

22 KW OBC Charger

Overview / Parts list

Vehicle Type: **Taycan**

Model Year: **As of 2020**

Restrictions: **NOT** approved for **Canada**
ONLY approved for the following market:

- USA (C02).

Cause: **Retrofitting**



Information

Please check whether workshop campaign **AMB5** must be carried out - if so, carry out the workshop campaign first and then start the conversion steps. If the workshop campaign has already been carried out, the conversion steps can be started immediately.

Parts Info: **Observe country versions and vehicle versions**

9J1.044.900.31 1x ⇒ OBC charger, NAR LHD (ES6)

Overview of the components and number of units contained in the set (see above)

Item number	Designation	9J1.044.900.31
9J1.915.681.BH	22KW OBC DH 1 PHAS	1x
9J1.915.543.A	Holder for OBC charger 22kW	1x
9J1.915.517.A	Holder, vertical	1x
N .107.390.02	6kt-flange screw M6x45	4x
N .107.148.01	Screw, M6 x 18	2 x
PAF.912.040	Hexagon screw M8x50	4x

PAF.106.825	Hex screw with inside multiple-tooth head	4x
N.107.370.01	6KT nut, M6	5x
9J1.971.106.R	AC charging wiring harness, driver side LHD	1x
9J1.971.093.R	Combo charging wiring harness, passenger side LHD	1x

Warning notes



WARNING

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'*



Information

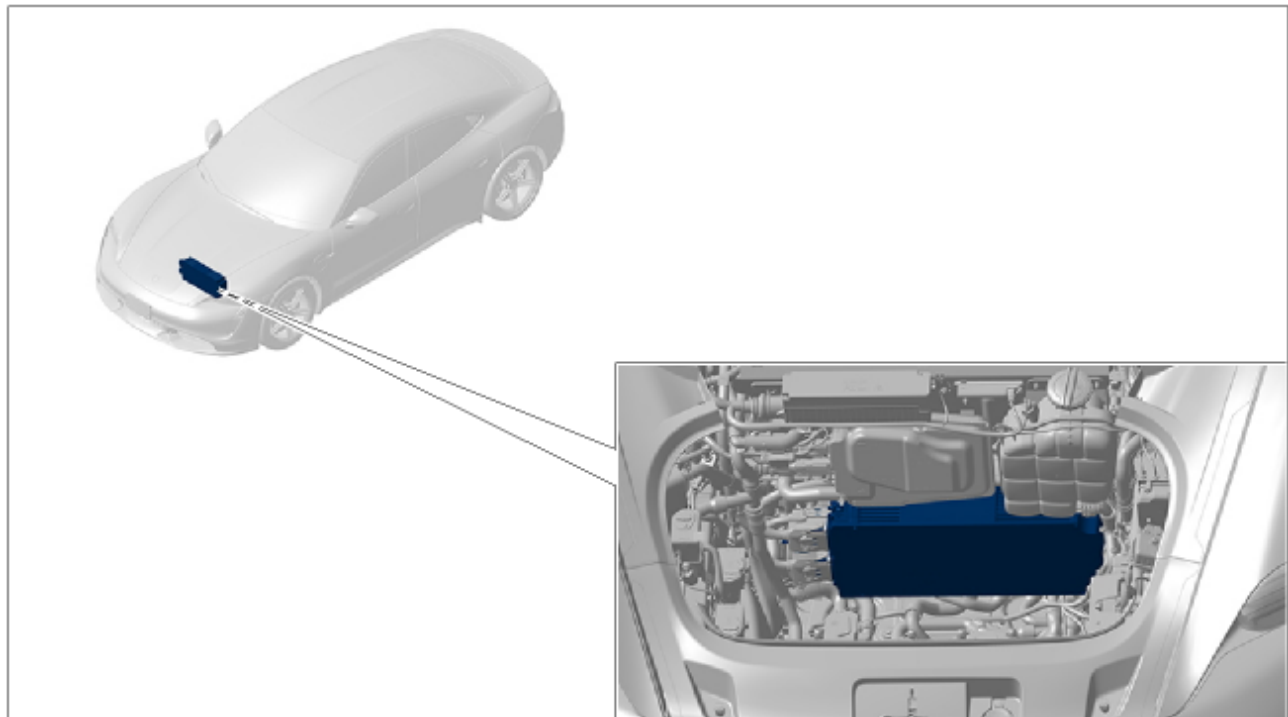
Handling high-voltage lines:

- Do not support yourself or your tools on high-voltage lines and their components.
- Work involving metal-removing, deforming and sharp-edged tools close to high-voltage components and lines is prohibited.
- Work involving heat sources such as welding, soldering, hot air and thermal bonding close to high-voltage components and lines is prohibited.
- High-voltage lines must not be extensively bent or kinked.
- A visual inspection of the high-voltage connectors must be performed before installing the high-voltage lines. If there are signs of damage to the connectors, contacts and seals, the high-voltage line must be replaced.
- In the event of queries or uncertainties, consult the relevant high voltage technician.



Information

OBC charger installation position



Installation position of high-voltage charger

Preliminary work



Information

Only for US vehicles with the Charging function "Plug & Charge" (e.g. MY21+ with 11kW OBC).

Further information on the Porsche Charging Service can be found in the Porsche Connect Store.

When replacing the high-voltage On-Board Charger (OBC), the customer settings of the Charging app in the PCM Central Display must be read out and documented before removing the OBC. From the PCM Home screen, select CHARGING --> OPTIONS [...], and note the existing customer settings. After installing and teaching the new OBC, the customer settings of the Charging app must be checked and set. If Plug & Charge is a new feature for the customer, discuss the charging process with the customer and point out the location of this option to turn Plug & Charge On and Off.

Important: Processing can take up to 24 hours.

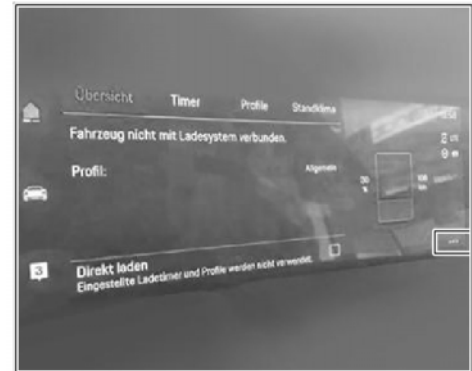
For vehicles already featuring Plug & Charge functionality (MY21 and newer Taycan with the 11 kW OBC, for example), continue with Step 1. For vehicles not previously equipped with Plug & Charge (MY20 Taycan with the 11 kW OBC, for example), skip Step 1 and proceed with Step 2.

- 1 Before replacement of the on-board charger,
 - 1.1 Select the **Charging** menu in the PCM central display.



PCM central display app "Charging"

- 1.2 Select "Settings" [...] at the bottom right of the PCM central display.



PCM Central display "Settings"

- 1.3 In menu Activate **Plug & Charge** check the status.

- 2 Read the warning notices. ⇒ *Workshop Manual '2X00IN General warning notes for working on the high-voltage system'*

- 3 Isolate the high-voltage system from the power supply. ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*

- 4 Complete the documentation. ⇒ *Workshop Manual '2X00IN Test log: Verifying absence of electric charge'*

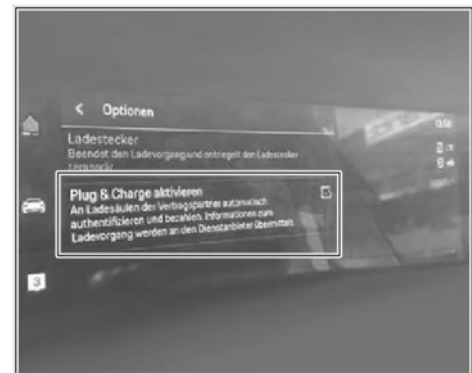
- 5 Remove front luggage compartment liner. ⇒ *Workshop Manual '501919 Removing and installing luggage compartment liner'*

- 6 Drain coolant. ⇒ *Workshop Manual '193817 Draining and filling coolant'*

- 7 Unscrew coolant reservoir at the partition, remove it and set it down by moving it forward into the luggage compartment. ⇒ *Workshop Manual '194019 Removing and reinstalling reservoir'*

- 8 Unscrew electric passenger compartment heater from the partition and pull it forward. ⇒ *Workshop Manual '828019 Removing and installing electric passenger compartment heater'*

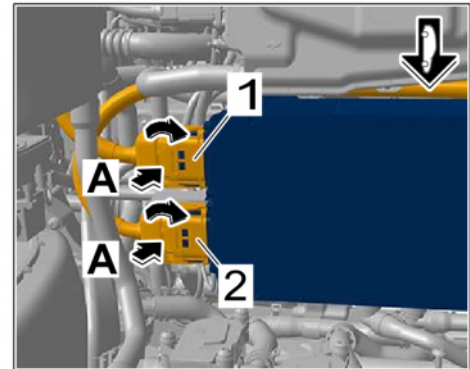
- 9 Remove fuse box for body front section from the partition and pull it forward. ⇒ *Workshop Manual '978409 Loosening and securing front end fuse box'*



PCM Central display "Plug & Charge"

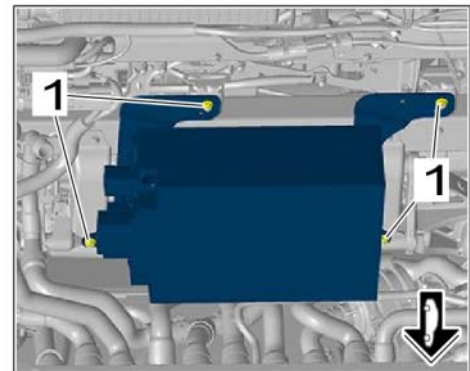
Removing OBC charger

- 10 Release high-voltage lines ⇒ *Disconnecting high-voltage lines -1-* and ⇒ *Disconnecting high-voltage lines -2-* (⇒ *Disconnecting high-voltage lines -Arrows A-*) and disconnect them from the high-voltage charger.



Disconnecting high-voltage lines

- 11 Unscrew the four fastening nuts ⇒ *Fastening nuts -1-* for the holders from the high-voltage charger.



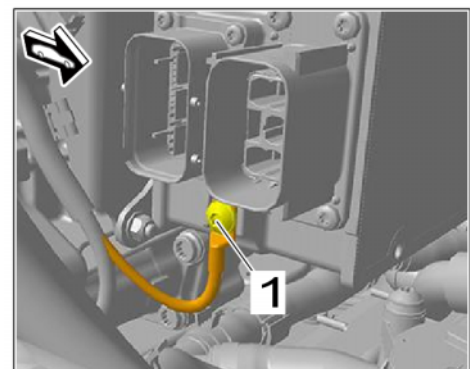
Fastening nuts

- 12 Unscrew fastening screw ⇒ *Equipotential bonding line -1-* for the equipotential bonding line.



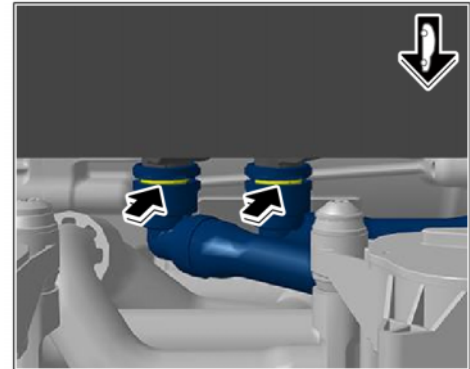
Information

Before installing or removing the coolant lines, place absorbent material (paper, cloths) underneath to absorb any emerging coolant. Coolant must never get onto electric contacts.



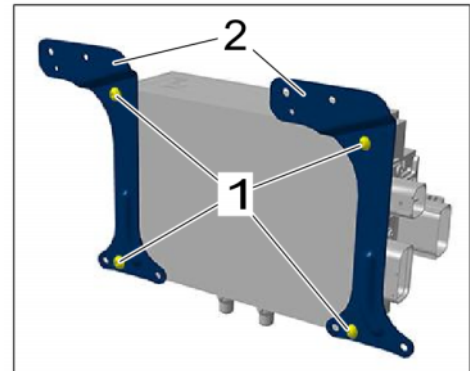
Equipotential bonding line

- 13 Set the high-voltage charger down by moving it forward, release the connections for the coolant lines by pressing them \Rightarrow *Coolant lines -Arrows-* and disconnect them from the high-voltage charger.
 - 13.1 Close off the high-voltage charger immediately using suitable stoppers and set it down with the adapters facing upwards.



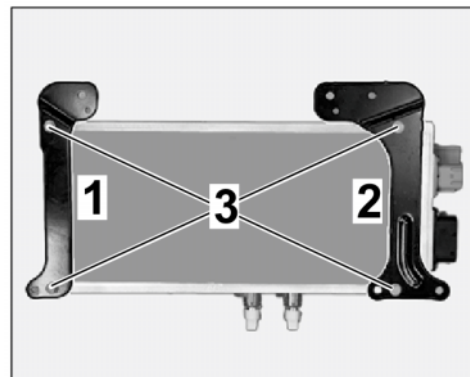
Coolant lines

- 14 Disassemble holder.
 - 14.1 Unscrew the fastening screws \Rightarrow *Holder for high-voltage charger -1-* and remove holder \Rightarrow *Holder for high-voltage charger -2-*.
- 15 Install right holder of 11 KW charger on 22 KW charger, install left holder from scope of delivery. **Observe the left and right as shown.**



Holder for high-voltage charger

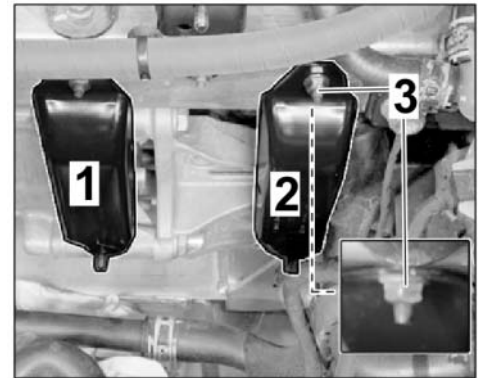
- 15.1 Install holder at the right of the 11 KW charger \Rightarrow *Holder for OBC charger -2-* on the 22 KW charger using two fastening screws \Rightarrow *Holder for OBC charger -3-*. **Tightening torque: 8 Nm (6 ftlb)**
- 15.2 Install new holder from the scope of delivery at the left as shown \Rightarrow *Holder for OBC charger -1-* on the 22 kW charger with two fastening screws \Rightarrow *Holder for OBC charger -3-*. **Tightening torque: 8 Nm (6 ftlb)**



Holder for OBC charger

- 16 For 4WD, an additional holder must be installed, Steps 16.1 and 16.2. For 2WD, the holder \Rightarrow *Holder on vehicle side -1-* in the vehicle must be converted to the right position \Rightarrow *Holder on vehicle side -2-*.

- 16.1 Install holder ⇒ *Holder on vehicle side -2-* included in the scope of delivery with two nuts ⇒ *Holder on vehicle side -3-* as shown. Holder ⇒ *Holder on vehicle side -1-* remains installed in the vehicle.

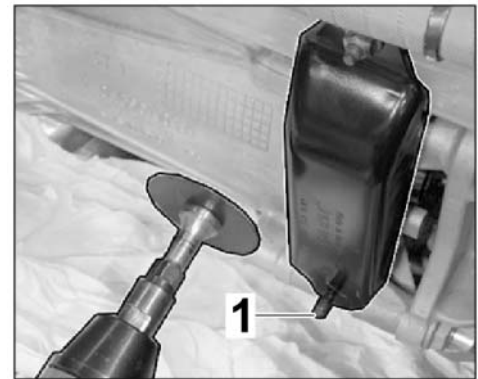


Holder on vehicle side

- 16.2 Remove studs ⇒ *Stud holder -1-* from holder ⇒ *Holder on vehicle side -1-* using a suitable tool.

- 17 For set **9J1.044.900.31**, and **9J1.044.900.32**, remove and install charging socket at the left and right.

- 17.1 ⇒ *Workshop Manual '978409 Removing and installing left charging socket'*
17.2 ⇒ *Workshop Manual '978409 Removing and installing right charging socket'*



Stud holder

Installing 22 kW OBC charger



Information

Check that the high-voltage connectors are engaged fully by carrying out a visual inspection and by pulling gently on the high-voltage connectors.

- 18 Install in reverse order.
- 19 Install fastening screw for ground line at the 22 kW on-board charger. **Tightening torque: 8 Nm (6 ftlb)**
- 20 Install fastening nuts for the holders of the on-board charger. **Tightening torque: 8 Nm (6 ftlb)**
- 21 Position fuse box for body front section at the partition and secure it. ⇒ *Workshop Manual '978409 Loosening and securing front end fuse box'*

- 22 Position electric passenger compartment heater at the partition and secure it. ⇒ *Workshop Manual '828019 Removing and installing electric passenger compartment heater'*
- 23 Position coolant reservoir at the bulkhead and secure it. ⇒ *Workshop Manual '194019 Removing and reinstalling reservoir'*

Subsequent work

NOTICE

Note on control unit integration test

- The control unit integration test can be ignored at this point. The 22 kW OBC charger will not be OK until the PR No. has been changed through maintenance of vehicle data.



Information

The **PIWIS Tester** 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 additional information may appear on the **PIWIS Tester**.

- 24 Fill in coolant and bleed the system. ⇒ *Workshop Manual '193817 Draining and filling coolant'*
- 25 Start the vehicle and complete the relevant documentation. ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*
- 26 Complete the documentation. ⇒ *Workshop Manual '2X00IN Test log: Starting the high-voltage system'*
- 27 Code / program 22 kW On-Board Charger

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.

27.1 Preparatory work – Coding **Attention:** Program the 22kW OBC using at least PIWIS Tester version 41.000.030.

NOTICE

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

- An unstable Internet connection can interrupt communication between PIWIS Tester III/ IV and the vehicle communication module (VCI). As a result, control unit programming may be aborted.

⇒ During control unit programming, always connect PIWIS Tester III/ IV to the vehicle communication module (VCI) via the USB cable.

27.1.1 Connect **9900 - PIWIS Tester 3/ 4** to the vehicle and switch it on.

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

**Information**

The **9900 - PIWIS Tester III/ IV** 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/ IV**.

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

27.1.4 If **9900 - PIWIS Tester 3/ 4** is connected correctly, a connection to the vehicle will be established: The "Taycan" series is recognized and an overview of the control unit is created.

27.1.5 Press •F12" to go to the control unit search screen.

27.1.6 •F8" for additional menu. Question: "Should a VAL be created?" With "Yes", press •F12" to confirm.

27.1.7 After the VAL 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 control unit integration test..

**Information**

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

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

- 27.2.1 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.
- 27.2.2 Confirm the message "The vehicle data was compared with PIWIS Online. Significant differences were found" with •F12" .
- 27.2.3 Look for the "**BATTERY CHARGER**" option in the "Family" column.
- Select the option "**KB4**" in the "Value" column in the drop-down menu. Press •F12" to continue.
- 27.2.4 A table containing the coding value and the columns "new value" and "old value" is displayed in the overview. Press •F8" to continue.
- 27.2.5 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 as a result of the changes that were made.
- 27.3 Code the new vehicle equipment.
- 27.3.1 Confirm the table containing a list of control units that must be coded by pressing •F12" .
- 27.3.2 Individual data records will be loaded, depending on the number of control units to be coded.
- 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.
- 27.3.3 Wait for the "Adaptation of the control units is complete." message and check the coding status of the control units in the displayed list.
- Continue by pressing •F12" to return to the control unit overview.
- 28 Teach high-voltage charger. ⇒ *Workshop Manual '279755 Replacing high-voltage charger'*
- 29 Check and modify the customer-specific settings of the Charging app as read out under preliminary work Step 1.

NOTICE**Note on Plug & Charge**

- **If the Plug & Charge selection is not available in the PCM Central Display --> Charging --> Settings [...] following installation, programming, and coding of the new 22 kW On-Board Charger then please reset the PCM to factory settings.**

30 Resetting the PCM to factory settings.

30.1 Select the "Central computer" control unit in the control unit selection screen (Overview menu) and call up the "Maintenance/repairs" area.

30.2 Select the "Reset factory settings" function and follow the instructions on the screen.

31 Read out the fault memory of all systems, work through any existing faults, and erase the fault memory. → *Workshop Manual '279755 On-board diagnosis'*

Working time:

27 97 23 44: Removing and installing OBC

Labor time: **1200 TU**

Includes: Remove OBC charger, install 22 KW OBC charger, removing and installing left and right charging socket, code 22 KW OBC charger.

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