WML2 – Re-Programming 22 kW High-Voltage Charger (OBC) (Workshop Campaign)

Introduction

Revision:	This bulletin replaces bulletin Group 2 145/21 WML2, dated October 26, 2021.
Model Year:	**As of 2021**
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.
Vehicle Type:	**Taycan (Y1A)** **Taycan Cross Turismo (Y1B)**
Concerns:	**22 kW high-voltage charger (OBC)**
Information:	**Updated software is available for the 22 kW high-voltage charger (OBC). The software contains improvements, enhanced functions and troubleshooting for the following topics:**

- Improved and enhanced "Plug-and-Charge" (PnC) comfort function
- Enhanced "smart charging" comfort function
- The high-voltage battery cannot be charged fully (100% state of charge (SoC) is not reached) at certain charging pedestals
- DC charging at certain charging pedestals with a duty cycle of between 6.1 and 7% is not possible (e.g. Signet charging stations)

Action required:	Re-program the 22 kW high-voltage charger using the PIWIS Tester with software version 40.550.050 (or higher) installed.

Required tools

Information

The Taycan (Y1A/Y1B) 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 **also** with a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 battery charger 90 A**.
- **9900 - PIWIS Tester 3** with software version **40.550.050** (or higher) installed.

Re-programming 22 kW high-voltage charger (OBC)

Work Procedure: 1 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 in this sequence, see the table below:

i **Information**

Points to note in relation to programming:
After programming the 22 kW high-voltage charger (OBC), the **central computer (PCM) settings** must be reset to factory settings.

Please speak with customers and let them know comfort settings in the vehicle are likely to be erased / reset during this workshop campaign. It is recommended to offer assistance re-configuring those settings if necessary. Online Software Updates should also be confirmed through the MyPorsche portal to ensure infotainment system updates take place.

In addition, discuss Plug and Charge (PnC) with customers, since this functionality is newly introduced by this software update. The PnC function relies upon backend system connections between Porsche Charging Service and the Charge Point Operator (Electrify America, for example) to automatically process payment of charging sessions. These system connections can take time to synchronize, with a waiting time ranging from overnight to approximately one week.

Therefore, it is recommended to leave Plug and Charge Deactivated via the PCM menu Home → Charging → Options[…] until at least one overnight resting period and at least one DC charging session is successfully completed. After that, the customer can activate Plug and Charge in the PCM and attempt DC charging via PnC authentication.

Required PIWIS Tester software version:	**40.550.050** (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:	**E8W5P**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.

Programming time (approx.):	**8 minutes**
Software version programmed during this sequence:	• High-voltage charger (OBC) 1256 Following control unit programming, the software version can be read out of the relevant control unit in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.* • Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" . • Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, end operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here again.
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'.*

Concluding work

Important: After programming the 22 kW high-voltage charger (OBC), the **central computer (PCM) settings** will be reset to factory settings.

Work Procedure: 1   Reset PCM to factory settings.

   1.1   Select the "Central computer" control unit in the control unit selection screen ('Over-view' menu) and open the **"Maintenance/repairs"** screen.

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

2   Read out and erase the fault memories of all control units.

   2.1   Press •F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.

2.2   Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm your selection ⇒ *Erasing fault memories*.

The fault memories of the control units are read out.

2.3   Once you have read out the fault memories, check the fault memory entries.

Erasing fault memories

ⓘ Information

If control units are found to have faults that are **not** caused by control unit programming, these must first be **found** and **corrected**. This work **cannot** be invoiced under the workshop campaign number.

2.4   Press •F8" to delete fault memory entries.

2.5   Press •F12" ('Yes') in response to the question as to whether you really want to delete all fault memory entries.

The faults stored in the fault memories of the various control units are deleted.
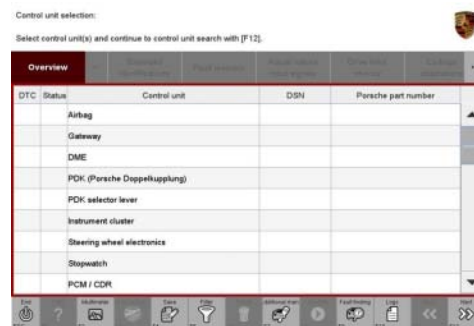
ⓘ Information

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. 15 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.
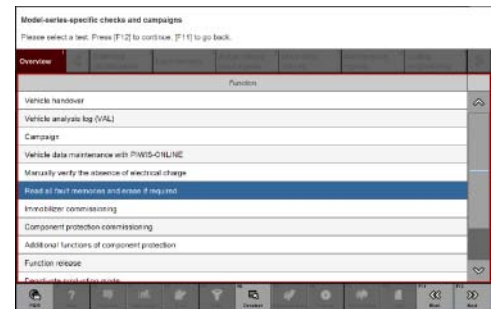
2.6   Once you have erased the fault memories, select the **'Overview'** menu to return to the control unit selection screen ⇒ *Control unit selection*.

3   Manually retract the rear spoiler, which extended automatically during programming.

Control unit selection

3.1   Select the **'Rear spoiler'** control unit in the control unit selection screen (**'Overview'** menu) and press •F12" ('Next') to confirm.

3.2   Once the rear spoiler control unit has been found and is displayed in the overview, select the **'Maintenance/repairs'** menu.

3.3   Select the function **'Teach rear spoiler'** and press •F12" ('Next') to confirm.

3.4   Read the instructions and confirm by pressing •F12" ('Next').

3.5   Meet the displayed conditions that must be checked manually and tick the relevant **'Status'** box.

3.6   Select the **Teach rear spoiler** function and press •F8" ('Execute') to confirm.

3.7   Once the rear spoiler has been taught and retracted fully, select the **'Overview'** menu to return to the control unit selection screen.

4   End operational readiness (switch off ignition).

5   Disconnect the PIWIS Tester from the vehicle.

    Information

Connect the PIWIS Tester to a network as soon as possible and log into the PPN in order to transfer the backup documentation created during this campaign to the PAG systems.

6   Switch off and disconnect the battery charger.

7   Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing

Scope 1:   **Re-programming 22 kW high-voltage charger (OBC)**

Working time:

Re-programming 22 kW high-voltage charger (OBC)   Labor time: **53 TU**
Includes: Connecting and disconnecting battery charger
                 Connecting and disconnecting PIWIS Tester
                 Reading out and erasing fault memories

⇒ **Damage Code WML2 066 000 1**