

Vehicle Electrical System Battery Discharged - It is Not Possible to Start or Unlock Vehicle (245/24)

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

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

Equipment: **Head-Up Display (KS1)**

Concerns: **Windshield projection control unit (Head-up display)**

Information: **The customer complains that the vehicle does not open or cannot be started.**
A discharged vehicle electrical system battery is detected in the workshop.

Cause: The vehicle electrical system battery can be discharged by a continuously active head-up display control unit.



Information

No fault memory entries regarding the complaint are stored in the fault memory of the head-up display control unit.

Action: For an existing customer complaint, check the measured value described in this Technical Information (TI) and reprogram the head-up display control unit with the PIWIS tester if necessary.



Information

The minimum programming requirement is the PIWIS Tester software release **43.300.015** (or higher).

Required tools

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

Check measured value and reprogram head-up display control unit if necessary

- Work Procedure:
- 1 Connect and switch on the battery charger.
⇒ *Workshop Manual '270689 Charging battery/vehicle electrical system'*
 - 2 Place the original remote control in the emergency start tray.
 - 3 Connect the **P90999 - PIWIS Tester 4**, switch on ignition and start the diagnostic application.

- 4 Create vehicle analysis log (VAL).
- 5 In the vehicle analysis log (VAL), select the '**Gateway**' control unit and check the last event under measured value '**Life_cycle_data_66 - ECU_1**'.

Assessment	Action
CALL ID 27 is not stored as the last event.	The complaint described in this Technical Information is not caused by a continuously active head-up display control unit. - Continue troubleshooting further. End of action.
CALL ID 27 is stored as the last event.	Software for head-up display control unit out of order . Continue with Step ⇒ 6.

- 6 Re-programme head-up display control unit.

The basic procedure for control unit programming is described in the Workshop Manual and must be followed. ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software release:	43.300.015 (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:	E3H9D
Programming sequence:	Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence. The head-up display control unit is reprogrammed during the programming sequence. The control unit is then re-coded automatically . 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 releases is then performed.
Programming time:	Programming takes up to 35 minutes , depending on equipment.
Software release programmed during this action:	<ul style="list-style-type: none"> ▪ Head-up display control unit with Hardware version: 07 Software version: 2401 (or higher) <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.

- 7 Read out and delete all control unit fault memories.
- 8 Exit the diagnostic application, switch off the ignition and disconnect **P90999 - PIWIS Tester 4** from the vehicle.
- 9 Switch off and disconnect the battery charger.
⇒ *Workshop Manual '270689 Charge vehicle electrical system battery'*

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
90862545	Re-programming head-up display control unit	

PCSS encryption:

Location (FES5)	90860	Control unit for head-up display
Damage type (SA4)	4034	automated on/off switch

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