

**E-Sound Generator GM3**

Revision: This bulletin replaces bulletin Group 9 02/20, dated September 14, 2021.

Model Year: **As of 2020**

Vehicle Type: **Taycan, Taycan 4S, Taycan Turbo, Taycan Turbo S, Taycan 4 Cross Turismo, Taycan 4S Cross Turismo, Taycan Turbo Cross Turismo, Taycan Turbo S Cross Turismo**

Information: **Retrofitting**

Restriction: **Only for vehicles from week 39/2019**



Figure 1

The E-Sound generator retrofit kit consists of an acoustic box in the rear of the vehicle as well as two other boxes for the rear door panels. These boost the sound for the passenger compartment and for outside the vehicle.

Parts Info: **9J1.044.900.20** ⇒ E-Sound package



Figure 2

9JA.970.502.Y	1 x	Wiring harness for E-Sound for the vehicle ⇒ Figure 2-1-
9JA.035.413	2 x	DVC speakers ⇒ Figure 2-2 and 5-
N.104.592.02	2 x	Cheese head bolt for installing control unit ⇒ Figure 2-3-
PAF.015.082	4 x	Hexagon flange nut, M6 ⇒ Figure 2-4-
9J1.035.446.D	1 x	Control unit for i-Sound ⇒ Figure 2-6-
N.909.747.01	6 x	Speaker screws ⇒ Figure 2-7-
999.513.076.40	20 x	Tie-wrap, large ⇒ Figure 2-8-
9J1.970.137.Y	2 x	Wiring harness for doors ⇒ Figure 2-9-
9J1.971.737.Y	1 x	Wiring harness for rear speaker ⇒ Figure 2-10-
9J1.035.915	1 x	Outside speaker ⇒ Figure 2-11-
N.020.904.4	20 x	Tie-wrap, small ⇒ Figure 2-12-
9J1.035.243.D	1 x	Bracket for amplifier i-Sound (not shown)
N.911.585.01	1 x	Expanding rivet BD-6.5X12.3

**NOTICE****Voltage peaks**

- Risk of damage to electrical load or to the control unit
- ⇒ Switch off ignition and keep transmitter key outside of the transmission range (at least 5 m/ 16.5 feet).
- ⇒ Switch off electrical loads before disconnecting or removing them.



## Information

Always comply with the regulations for handling ESD-sensitive components!

- Assembly work may only be carried out if the mechanic is wearing the working clothes and shoes approved by Porsche.
- The new part must only be removed from the ESD (electrostatic discharge) protective packaging just before installation and at the position at which the part is to be installed.
- Never touch the electric pins and plug contacts.

Tool: **9900 - PIWIS tester 3**

Flashlight

Work

Procedure:



### **Incorrect handling of high-voltage components**

- **Electric shock**
  - **Short circuit**
  - **Fire**
  - **Explosion**
- ⇒ **Only appropriately trained and authorized persons are permitted to work on high-voltage vehicles and components.**
- ⇒ **Required qualification: High voltage technician or high voltage expert.**
- ⇒ **Observe national requirements and legislation for this work.**
- ⇒ **Always use insulated tools, e.g. VAS 6883 Insulated Tool Set when working on these components.**
- ⇒ **Observe general warning notes for working on the high-voltage system. ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage system'***

1

#### Preparatory work

- 1.1 Drive the vehicle onto the lifting platform ( ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*).
- 1.2 Connect a battery charger ( ⇒ *Workshop Manual '2X00IN trickle charging 12-volt lithium-ion battery'*).
- 1.3 Remove rear apron. ⇒ *Workshop Manual '2X00IN Removing and installing rear bumper'*
- 1.4 Remove luggage compartment linings. ⇒ *Workshop Manual '2X00IN Removing and installing (side) luggage compartment trim panel (luggage compartment cover)'*

- 1.5 Remove trim panel for luggage compartment at the sides. ⇒ *Workshop Manual '2X00IN Removing and installing (side) luggage compartment trim panel (luggage compartment cover)'*
  - 1.6 Remove rear lock carrier . ⇒ *Workshop Manual '2X00IN Removing and installing cover for rear lock carrier'*
  - 1.7 Remove left and right rear door trim panels ⇒ *Workshop Manual '2X00IN Removing and installing rear trim panel'*
  - 1.8 Remove rear seat. ⇒ *Workshop Manual '2X00IN Removing and installing rear seat'*
  - 1.9 Remove rear backrest frame ⇒ *Workshop Manual '2X00IN Removing and installing the rear backrest frame'*
  - 1.10 Remove rear door sill trim. ⇒ *Workshop Manual '2X00IN Removing and installing (rear) inner door sill trim'*
  - 1.11 Remove front door sill trim. ⇒ *Workshop Manual '2X00IN Removing and installing (front) inner door sill trim'*
- 2 Install E-Sound system.

**Information**

Some of the repair illustrations show only one side of the vehicle. Naturally, some steps also have to be performed on the opposite side of the vehicle as well. These must be carried out as a mirror image of the steps shown.

**Information**

The number of electric plug connections and clips will vary depending on equipment.

2.1 Overview of wiring harness.

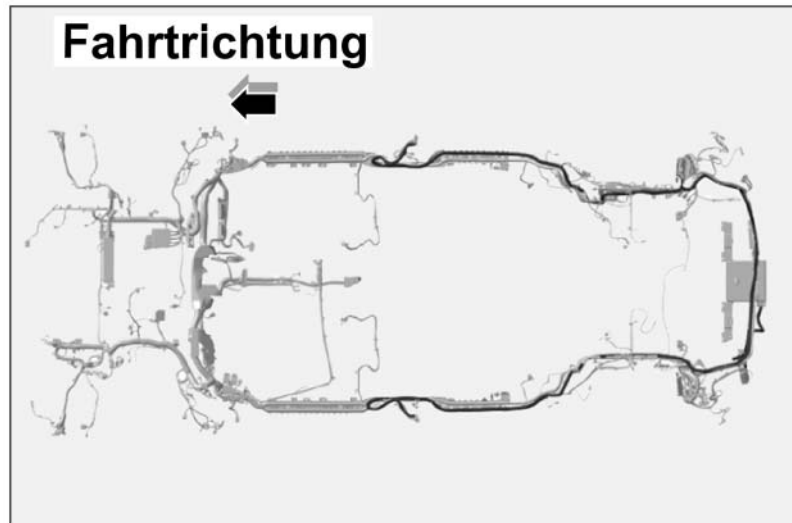


Figure 3

The cable routing/fastenings using tie-wraps can be selected as required, but always make sure that no chafing points or noises can occur while driving. Route excess cable lengths correctly. Route excess cable lengths correctly.

2.2 Remove side trim panel at the ⇒ Figure 4 -1-right. ⇒ Figure 4 -2-Loosen screws and remove trim panel.

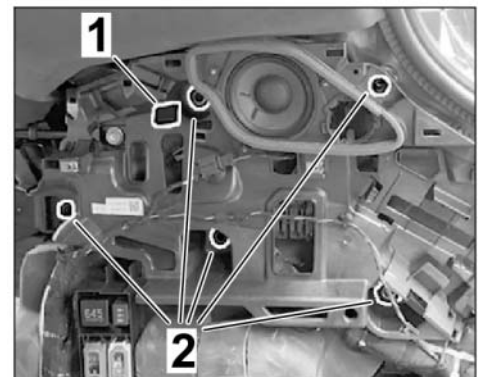
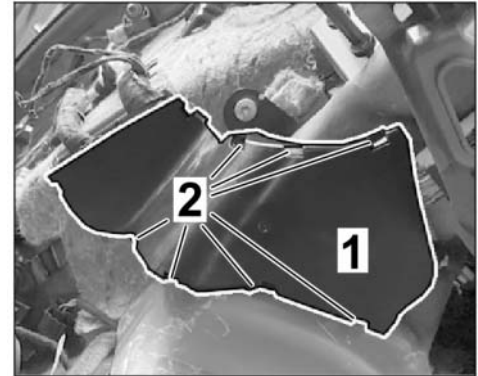


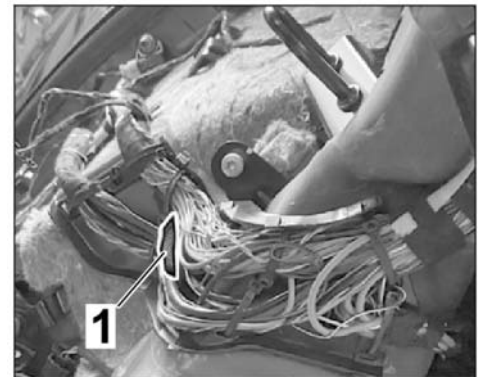
Figure 4

- 2.3 Cover cable duct ⇒ *Figure 5-1*-Dismantle the rear right in the entrance area. ⇒ *Figure 5-2*-Open retaining lugs and remove cover.



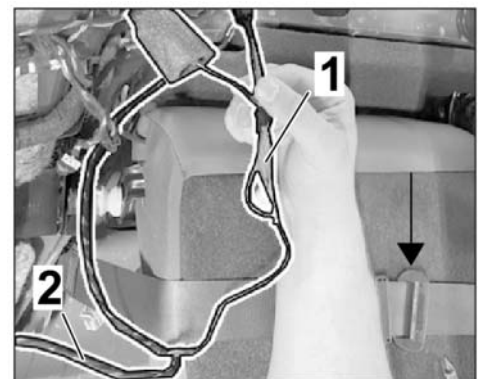
*Figure 5*

- 2.4 Install main wiring harness in the cable duct in the Y-shaped plug connection area ⇒ *Figure 6-1*-. The Y-shaped plug connection is located in the cable duct and the connector for the Y-piece is located in a piece of foam at the side of the vehicle ⇒ *Figure 6-1*-.



*Figure 6*

- 2.5 Connect Y-shaped plug connection ⇒ *Figure 7-1*-. Route wiring harness ⇒ *Figure 7-2*-further forward towards the door connection point.



*Figure 7*

- 2.6 Route wiring harness with the pins for the door connector plug to the front. Route wiring harness up through the B-pillar to the door connection point.

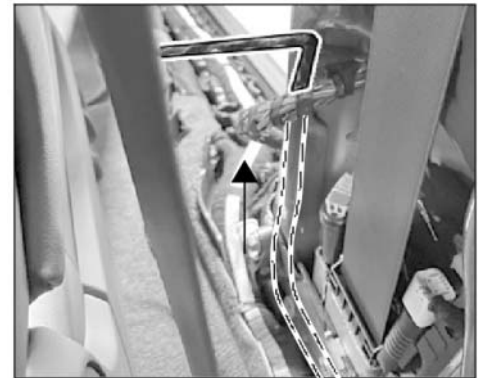


Figure 8

- 2.7 Release connector for door connection point ⇒ *Figure 9-1*-(green housing) and unclip connector housing on the vehicle side by pulling it towards the passenger compartment.

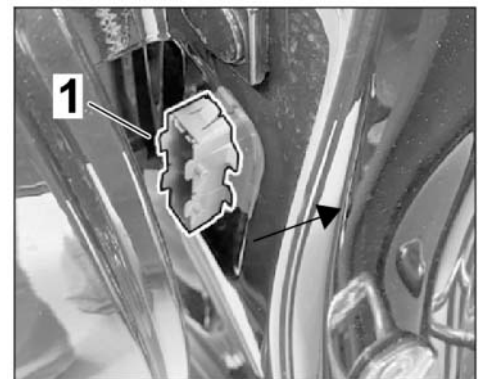


Figure 9

- 2.8 Plug wiring harness into connector for door on vehicle side. Release connector. **Green connector Pin1 ⇒ *Figure 10*-Pin 1-: Cable color black/yellow. Green connector Pin2 ⇒ *Figure 10*-Pin 2-: Red/brown cable.**

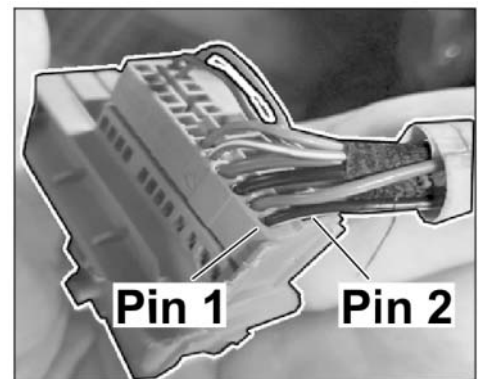
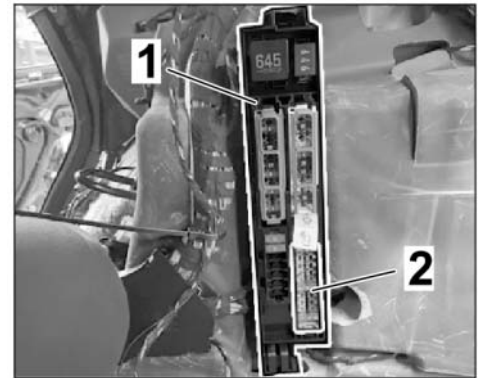


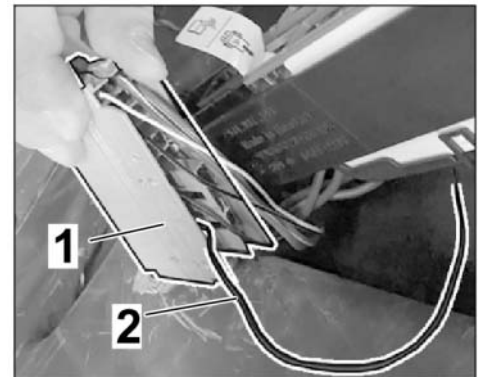
Figure 10

- 2.9 Cable routing at rear right. ⇒ *Figure 11*  
-1-Remove fuse box at the rear right, remove lock and unclip brown fuse strip by pulling it to the rear. ⇒ *Figure 11-2-*



*Figure 11*

- 2.10 ⇒ *Figure 12-12-*Lay wiring behind the fuse box and in socket 9A ⇒ *Figure 12-1-1-*pin in. Insert fuse (5A) in socket 9A. Clip brown fuse strip into the fuse box and lock it using the locking clip. Install fuse box.



*Figure 12*

- 2.11 Remove holder for control unit at the rear right.
- 2.12 Install control unit ⇒ *Figure 14-1-*on holder ⇒ *Figure 14-2-* using two cylinder screws N.104.592.02. Install control unit with retaining frame on the vehicle and connect the control unit. Route wiring harness as far as the center of the luggage compartment towards the left side of the vehicle.



*Figure 13*



**Important:** If the holder is not installed, please use the holder from the kit.

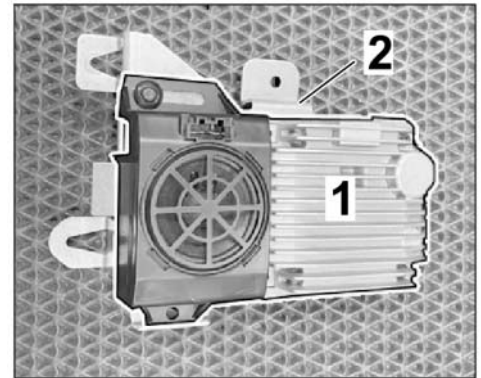


Figure 14

- 2.13 Install outside speaker ⇒ *Figure 15-2*-in rear center of vehicle at the bottom. Install outside speaker in rear center of vehicle at the bottom. Push speaker with two bolts into the assembly holes provided for this purpose ⇒ *Figure 15-3*-and secure to the body with two nuts PAF.015.082 ⇒ *Figure 15-1*-.

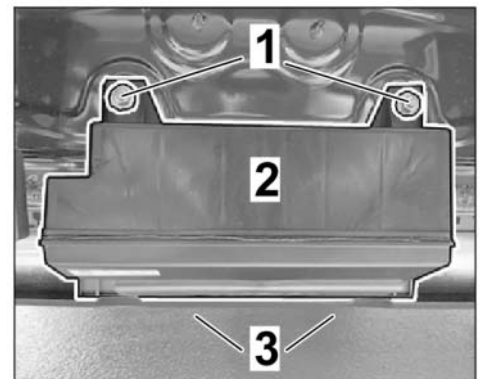


Figure 15

- 2.14 Remove the rubber sleeve installed on the vehicle ⇒ *Figure 16-1*-. Remove adhesive residue. Install wiring harness for rear speaker 9J1.971.737.Y on the speaker ⇒ *Figure 16-2*-and route it in the passenger compartment through the bore in the body. ⇒ *Figure 16-3*-Route wiring harness behind the holder. Make sure that the rubber sleeve on the wiring harness is positioned cleanly in the bore on the body and is well sealed. Remove luggage compartment liner foam and route speaker wiring towards the left side of the vehicle.

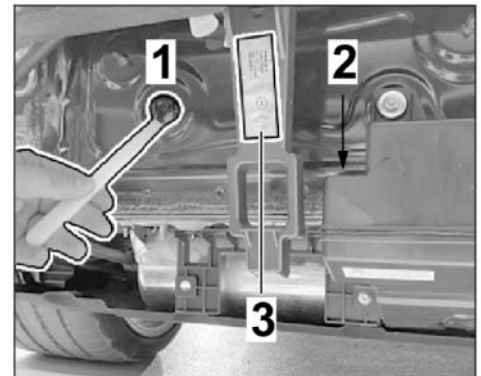
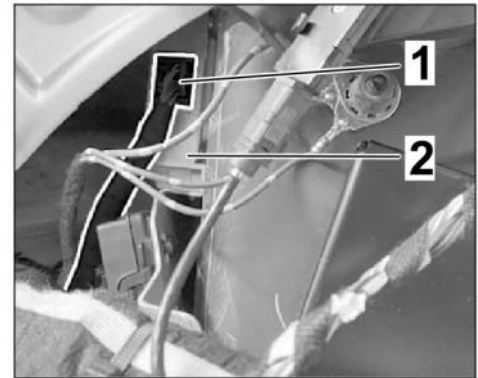


Figure 16

- 2.15 Disconnect connector ⇒ *Figure 17-1*-on control unit ⇒ *Figure 17-2*- for acoustic simulator at the left.



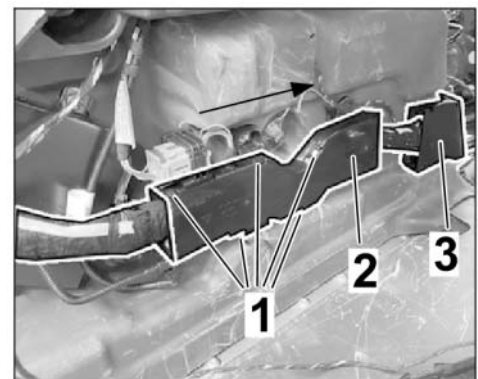
*Figure 17*

- 2.16 Route wiring harness from outside speaker and connect it to the acoustic simulator control unit. Release connector ⇒ *Figure 18-1*-using a small screwdriver ⇒ *Figure 18-2*-. **Plug pin with green cable into chamber 5 of the connector. Plug pin with green/black cable into chamber 6 of the connector.** Lock the connector again and insert it into control unit for acoustic simulator.



*Figure 18*

- 2.17 ⇒ *Figure 19-1*-Open left cable duct and route wiring harness through the ducts ⇒ *Figure 19-2 and 3*-. Route wiring harness with the pins for the door connector plug to the front. Route wiring harness up through the B-pillar to the door connection point (in the same way as for the right side).



*Figure 19*

- 2.18 Release connector for door connection point ⇒ *Figure 20-1*-(green housing) and unclip connector housing on the vehicle side by pulling it towards the passenger compartment.

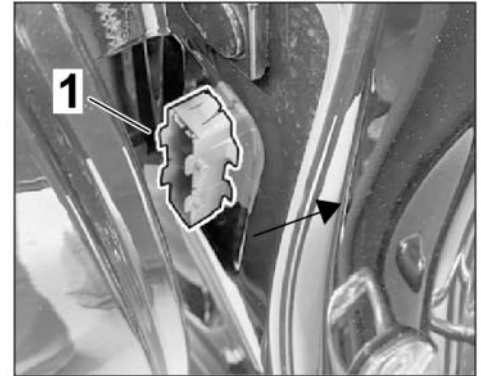


Figure 20

- 2.19 Plug wiring harness into connector for door on vehicle side. Release connector. **Green connector Pin1 ⇒ Figure 21 -Pin 1-: Cable color violet/black. Green connector Pin2 ⇒ Figure 21 -Pin 2-: White/violet cable.**

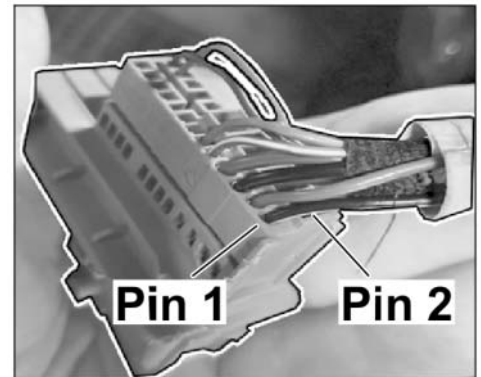


Figure 21

- 2.20 **The following work steps must be carried out on both door panels.** Fold fleece lining up off the door panel. Remove assembly cover ⇒ *Figure 22-1*-from door panel using a small screwdriver ⇒ *Figure 22-2*-. Remove excess pieces.

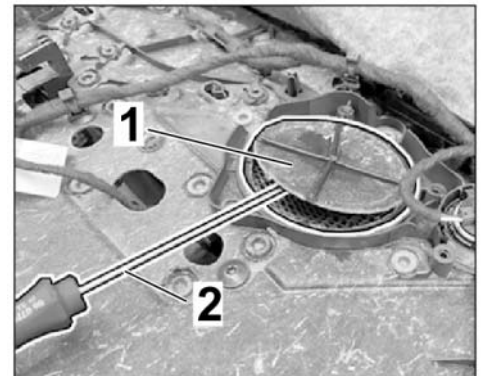


Figure 22

- 2.21 ⇒ *Figure 23-1*-Install speaker using N.909.747.01 speaker screws (3 on each side).⇒ *Figure 23-2*-

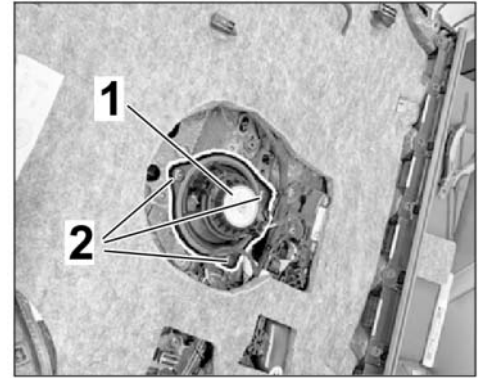


Figure 23

- 2.22 Mark cut-out for speaker⇒ *Figure 24-2*- in the fleece lining⇒ *Figure 24-1*- and cut it out using scissors.

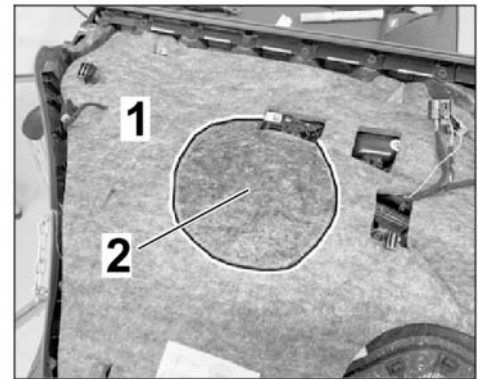


Figure 24

- 2.23 Plug cable set 9J1.970.137.Y into the loud-speaker 8 pin connector ⇒ *Figure 25-2*-and unplug from the door control unit. Loosen the lock on the connector and ⇒ *Figure 25-1*-open it using a small screwdriver. **Plug white/violet cable into chamber 7 of the connector. Plug white/violet cable into chamber 8 of the connector.**

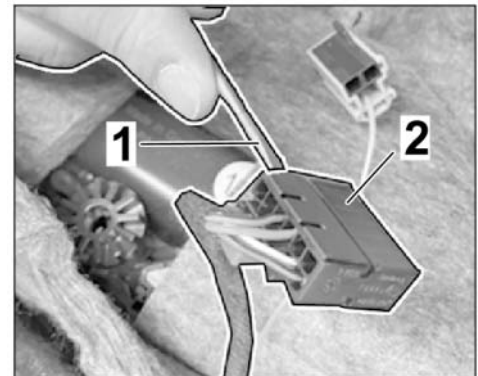


Figure 25

### 3 Completing the vehicle

- 3.1 Install front door sill trim. ⇒ *Workshop Manual '2X00IN Removing and installing (front) inner door sill trim'*
- 3.2 Install rear inner door sill trim. ⇒ *Workshop Manual '2X00IN Removing and installing (rear) inner door sill trim'*
- 3.3 Installing rear backrest frame ⇒ *Workshop Manual '2X00IN Removing and installing the rear backrest frame'*

- 3.4 Install rear seat. ⇒ *Workshop Manual '2X00IN Removing and installing rear seat'*
- 3.5 Install rear door panels at the left and right. ⇒ *Workshop Manual '2X00IN Removing and installing rear trim panel'*
- 3.6 Install cover for rear lock support. ⇒ *Workshop Manual '2X00IN Removing and installing cover for rear lock carrier'*
- 3.7 Install trim panel for luggage compartment at the sides. ⇒ *Workshop Manual '2X00IN Removing and installing (side) luggage compartment trim panel (luggage compartment cover)'*
- 3.8 Install linings for luggage compartment. ⇒ *Workshop Manual '2X00IN Removing and installing (side) luggage compartment trim panel (luggage compartment cover)'*
- 3.9 Install rear bumper. ⇒ *Workshop Manual '2X00IN Removing and installing rear bumper'*
- 3.10 Calibrate reversing camera (if installed). ⇒ *Workshop Manual '2X00IN Calibrating reversing camera'*

Coding: 4 Coding/programming E-Sound generator GM3

## 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 90 A to the vehicle battery.

### 4.1 Preparatory work – Coding

## 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.

4.1.1 **9900 - PIWIS Tester 3** must be connected to the vehicle and switched on.

4.1.2 Switch on ignition **AND** hazard warning lights on the vehicle.



#### 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**.

4.1.3 Select the "Diagnostics" menu item on the PIWIS Tester.

4.1.4 If **9900 - PIWIS Tester 3** is connected correctly, a connection to the vehicle will be established: The model line is detected. The "Taycan" series is recognized and an overview of the control unit is created.

4.1.5 Press **•F12** to go to the control unit search screen.

4.1.6 **•F8** for additional menu. Question: "Should an FAP be created?" With "Yes", press **•F12** to confirm.

4.1.7 After the FAP has been created, a message may appear that there are still open service actions for the connected vehicle. You can do this with **•F12**. This is followed by the back documentation of the vehicle and the vehicle network test.



#### Information

The function is **ONLY** available when the Tester is online!

4.2 Enter the new vehicle equipment in the vehicle data using "PIWIS Online"

4.2.1 Select the "Maintain vehicle data with PIWIS-ONLINE" function in the "Additional menu" menu item.

A message appears informing you that the "Actual" (vehicle) data and "Required" (PIWIS Online) data will be compared.

Press **•F12** to continue.

4.2.2 Confirm the message "The vehicle data was compared with PIWIS Online. Significant differences were found" with **•F12**.

4.2.3 Look for the "E-Sound" option in the "Family" column.

Select the option "GM3" in the "Value" column in the drop-down menu. Press **•F12** to continue.

4.2.4 A table containing the coding value and the columns "new value" and "old value" is displayed in the overview. Press **•F8** to continue.

4.2.5 Data is then written/stored. The following messages appear one after the other:

- Transferring vehicle data to PIWIS Online.
- Writing and transferring vehicle data to the vehicle.
- Vehicle order was written successfully.
- A check was performed in order to check whether control units have to be coded or programmed as a result of the changes that were made.

4.2.6 Confirm the table containing a list of control units that must be coded/programmed by pressing •F12“ .

4.2.7 Individual data records will be loaded, depending on the number of control units to be coded/programmed.

Wait until messages "Creating backup documentation. Please wait..." and "Coding was completed successfully" are displayed. Press •F12“ to continue.

Repeat the process for other control units if necessary.

4.2.8 Wait for the "Adaptation of the control units is complete." message and check the coding status of the control units in the table displayed.

Continue by pressing •F12“ to return to the control unit overview.

4.3 Program the interior acoustics control unit (E-Sound) **(from model year N)**:

4.3.1 In the overview, select the interior acoustics control unit (E-Sound). Press •F12“ to continue.

4.3.2 Select Coding/programming.

4.3.3 Automatic programming must now be selected. Press •F12“ to continue.

4.3.4 The Tester displays the message: Coding successfully performed.

4.4 Read out the fault memory of all systems, work through any existing faults, and erase the fault memory. ⇒ *Workshop Manual '0335IN Diagnostic maintenance: diagnostic system and maintenance inter...'*

5 Concluding work

5.1 Switch off ignition and disconnect **9900 - PIWIS Tester 3**.

5.2 Drive the vehicle off the lifting platform.

26 02 49 40: E-Sound installed

Labor time: **710 TU**

**Important Notice:** Technical Bulletins issued by Porsche Cars North America, Inc. are intended only for use by professional automotive technicians who have attended Porsche service training courses. They are written to inform those technicians of conditions that may occur on some Porsche vehicles, or to provide information that could assist in the proper servicing of a vehicle. Porsche special tools may be necessary in order to perform certain operations identified in these bulletins. Use of tools and procedures other than those Porsche recommends in these bulletins may be detrimental to the safe operation of your vehicle, and may endanger the people working on it. Properly trained Porsche technicians have the equipment, tools, safety instructions, and know-how to do the job properly and safely. Part numbers listed in these bulletins are for reference only. The work procedures updated electronically in the Porsche PIWIS diagnostic and testing device take precedence and, in the event of a discrepancy, the work procedures in the PIWIS Tester are the ones that must be followed.

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