailpipe'*).

- 1 – Tailpipe, outer left (970.111.685.51)
- 2 – Tailpipe, inner left (970.111.687.51)
- 3 – Ball clamp

3.3.1 Pre-fit ball clamp (⇒ *Figure 11-3-*) on inner/outer tailpipe as shown in Figure 11 (left side: ⇒ *Figure 11*, right side: mirror image).

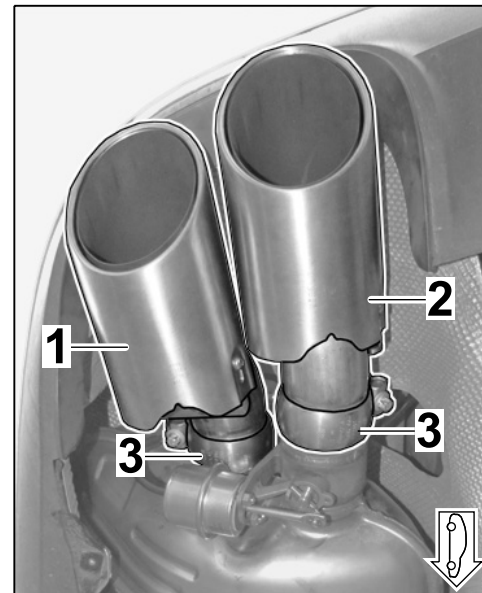


Figure 11

3.3.2 Fit tailpipe with a new ball clamp on the relevant connection piece for the rear muffler and pre-fit hand-tight.

- 1 – Direction of rotation around axis of symmetry of tailpipe
- 2 – imaginary edge of the rear apron
- 3 – imaginary edge of both tailpipes
- X – Dimension "X"

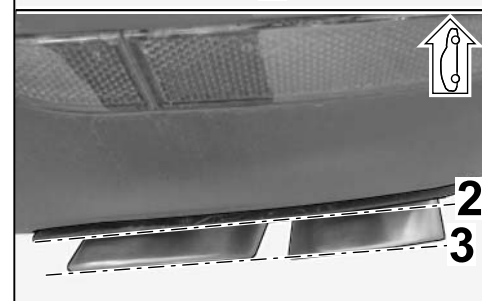
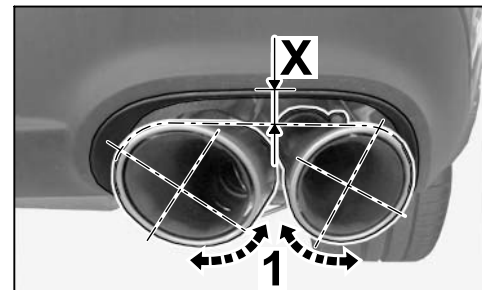


Figure 12

3.3.3 Turn the left and right tailpipe (⇒ *Figure 12 -arrows-*) until both tailpipes are aligned parallel to the imaginary edge of the rear apron.

3.3.4 Set the same dimension "X" for both tailpipes all the way around.

3.3.5 Tighten both tailpipes.  
**Tightening torque 30 Nm (22 ftlb.)**

3.3.6 Install tailpipes on the other side of the vehicle in the same way.

**NOTICE****Voltage drop**

- Risk of irreparable damage to control unit
  - Risk of damage to control unit
  - Fault entries in the control unit
  - Coding in the control unit is aborted
  - Malfunctions in control unit, even during programming
- ⇒ Switch off the ignition and remove the ignition key before disconnecting the control unit.
- ⇒ Ensure that the power supply is not interrupted during programming.
- ⇒ Connect a battery charger with a current rating of at least Nominal value 70 A to the vehicle battery.

**NOTICE**

Control unit programming will be aborted if the Internet connection is unstable.

- An unstable Internet connection can interrupt communication between PIWIS Tester III and the vehicle communication module (VCI). As a result, control unit programming may be aborted.
- ⇒ During control unit programming, always connect PIWIS Tester III to the vehicle communication module (VCI) via the USB cable.

#### 4 Code sport exhaust system and perform function test

**Information**

The **9900 - PIWIS Tester III** instructions take precedence since the description may be different with later Tester releases.

The procedure described here has been structured in general terms; different text or additions may appear on the **9900 - PIWIS Tester III**.

- 4.1 **9900 - PIWIS Tester 3** must be connected before switching on the ignition.
- 4.2 Select vehicle type "Panamera". Press •F12" to continue.
- 4.3 Code new button module and enter the sport exhaust system in the vehicle data.
  - 4.3.1 Switch to the control unit overview by touching the "Overview" cell. Press •F7" to switch to the "Additional menu" item.
  - 4.3.2 Select the "Maintenance of vehicle data" function. Press •F12" until "X numbers" appears in the Value group column.
  - 4.3.3 Select "X numbers" in the Value group column, "Exhaust systems" for Family and then select the value "176 - Sport exhaust system". Press •F8" to save.

- 4.3.4 Wait until the message "Modified values have been buffered" is displayed and a tick appears next to "176 – Sport exhaust system". Press •F12" several times until •F8" appears. Press •F8" to write the value.
- 4.3.5 Wait until the message "Generation of the vehicle order is complete" appears. Continue to Log management by pressing •F12" .
- 4.3.6 Open the log by pressing •F10" and check that vehicle equipment "176 – Sport exhaust system" has been entered. Then close the log.
- 4.3.7 Press •F11" to switch to the control unit overview.
- 4.4 Code the sport exhaust system
  - 4.4.1 Select all control units (•CTRL+A" ). Press •F12" to continue.
  - 4.4.2 Switch to the "Automatic coding" of control units mode in the "Codings/adaptations" menu. Press •F12" to continue.
  - 4.4.3 Once coding is completed successfully, a tick will appear in the "Status" column.
- 4.5 Perform "Sport exhaust system" function test
  - 4.5.1 Start the engine and select "Rear-end electronics" in the Control unit overview menu. Then switch to the "Drive links/checks" menu.
  - 4.5.2 Select the "Actuators" function. Press •F12" to continue.
  - 4.5.3 Select "Exhaust flap activation" in the Drive links/checks column and start the function by pressing •F8" .  
"Function is running" will appear as the status.  
  
Check that the tappets on the rear silencer vacuum units extend and retract correctly if necessary.
- 4.6 Once coding is complete, read out the fault memories of all systems, work through any existing faults and erase the fault memory ( ⇒ *Workshop Manual '0X03IN Maintenance diagnosis: Diagnostic system and maintenance inter...* ).
- 4.7 Switch off ignition and disconnect **9900 - PIWIS Tester 3**.
- 4.8 Disconnect battery charger ( ⇒ *Workshop Manual '2X00IN Battery trickle charging* ).

26 01 31 03: –Sport exhaust system (1 x) retrofitted– Labor time: **271 TU**  
 Includes: Sound symposer and rear mufflers converted  
 Converting and coding button module  
 Coding sport exhaust system and performing function test  
 Reading out fault memory and correcting and erasing faults.

26 51 19 00: In the event of repairs:  
 –Removing and installing control box (1 x) for exhaust flap– Labor time: **31 TU**

26 51 20 00: In the event of repairs:

–Removing and installing control box (2 x) for exhaust flap–

Labor time: **39 TU**

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