

WPKO - Re-Programming PSM 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**

Change Overview:

Version	Date	Change
0	04/08/2024	• First publication
1	04/23/2024	• Correction of Action steps under 1.4
2	05/17/2024	• Correction of contact information under 1.4

Model Line: **Taycan (Y1A / Y1B / YBC)**

Concerns: **Porsche Stability Management (PSM)**

Cause: **An optimized software is available for the Porsche Stability Management (PSM) control unit. This update optimizes the brake pedal feel on recuperative and hydraulic braking.**

Action: Check hydraulic unit and re-program PSM control unit using an updated data record.
Minimum requirement: Release **42.400.050**

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

Required materials

Material: **Required materials** (usually already available in the Porsche Center or locally sourced):

Part No.	Designation	Quantity
00004321086	⇒ Brake fluid, 30 liter/ 7.9 gal container	Quantity as required (approx. 1 liter/ 33.8 fl oz required per vehicle)

Required tools

- Tool:
- **P90999 - P90999 - PIWIS Tester 4**
 - 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 5809 battery charger 90A**
 - Torque wrench, 6 – 50 Nm (4.5 – 37 ftlb.), e.g. **VAG 1331A Torque wrench, 6-50 Nm (4.5-37 ftlb.)**
 - Torque wrench, 150 – 800 Nm (111 – 592 ftlb.), e.g. **VAG 1601 Torque wrench, 150 - 800 Nm (111 - 592 ftlb.)**
 - Suitable bleeding device for brake fluid, e.g., **VAS 6860 - Brake filling and bleeding equipment**

Checking hydraulic unit and re-program PSM control unit

Work Procedure: 1 Check hydraulic unit.

- 1.1 Connect and switch on the battery charger.
- 1.2 Connect the Tester to the vehicle and start it. Switch on ignition.
- 1.3 In the control unit Overview, select the control unit **"Brake electronics (PSM incl. parking brake)"**.
- 1.4 Select the menu **"Service and repairs"**, then perform the function **"Functional testing of the hydraulic unit"**, menu-guided.

Assessment	Action
(✓) Hydraulic unit function OK .	Bleed the brake system with the bleeding routine for EBB . Continue with Step 1.6 . Invoicing for Scope 2.

Assessment	Action
<p>(✓) Hydraulic unit function OK. It is also suggested that you perform a detailed function test of the hydraulic unit (expected duration: 60 min.)</p>	<p>Perform a detailed functional test of the hydraulic unit. Then bleed the brake system with bleeding routines EBB and PSM and re-program the PSM control unit.</p> <p>Continue with Step 1.5. Invoicing for Scope 4.</p>
<p>(X) Hydraulic unit function not OK (see also error message below*)</p>	<p>Replace the PSM control unit and hydraulic unit. In this case, please send a PRMS Warranty / Campaigns ticket to PCNA. The ticket does not need to be assigned to any specific person.</p> <p>Only in the event of the aforementioned error message* can you replace the PSM control unit and hydraulic unit immediately after you have sent the ticket and without waiting for the response. The invoice can be made via a request for subsequent compensation to the original campaign claim. It is important to keep the removed parts, as they are requested for analysis.</p>



Information

*** Error message PSM control unit incl. hydraulic unit**

In the event that the PSM control unit incl. hydraulic unit has a fault and must be replaced, the following message is displayed in the PIWIS Tester:

"The brake system is faulty!

The function test of the hydraulic unit is completed. The brake system is defective.
Replace the complete PSM system."

- 1.5 **Only required after a detailed functional test of the hydraulic unit has been completed successfully:** Bleed the brake system with the bleeding routine **Porsche Stability Management (PSM)**.
⇒ *Workshop Manual '470107 Bleeding brake system'*
- 1.6 Bleed the brake system with the bleeding routine **for electric brake booster (EBB)**.
⇒ *Workshop Manual '470107 Bleeding brake system'*
- 2 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:	42.400.050 (or higher)
Integration test procedure:	<ul style="list-style-type: none"> The integration test shows a green result independently of the necessary campaign The WPKO campaign must still be carried out
Type of control unit programming:	Control unit programming using the “Automatic programming” function in the PSM control unit.
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 releases starts as soon as programming and coding is complete.</p>
Programming time (approx.):	12 minutes
Software release programmed during this campaign:	<ul style="list-style-type: none"> PSM control unit: 0190 <p>Following control unit programming, the software release can be read out from the relevant control unit using the PIWIS Tester in the menu ⇒ “Incremented identifications”.</p>
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'</i>
Procedure in the event of a termination in the control unit programming:	Repeat control unit programming by restarting programming.

- 3 Read out and delete all control unit fault memories.
 - 3.1 In the control unit selection (“Overview menu”) press **•F7** to call up the Additional menu.
 - 3.2 Select the function “Read all fault memories and erase if necessary” and press **•F12** (“Next”) to confirm.



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.

- 4 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 overview and their status.



Information

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

- 5 Exit the diagnostic application. Switch off ignition.
- 6 Switch off and disconnect the battery charger.
- 7 Enter the campaign in the Warranty and Maintenance logbook.

Warranty processing

Scope 1: Not valid.

Scope 2: Re-programming the PSM control unit – Bleeding the brake system with bleeding routine **EBB**

Labor time:

Re-programming PSM control unit	Labor time: 151 TU
---------------------------------	---------------------------

Includes:

- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Functional testing of the hydraulic unit
- Removing and installing wheels
- Bleeding brake system (EBB)
- Reading out and deleting fault memories

Required materials:

00004321086	Brake fluid, 30 liter/ 7.9 gal container	0.04 piece (approx. 1 liter/ 33.8 fl oz)
-------------	--	---

Only in the event that the 30 liter/ 7.9 gal container cannot be referenced, the 1 liter/ 33.8 fl oz container can also be referenced and invoiced:

00004321082	Brake fluid, 1 liter/ 33.8 fl oz container	1 piece
-------------	--	---------

⇒ **Damage Number WPKO 066 000 1**

Scope 3: Not valid.

Scope 4: Re-programming the PSM control unit – Bleeding the brake system with bleeding routines **EBB** and **PSM**

Labor time:

Re-programming PSM control unit

Labor time: **171 TU**

Includes: Connecting and disconnecting battery charger
 Connecting and disconnecting PIWIS Tester
 Functional testing of the hydraulic unit
 Removing and installing wheels
 Bleeding brake system (EBB)
 Reading out and deleting fault memories

Required materials:

00004321086 Brake fluid, 30 liter/ 7.9 gal container 0.04 piece
 (approx. 1 liter/ 33.8 fl oz)

Only in the event that the 30 liter/ 7.9 gal container cannot be referenced, the 1 liter/ 33.8 fl oz container can also be referenced and invoiced:

00004321082 Brake fluid, 1 liter/ 33.8 fl oz container 1 piece

⇒ **Damage Number WPKO 066 000 1**

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.

© 2024 Porsche Cars North America, Inc.