Vehicle Cannot be Charged and Fault Memory Entry for the Additional Coolant Pump in the High-Voltage Battery Control Unit (120/25)

Change Overview:

Revision	Date	Change
0	03/16/2026	▪ First Publication
1	03/30/2026	▪ Update to Work Procedure, Preparatory work

Model Year: **As of 2024 up to 2026**

Model Line: **Cayenne (9YA/9YB)**

Equipment: Hybrid drive system PHEV **(M-No. 0K3)**

Concerns: **High-voltage battery 2.0 control unit (BMCE/BECM)**

Cause: **The customer complains that the vehicle can no longer be charged or the malfunction indicator light is active.**
A pin of the high-voltage battery 2.0 control unit (BECM) can be loosened; therefore, the activation of the additional coolant pump for the low-temperature system (P2) is not possible. This results in potentially insufficient cooling during the charging process, which is why it is aborted or not started.

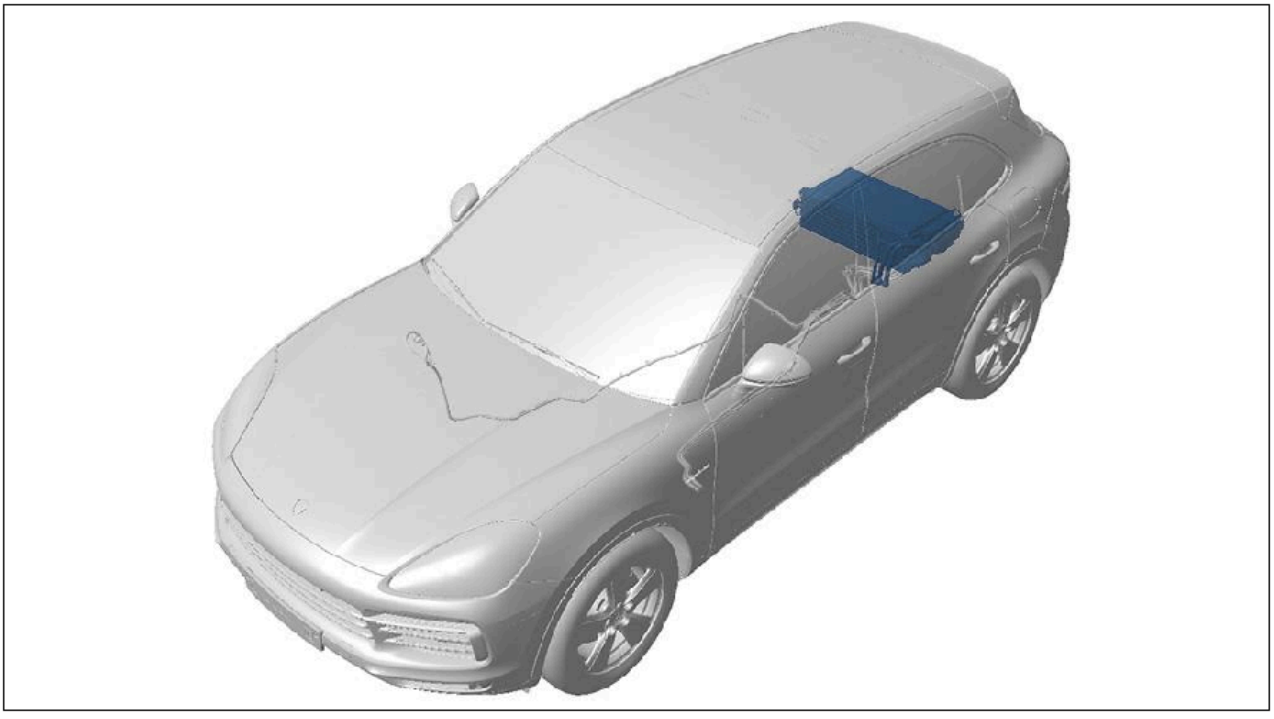
The following fault memory entry is stored in the fault memory of the high-voltage battery 2.0 control unit (BECM):

- **P0C4700** - Additional coolant pump, activation, open circuit (00500A)

Action: Check activation of the additional coolant pump for low-temperature system (P2) and replace the high-voltage battery 2.0 control unit if necessary.

Information
The minimum requirement for troubleshooting is the Porsche Tester software release **43.900.000** (or higher).

Installation Position:



Installation position high-voltage battery 2.0 / High-voltage battery 2.0 control unit

Required tools

Tools:

- **P90999 - Porsche 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 5908 - battery charger 90A**. For further information about the battery chargers to be used, see the corresponding Workshop Manual. ⇒ *Workshop Manual '270689 Charging vehicle electrical system battery'*

Additional required tools for checking the signal line for the additional coolant pump for the low-temperature system (P2).

- Torque wrench, 2-10 Nm (2-8 ftlb.), e.g., **V.A.G 1783 - Torque wrench, 2-10 Nm (2-8 ftlb.)**
- Torque wrench, 6-50 Nm (4.5-37 ftlb.), e. g. **V.A.G 1331A - Torque wrench, 6-50 Nm (4.5-37 ftlb.)**

Additional tools required for checking the signal line for the additional coolant pump for low-temperature system (P2) (only for Coupé):

- **9943 - Disassembly tool**

Additional required tools for removing and installing the high-voltage battery 2.0 control unit:

- **P90037 - Frame**
- **P90037/2 - PHEV 2.0 mounting**
- **T40490 - Guide pins**
- **T90054 - Wedge**
- **VAS 6883A - Insulated tool set**
- **VAS 895 015 - Disassembly wedges**
- **3033 - Lifting tackle**
- **VAS 501 017 - Round sling**
- **VAS 6100 - Workshop crane**
- **VAS 6410 - Contact surface cleaning set**
- **VAS 6890 - Spring band clamp pliers**
- **VAS 691 013 - Stop rod**
- **VAS 531 011 - Cooling system service equipment**
- Torque wrench 40-200 Nm (30-248 ftlb.), e. g. **V.A.G 1332A - Torque wrench, 40-200 Nm (30-248 ftlb.)**

Required parts and materials as needed

Information

No parts and materials are required for the initial test of the additional coolant pump for the low-temperature system (P2) with the Porsche Tester.

Parts Information:

Part No.	Designation – Location	Quantity
Required parts for checking the signal line for the additional coolant pump low-temperature system (P2) (only for Coupé).		
N 91205201	⇒ Cheese head bolt with multiple-tooth head (instrument cluster) – Rear seat bench, front	4 piece(s)
PAF912664	⇒ Hexagon flange bolt – Rear seat, rear	4 piece(s)
PAB886373	⇒ Fixing clip for seat cushion – Rear seat	5 piece(s)
Additional parts and materials required for removing and installing the high-voltage battery 2.0 control unit:		

9A700809600	⇒ Flat-head screw with internal hexagon, self-tapping, M6 x 20 – High-voltage battery cover	34 piece(s)
PAF011351	⇒ Internal hexagon round-head countersunk screw, M6 x 25 – High-voltage battery control unit	3 piece(s)
9A791543400	⇒ Seal for cover – High-voltage battery cover	1 piece(s)
PAB915434	⇒ Battery degassing seal – High-voltage battery	1 piece(s)
N 10505602	⇒ Hexagon-head bolt, M12 x 1.5 x 80 – High-voltage battery to body	2 piece(s)
PAF910940	⇒ Hexagon-head bolt with hexagon socket head (Duo) M12 x 1.5 x 25 – High-voltage battery to body	4 piece(s)
PAB121809	⇒ Seal for coolant reservoir cap – Coolant reservoir for low-temperature cooling system	1 piece(s)
V04015003P	⇒ Coolant additive – Low-temperature system	0.1 piece(s)

Additional part required if the high-voltage battery 2.0 control unit must be replaced:

PAB915231D	⇒ Control unit – High-voltage battery	1 piece(s)

Preparatory work

Work Procedure: 1 Check function of additional coolant pump for low-temperature system (P2).

1.1 Connect and switch on the battery charger.
⇒ *Workshop Manual '270689A4 Charge battery and vehicle electrical system'*

1.2 Place original remote control in emergency start tray.

1.3 Connect **P90999 - Porsche Tester 4**, switch on the ignition and start the diagnostic application.

1.4 Create vehicle analysis protocol (FAP) and mark it with the attribute **"Pre-VAL"**.

1.5 Activate additional coolant pump for low-temperature system (P2) via high-voltage battery 2.0 control unit (BECM).

Assessment		Action
(✓)	Additional coolant pump for low-temperature system (P2) can be activated and is working.	Function OK. Continue troubleshooting otherwise. **End of action.**
(✗)	Additional coolant pump for low-temperature system (P2) **cannot** be activated.	Continue with Step ⇒ 2.

2 Check production date of high-voltage battery 2.0.
To do this, read out the value **"Vehicle central information system (FAZIT) - identification"** from the Extended identifications menu for the high-voltage battery 2.0 control unit.

Information

Example of measured value:

- MZS-MST**25.09.23**25560144

The first 6 digits are the production date. In this example 25.09.2023.

Assessment	Action
▪ Production date of the high-voltage battery 2.0 **is 07/27/2025 or later**	Continue troubleshooting otherwise. **End of action.**
▪ Production date of the high-voltage battery 2.0 **is 07/26/2025 or earlier**	**Check signal line for additional coolant pump for low-temperature system (P2)** Continue with. ⇒*Technical Information '270689A4 Check signal line for additional coolant pump for low-temperature system (P2)'*

Check signal line for additional coolant pump for low-temperature system (P2)

Work Procedure: 1 Observe general warning notes for working on the high-voltage vehicle electrical system.
⇒*Workshop Manual '2X00INB2 General warning notes for working on the high-voltage vehicle electrical system'*

2 Perform deactivation of high-voltage system.
⇒*Workshop Manual '277583A1 Deactivation/start of the high-voltage system'*

3 Complete the documentation.
Procedure, see: ⇒*Workshop Manual '2775INA4 Test log: Verifying isolation from the power supply'*

Information

The following points must be observed to expose the high-voltage battery:

- Do not disconnect high-voltage lines
- Do not disconnect cooling hoses

4 Expose high-voltage battery 2.0
Procedure see: ⇒ *Workshop Manual '270819A8 Removing and installing high-voltage battery 2.0'*

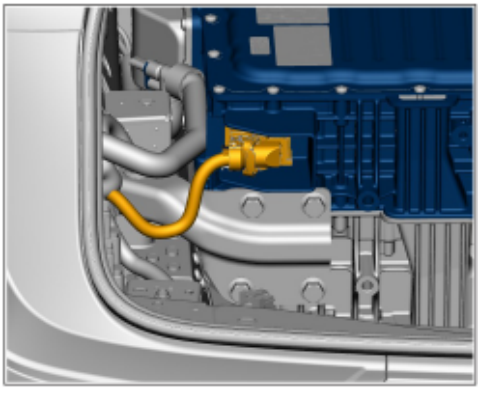
Information

To expose the additional coolant pump for the low-temperature system (P2), the following points must be observed:

- Only the electric plug connection must be made accessible
- Start catalytic converter **does not** have to be removed
- Do not disconnect cooling hoses

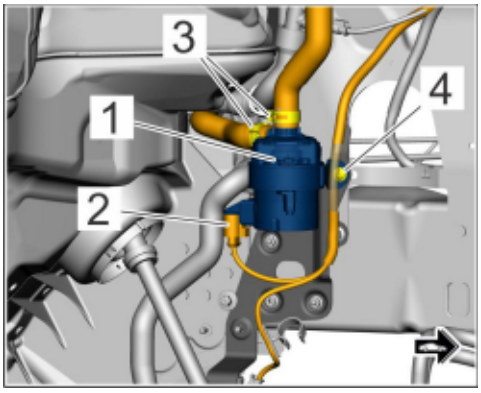
5 Expose additional coolant pump for low-temperature system (P2).
For vehicles with V6 engine (M-no. T9I):
⇒ *Workshop Manual '194519 Remove and install additional coolant pump (low-temperature system P2) - 0K3,T9I'*
For vehicles with V8 engine (M-no. TB5):
⇒ *Workshop Manual '194519D7 Remove and install additional coolant pump (low-temperature system P2) - 0K3,TB5'*

6 Release and disconnect electric plug connection on high-voltage battery 2.0



Electric plug connection on high-voltage battery 2.0

7 Unlock and disconnect electric plug connection of additional coolant pump for low-temperature system P2 ⇒ *Additional coolant pump for low-temperature system P2* **-2-**.



Additional coolant pump for low-temperature system P2

8 Perform resistance test on signal line for additional coolant pump for low-temperature system (P2).

8.1 Set the multimeter to "resistance test".

8.2 Position measuring tip 1 of multimeter on electric plug connection for high-voltage battery **pin 6 (blue / green)**.

8.3 Position measuring tip 2 of multimeter on electric plug connection for additional coolant pump for low-temperature system P2 **pin 2 (blue / green)**.

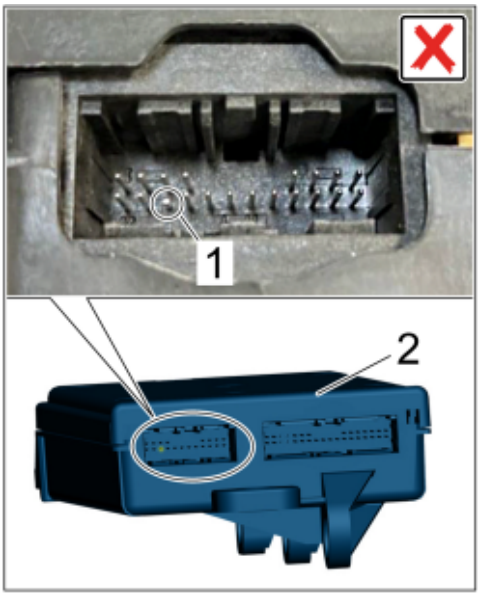
9 Assess measured value.

Assessment		Action
(✓)	Resistance of the signal line is normal or unremarkable (< 0.5 Ω).	**Signal line OK** ▪ Connect electric plug connection for additional coolant pump for low-temperature system P2, until it locks securely. ▪ Continue with ⇒ *Technical Information '194519D7 Check high-voltage battery 2.0 control unit'*.
(✗)	Resistance of the signal line is too high or signal line is interrupted (> 0.5 Ω / O.L.).	**Signal line damaged or interrupted.** Locate damage, repair line and then complete the vehicle again. **End of action.**

Checking high-voltage battery 2.0 control unit and replacing if necessary

Work Procedure: 1 Remove high-voltage battery 2.0 control unit.
⇒ *Workshop Manual '279419A3 Removing and installing high-voltage battery 2.0 control unit'*

2 Check **plug contact pin 18** ⇒*Plug contact for high-voltage battery 2.0 control unit* **-1-**for damage.



Plug contact for high-voltage battery 2.0 control unit

Assessment		Action
(✓)	Plug contact is **not** damaged.	**High-voltage battery 2.0 control unit OK** Continue troubleshooting otherwise. **End of action.**
(✗)	Plug contact is damaged.	**High-voltage battery 2.0 control unit faulty.** Exchange high-voltage battery 2.0 control unit. ⇒*Workshop Manual '279455A4 Replace high-voltage battery 2.0 control unit'* Then complete the vehicle again. **End of action.**

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
19450140	Check additional coolant pump low-temperature system, (activation)	
19450141	Check additional coolant pump low-temperature system (activation, read measured values)	

APOS	Labor operation	I No.
19450142	Check additional coolant pump low-temperature system (signal line, V6)	
19450143	Check additional coolant pump low-temperature system (signal line, V8)	
27940140	Check control unit high-voltage battery (V6, Cayenne 9YA)	
27940141	Check control unit high-voltage battery (V6, Cayenne 9YB)	
27940142	Check control unit high-voltage battery (V8, Cayenne 9YA)	
27940143	Check control unit high-voltage battery (V8, Cayenne 9YB)	
27945527	Replace high-voltage battery control unit	

PCSS encryption:

Location (FES5)	27080	High-voltage battery
Damage type (SA4)	4011	Loose contact, contact fault