

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

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

Model Year: **As of 2019 up to 2021**

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	⇒ 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 liter/ 42.27 fl oz are required for conventional bleeding and approx. 2.5 liter/ 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 90A 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 ignition.
- 1.3 In the control unit Overview, select the control unit **"Brake electronics (PSM incl. parking brake)"**.
- 1.4 Select the **"Service and repairs"** menu and then perform and assess the **"Functional testing of the hydraulic unit"** function with menu guidance.

Assessment		Action
(✓)	Hydraulic unit function OK	Bleed the brake system and re-program the PSM control unit. Continue with Step ⇒ 2.
(x)	Hydraulic unit function not OK	Replacing PSM control unit incl. hydraulic unit For procedure, see:

	<p>⇒ <i>Workshop Manual '453019 Removing and installing hydraulic unit'</i> (includes bleeding the brake system)</p> <p>⇒ <i>Workshop Manual '453055 Replacing PSM control unit'</i> (includes automatic coding of the PSM control unit)</p> <p>and finally Re-program PSM control unit.</p> <p>See step ⇒ 3.</p>
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- 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 ' Campaign ' function in the additional menu on the PIWIS Tester by entering a programming code.
Programming code:	G4A8Y
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 after the programming and coding is complete.</p>
Programming time (approx.):	15 minutes

Software programmed during this action:	<ul style="list-style-type: none"> 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"</i> .
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	
45305500	Replacing hydraulic unit	
45302550	Programming hydraulic unit	

PCSS encryption:

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

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