Brake Symptom - Yellow Warning Message "PSM Failure" in the Instrument Cluster: Checking Hydraulic Unit and Re-Program PSM Control Unit (SY 211/23)

Change overview

Release	Date	Change
0	02/19/2024	▪ First publication
1	11/19/2024	▪ Extended logging added during the function test ▪ Work procedure in the section "Checking hydraulic unit ..." adapted
3	12/01/2025	▪ Requirement for creating a PRMS ticket removed. ⇒ No information on PAG is required in the future.

Vehicle Type: **Cayenne E-Hybrid (9YA/9YB)/Cayenne Turbo S E-Hybrid (9YA/9YB)**

Model Year: **As of 2022 up to 2023**

Concerns: **Hydraulic unit**

Symptom: **The yellow warning message "PSM failure" lights up in the instrument cluster.**
At the same time, a brake pedal travel that is subjectively perceived as "too long" can occur.

The following fault memory entry is stored in the fault memory of the PSM control unit and/or the brake booster control unit:

- P05FF00 - Brake pressure sensor/brake pedal travel sensor, deviation

Remedial Action: If there is a complaint, carry out **functional test of the hydraulic unit** and, depending on the test result:

- Bleed the brake system and re-program the PSM control unit.

or

- Replace PSM control unit, including hydraulic unit, bleed brake system and re-program PSM control unit.

Information
The minimum programming requirement is the PIWIS Tester software release: **42.500.020**

Required parts and materials

Parts Info: **Required parts if the PSM control unit including hydraulic unit needs to be replaced.**

Part No.	Designation – Location	Quantity
9Y0614508SY	⇒ Hydro aggregate (hydraulic unit)	1 piece
9Y0698009	⇒ Set of seals – Supply line (to reservoir) to hydraulic unit	1 piece

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

Part No.	Designation – Location	Quantity
00004321086	⇒ Brake fluid, 30-liter / 7.9 gal container - Brake system	Quantity as required (Approx. 1.25 liters / 42.27 fl oz are required for conventional bleeding and approx. 2.5 liters / 84.53 fl oz are required for replacing the hydraulic unit)

Required tools

Tools:

- **P90999 - PIWIS Tester 4**
- Battery charger with a current rating of **at least 90 A**, e.g., **VAS 5908 90 A battery charger**. For further information about the battery chargers to be used, see the corresponding Workshop Manual. ⇒ *Workshop Manual '270689 Charging vehicle electrical system and battery'*
- **VAS 6860 - Brake Filling and Bleeding Equipment**
- **VAS 6122 - Engine plug set**

Checking hydraulic unit, replace if necessary, 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 the ignition.

1.3 In the control unit Overview, select the control unit **"Brake electronics (PSM incl. parking brake)"**.

1.4 Start **extended logging** using the key combination Ctrl + L **before starting the function test** on the PIWIS Tester.

1.5 Select the **"Service and repairs"** menu and then perform and assess the **"Functional testing of the hydraulic unit"** function with menu guidance.

Information

Please note that **extended logging** must be **activated during the entire function test**.
Please also note that extended logging is **automatically deactivated after one hour**. If **more than 1 hour** is required for the function test, **extended logging must be restarted after one hour**.

Assessment		Action
(✓)	Hydraulic unit function **OK**	**Bleed the brake system and re-program the PSM control unit.** Continue with Step ⇒ 2.
(✗)	Hydraulic unit function **not OK**	**Replace the PSM control unit including hydraulic unit.** ▪ Replace the PSM control unit including hydraulic unit. For work procedure, see: ⇒ *Workshop Manual '453019 Remove and install hydraulic unit'* ⇒ *Workshop Manual '453055 Replacing PSM control unit'*

2 Bleed the brake system.
⇒ *Workshop Manual '470107 Bleeding brake system'*

3 Re-program PSM control unit.

The basic work 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 - section on "Programming"'*.

Specific information on control unit programming as part of this Technical Information:

Required PIWIS Tester software release:	**42.500.020** (or higher)
Type of control unit programming:	Control unit programming using the **'Automatic programming'** function of the brake electronics control unit. **"Brake electronics (PSM, including parking brake)"** 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. During the programming sequence, the **brake electronics (PSM, including parking brake)** control unit is re **programmed** and then **automatically** re **coded**. **Do not interrupt the programming and coding process.** Once the control units have been programmed and coded, you will be prompted to switch the ignition off and then back on again after a certain waiting time. Backup documentation of the new software versions is then performed.
Programming time (approx.):	Programming takes up to **15 minutes**, depending on equipment.
Software programmed during this action:	▪ PSM control unit software release: **0192** 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'.
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'*.
Procedure in the event of a termination in the control unit programming:	Repeat control unit programming by restarting programming.

4 Read out and delete PSM control unit fault memories.

5 Exit the diagnostic application. Switch off ignition. Disconnect Tester from vehicle.

6 Switch off and disconnect the battery charger.

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
45300190	Check hydraulic unit	
47010715	Bleeding brake system	

APOS	Labor operation	I No.
45305502	Replacing hydraulic unit	
45302552	Programming hydraulic unit	

PCSS encryption:

Location (FES5)	45300	Hydraulic unit
Damage type (SA4)	9735	Repair in accordance with PAG instructions