

WSH4 - Re-Programming High-Voltage Battery 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: **As of 2020 up to 2024**
- Model Line: **Taycan (Y1A / Y1B / Y1C)**
- Concerns: **High-voltage battery**
- Cause: **Updated software is available for the high-voltage battery control unit (BMCe) in the Taycan.**
This update optimizes the on-board diagnostic function of the affected vehicles to improve the detection of potential deviations within the high-voltage battery.
With this updated software, in future a yellow warning message will appear immediately in the instrument cluster in the case of detected deviations.
- Action:
- Re-programming the high-voltage battery control unit (BMCe) with the **latest** PIWIS Tester software release
 - Minimum requirement: Release **43.500.000**



Information

Scope definition

Scope 1: Over-the-Air (OTA) software update **via PCM**.

- Please note that the OTA software updates should generally be installed by the driver (main user) via the Porsche Communication Management (PCM), provided that the software package for the campaign has been downloaded to the vehicle via OTA (**Scope 1**) and the update is subsequently displayed in the PCM "Updates" menu.
- For required preconditions for performing the OTA software update, see ⇒ *Technical Information 'Preconditions for the OTA software update via PCM'*
- Only vehicles, for which the high-voltage battery was checked via the evaluation of the vehicle analysis log (VAL) within the last 40 days and no abnormalities were detected, were assigned to the OTA scope.

Scope 2: Automatically re-program the control unit for high-voltage battery (BMCe) **using the PIWIS tester.**



Information

Please note:

The vehicles affected by this action are **additionally** assigned to the workshop/OTA campaign **WRW1** if necessary.

If this is the case, the **present workshop campaign WSH4 must be carried out first** and only then the control unit programming started as part of the WRW1 campaign.

Affected
Vehicles:

Only vehicles assigned to the campaign (see also PCSS Vehicle Information).

Required tools

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**
- **P90999 - PIWIS Tester 4** with installed test software version **43.500.000**

Automatically re-programming the high-voltage battery control unit (BMCe)

Work Procedure: 1 **Re-program high-voltage battery control unit (BMCe).**

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 release:	43.500.000 (or higher)
Type of control unit programming:	Control unit programming using the 'Automatic programming' function of the high-voltage battery control unit: 'High-voltage battery (BMCe)' control unit – 'Coding / Programming' menu – 'Automatic programming' function.
Programming sequence:	Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence. Do not interrupt the programming and coding process. A backup documentation process for the re-programmed software releases starts as soon as programming and coding is complete.
Programming time (approx.):	10 minutes

Software release programmed during this campaign:	1606 or 1651 or 1652 The programmed software status depends on the cell chemistry or battery generation. Following control unit programming, the software release can be selected from the relevant control unit in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of error messages during the programming sequence:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.</i>
Procedure in the event of a termination in the control unit programming:	▪ Terminate and restore readiness for operation (switch ignition off and then switch on again). ▪ Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.</i> ▪ Repeat control unit programming by restarting programming.

- 2 Read out all fault memories, process existing faults if necessary and delete fault memory.



Information

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

- 3 Press **(F3)** to start the integration test in the control unit selection.
All affected control units should now be successfully re-programmed or checked in the control unit and the overview of the control units and their status.



Information

If a deviation in the integration test is still indicated despite the programming carried out, this must be repeated. If the deviation persists, contact Technical Support.

- 4 Enter the campaign in the Warranty and Maintenance Logbook.

Warranty processing

Scope 1: **Re-programming Over-the-Air (OTA) software update via PCM – high-voltage battery control unit (BMCe)**

- No invoicing possible.

Scope 2: **Automatically re-programming control unit for high-voltage battery (BMCe) using the PIWIS tester**

Labor time:

Re-programming high-voltage battery control unit (BMCe)

Labor time: **60 TU**

Includes:

- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Reading out software release of the control unit
- Reading out and deleting fault memory

⇒ **Damage code WSH4 066 000 1**

Preconditions for OTA software update via PCM

Preconditions: **General preconditions for OTA software updates**

- The respective customer has an **active Porsche Connect Care package**
- Consent to online software updates** was **not** withdrawn in the MyPorsche app

Preconditions for performing an OTA software update

- Driver (main user)** logged into Porsche Communication Management (PCM)
- Privacy Mode** in Porsche Communication Management (PCM) **deactivated**
- Vehicle **safely parked and on flat ground**
- P button next to selector lever (parking mode) pressed and parking brake activated
- Power button pressed with driver door closed, to stop driving readiness
- Parking pre-climatization deactivated
- All doors and windows, front and rear lids and sliding roof closed
- Charging process completed, charging cable disconnected and charging connection lid closed
- All passengers have left the vehicle
- Vehicle locked from outside via handheld transmitter

After the driver has started the OTA software update via Porsche Communication Management (PCM), the preconditions listed above are also displayed in the central display.

Once all the preconditions have been met and the vehicle has been locked from the outside, the OTA software update starts automatically.

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