

WLG6 - Re-Programming High-Voltage Charger (OBC) Control Unit (Workshop Campaign)

Important: **CRITICAL WARNING** - This campaign includes steps where control unit(s) in the vehicle will be programmed with the PIWIS Tester. The vehicle voltage must be maintained between 13.5 volts and 14.5 volts during this programming. Failure to maintain this voltage could result in damaged control unit(s). Damage caused by inadequate voltage during programming is not a warrantable defect. The technician must verify the actual vehicle voltage in the PIWIS Tester before starting the campaign and also document the actual voltage on the repair order.

Model Year: 2020

Model Line: Taycan (Y1A)

Subject: Control unit for high-voltage charger (OBC)

Information: **Optimized software is available for the high-voltage charger for the Taycan.**

This software update improves at-home charging (AC charging process) and further optimizes the calculation of battery capacity.

Further information on the new features that will be implemented with the software update can be found in the attachment under ⇒ *Technical Information 'Overview of new features implemented by the software updates'*.

Remedial Action: Re-program the high-voltage charger and, if necessary, other control units using the PIWIS Tester with test software version 39.600.015 (or higher).

Affected Vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information). There are 1,486 vehicles affected by this campaign.

Required tools



Information

The Taycan (Y1A) is equipped as standard with a **lithium starter battery**.

Lithium starter batteries must only be charged using a **suitable battery charger** that has a current and voltage-controlled charge map.

For further information about the battery chargers to be used, see ⇒ *Workshop Manual '270689 Charging battery/vehicle electrical system'*.

- Tools:**
- Battery charger with a current rating of **at least 90 A** and a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 Battery charger 90 A**
 - **9900 - PIWIS Tester 3** with test software version **39.600.015**

Preparatory work

NOTICE

Fault entry in the fault memory and control unit programming aborted due to undervoltage.

- Increased current draw during diagnosis or control unit programming can cause a drop in voltage, which can result in one or more fault entries and the abnormal termination of the programming process.
- ⇒ Before starting control unit programming, connect a suitable battery charger with a current rating of at least 90 A to the vehicle.

NOTICE

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

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

NOTICE

Control unit programming will be aborted if the driver's key is not recognized

- If the driver's key is not recognized in the vehicle, programming cannot be started or will be interrupted.
- ⇒ Position the driver's key with the back facing forward upright between the holding struts in the rear cupholder (emergency start tray) to guarantee a permanent radio link between the vehicle and remote control.

NOTICE

Programming interrupted

- Malfunctions in control unit
 - Risk of damage to control unit
- ⇒ Route the line between the vehicle communication module (VCI) and diagnostic socket on the vehicle without tension and make sure that the connector is inserted fully into the diagnostic socket.
- ⇒ Check that the rechargeable battery for the PIWIS Tester is charged sufficiently. Connect the PIWIS Tester to the power supply unit if necessary.



Information

To carry out the campaign, the PIWIS Tester must be online and logged into the Porsche Partner Network (PPN).



Information

The procedure described here is based on the PIWIS Tester 3 software version **39.600.015**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.

A discrepancy may arise with later software versions for example.

Work Procedure: 1 Connect a suitable battery charger, e.g. **VAS 5908 Battery charger 90A**, to the jump-start terminals in the luggage compartment and switch it on.

2 Position the **driver's key** with the back facing forward upright between the holding struts in the rear cupholder (**emergency start tray**) to guarantee a permanent radio link between the vehicle and remote control ⇒ *Emergency start tray*.

3 Connect the **9900 - PIWIS Tester 3** to the Vehicle Communication Module (VCI) via the **USB cable**. Then, connect the Communication Module to the vehicle and switch on the PIWIS Tester. Due to the long programming time, connect the **PIWIS Tester to the power supply during the operation**.



Emergency start tray

4 Establish operational readiness (switch on ignition).

5 On the PIWIS Tester start screen, call up the **'Diagnostics'** application.

The vehicle type is then read out, the diagnostic application is started and the control unit selection screen is populated.

Re-programming high-voltage charger (OBC) control unit



Electrically moved side windows and rear spoiler

- **Danger of limbs being trapped or severed**
 - **Risk of damage to components**
- ⇒ **Do not reach into the danger area.**

- ⇒ Keep third parties away from the danger area.
- ⇒ Do not move components or tools into the danger area.



Information

In addition to programming and coding of the high-voltage charger (OBC) control unit, the guided programming sequence within the scope of this campaign includes other control units from the VR8.7 software release. In the programming sequence, the following software versions of the individual control units are again compared with the required status of software release VR8.7. If the actual status already matches, the programming of the relevant control unit is automatically skipped, so that the scope of the control units programmed in addition to the high-voltage charger control unit can vary depending on the vehicle.

- Control unit for high-voltage power electronics, front and rear - 0007
- High-voltage battery control unit (BMCe) – E870
- High-voltage converter – 0899
- Brake booster (electric brake booster) – 0100
- High-voltage DC charger (booster) – 0990
- Engine electronics (DME) – 0005
- Brake electronics (PSM) – 0094
- Driver's seat and passenger's seat adjustment – 0064
- Assistance systems (zFAS) – 0355

Work Procedure: 1 **Re-program high-voltage charger control unit (OBC).**

The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

For specific information on control unit programming during this campaign, see the table below:

Required PIWIS Tester software version:	39.600.015 (or higher)
Type of control unit programming:	Control unit programming using the 'Campaign' function in the Additional menu on the PIWIS Tester by entering a programming code.
Programming code:	V6P8C

Programming sequence:	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>Do not interrupt programming and coding.</p> <p>A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.</p>
Programming time (approx):	approx. 60 minutes
Software version programmed during this campaign:	<p>High-voltage charger control unit (OBC): 1079</p> <p>Following control unit programming, the software version can be read out of the high-voltage charger control unit in the 'Extended identifications' menu using the PIWIS Tester.</p>
Procedure in the event of abnormal termination of control unit programming:	<ul style="list-style-type: none"> • End and restore operational readiness (switch ignition off and then on again). • Read out and erase fault memories ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. • Repeat control unit programming by entering the programming code again and start extended logging using the key combination •Ctrl" + •L" . <p>Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted.</p> <ul style="list-style-type: none"> • Repeat the procedure described here again if control unit programming is aborted a second time.
Procedure in the event of error messages appearing during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

Concluding work



Information

If fault memory entries for individual control units cannot be deleted, proceed as follows:

- End operational readiness (switch off ignition).
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key and remove the driver's key from the proximity of the vehicle (approx. 10 metres).

- Wait approx. 5 minutes before unlocking the vehicle again.
- Restore operational readiness (switch on ignition).
- Plug the PIWIS Tester diagnostic connector into the diagnostic socket again and restore communication with the vehicle.
- Read out the fault memory again and delete any fault memory entries that are stored.

Work Procedure: 1 Standardize seat adjustment for driver's and passenger's side.

- 1.1 Select the 'Seat adjustment on front passenger's side' control unit in the control unit selection screen ('Overview' menu) and press •F12" ('Next') to confirm your selection .
- 1.2 Once the seat adjustment on front passenger's side control unit has been found and is displayed in the overview, select the 'Maintenance/ repairs' menu.
- 1.3 Select the 'Standardize seatmotors' function and press •F12" ('Next') to confirm your selection.
- 1.4 Read the instructions and confirm by pressing •F12" ('Next').



Information

If seat standardization is aborted, the teaching process must be re-started by selecting the 'Standardize seat motors' function again.

- 1.5 Press •F8" to to run the procedure.
- 1.6 Once the seat motors on the passenger's side have been standardized, also teach the driver's side. To do this, select the 'Seat adjustment on front driver's side' control unit in the control unit selection screen ('Overview' menu) and repeat steps 1.2 to 1.6.

Then, continue with Step 2.



Control unit selection




WARNING

Electrically moved side windows and rear spoiler

- Danger of limbs being trapped or severed

- **Risk of damage to components**
 - ⇒ **Do not reach into the danger area.**
 - ⇒ **Keep third parties away from the danger area.**
 - ⇒ **Do not move components or tools into the danger area.**
- 2 Manually retract the rear spoiler, which extended automatically during programming.
 - 2.1 Select the **'Rear spoiler'** control unit in the control unit selection screen (**'Overview'** menu) and press •F12" ('Next') to confirm your selection.
 - 2.2 Once the rear spoiler control unit has been found and is displayed in the overview, select the **'Maintenance/repairs'** menu.
 - 2.3 Select the function **'Teach rear spoiler'** and press •F12" ('Next') to confirm your selection.
 - 2.4 Read the instructions and confirm by pressing •F12" ('Next').
 - 2.5 Meet the displayed conditions that are to be checked manually and set a tick in the relevant **'Status'** box.
 - 2.6 Select the **Teach rear spoiler** function and press •F8" ('Execute') to confirm your selection.
 - 2.7 Once the rear spoiler has been taught and retracted fully, select the **'Overview'** menu to return to the control unit selection screen.
 - 3 End operational readiness (switch off ignition).
 - 4 Disconnect the PIWIS Tester from the vehicle.



Information

Connect the PIWIS Tester to a network as soon as you can and log into the PPN in order to transfer the backup documentation created during this campaign to the PAG systems.
 - 5 Switch off and disconnect the battery charger.
 - 6 Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing**Information**

The specified working time was determined specifically for carrying out this campaign and includes all necessary preliminary and subsequent work.

The working time may differ from the working times published in the Labor Operation List in the PCSS.

**Information**

Information on the working time:

Generally, the working time includes all work that requires the active participation of the service technician.

This also covers all required preliminary work and subsequent work.

The working time includes the following activities during control unit programming:

- All required steps for starting or finishing programming
- Required interaction during a programming sequence
- Waiting times until programming starts
- Random check of programming status

If no further interaction by the service technician is required once control unit programming has started because programming is performed automatically, there is no need for the service technician to remain at the vehicle for the entire programming time.

These waiting times are not included in the working time if the total programming time is more than 15 minutes.

If programming takes up to 15 minutes, the full waiting time is included in the working time.

Scope 1:

Working time:

Re-programming high-voltage charger control unit

Labor time: **75 TU**

Includes: Connecting and disconnecting battery charger
Connecting and disconnecting PIWIS Tester
Reading out and erasing fault memories

⇒ **Damage Code WLG6 066 000 1**

Overview of the new features of the software update

Overview:

Function	Description
At-home charging	<ul style="list-style-type: none"> • At-home charging is improved. Any premature disruption of the charging process will be averted. • Communication between the vehicle and third-party high-voltage charging equipment (e.g. ABL Wallbox) has been optimized. This prevents discharge of the 12-volt vehicle electrical system battery following completion of the charging process. • Starting the charging process on the passenger's side has been optimized.
Charging on the road	<ul style="list-style-type: none"> • Communication between the vehicle and public charging pedestals (e.g. i-Charge Schrack charging pedestal) has been improved. This prevents any premature disruption of the charging process.

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