

**Complaint - Battery Low and Yellow Warning Message "Battery low \_ Service necessary" in instrument cluster: Re-programming gateway control unit (battery sensor) (168/18)**

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

Model Year: **As of 2018 up to 2019**

Subject: **Gateway control unit (battery sensor)**

Information:

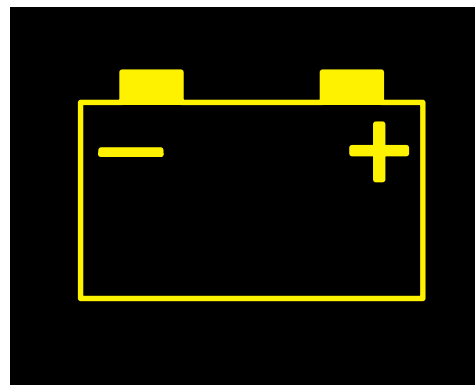


**Information**

**In the event of a customer complaint** about a **flat battery** and if the yellow warning message **"Battery low \_ Service necessary"** (⇒ *Yellow warning message: Battery low \_ Service necessary*) appears in the instrument cluster, the following points must be observed before doing any other work:

- A chain of different factors can cause an increased closed-circuit current (greater than 1.0 A) after charging, see also ⇒ *Technical Information '944900 Complaint - Battery flat and specific fault code in front-end electronics control unit: Observe specified procedure (154/18)'*.
- A **battery sensor software version lower than "1000"** can bring about this symptom.
- In the event of a customer complaint and if the **battery sensor software version in the gateway control unit is lower than "1000"**, **re-program** the **gateway control unit** as described in the "Procedure" section.

Replacing components will **not** resolve the problem.



*Yellow warning message: Battery low \_ Service necessary*

Date of Introduction: A control unit with adapted software has been used during production since April 12, 2018 or as of chassis number 9Y 2KD A9 5209.

- Tools:
- **9900 - PIWIS Tester 3** with software **version 38.000.010** (or higher) installed
  - **Battery charger** with a current rating of **at least 90 A**.

Work  
Procedure:

**NOTICE****Voltage drop**

- Risk of irreparable damage to control unit
  - Risk of damage to control unit
  - Fault entries in the control unit
  - Coding in the control unit is aborted
  - Malfunctions in control unit, even during programming
- ⇒ Before disconnecting the control unit, switch off ignition and remove ignition key.
- ⇒ Make sure that the power supply is not interrupted during programming.
- ⇒ Connect battery charger/power supply - Suitable for AGM Type batteries, recommended current rating of 90A fixed voltage 13.5V to 14.5V.

1

**Preliminary work:**

- 1.1 Connect a battery charger with a current rating of **at least 90 A**.
- 1.2 Switch on the ignition.

**NOTICE**

**Coding will be aborted if the WLAN connection is unstable.**

- An unstable WLAN connection can interrupt communication between PIWIS Tester 3 and the vehicle communication module (VCI). As a result, coding/programming may be aborted.
- ⇒ During control unit coding/programming, always connect PIWIS Tester 3 to the vehicle communication module (VCI) via the USB cable.
- 1.3 **9900 - PIWIS Tester 3** with software version **38.000.010** (or higher) installed must be connected to the vehicle communication module (VCI) via the **USB cable**. Then, connect the communication module to the vehicle and switch on the PIWIS Tester.
  - 1.4 On the PIWIS Tester start screen, call up the ⇒ **'Diagnostics'** menu.  
The diagnostic application is then started and the control unit selection screen is populated.

2 **"Gateway" control unit ⇒ re-program:**



**Information**

The procedure described here is based on the **9900 - PIWIS Tester 3** test software version **38.000.010**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.

A discrepancy may arise with later software versions for example.

Menu	⇒	Control unit/Function	⇒	Action	⇒	confirm/execute
•		Instructions/information or		•	⇒	Result/consequence of action
2.1		Control units 'Overview'		'Additional menu'		call up •F7"
2.2	⇒	<b>Follow instructions:</b>				
		• Create Vehicle Analysis Log (VAL) if necessary and				•Yes" /•No" /
		• carry out any campaigns that are available for the vehicle.				•F12"
2.3				'Campaign'		select •F12"
2.4		Campaign number		Value: 'L5V4A'		enter •F12"
<p>Read and follow the <b>information and instructions on the PIWIS Tester</b> during the guided programming sequence. Then press •&gt;&gt;" to continue.</p> <p>During the programming sequence, the control unit is re-programmed and then re-coded automatically if necessary.</p> <p><b>Do not interrupt programming and coding.</b></p> <p>Once control unit programming - and coding if necessary - is complete, you will be prompted to switch the ignition off and then back on again after a specified waiting time.</p>						
2.5		Control units 'Overview'		Gateway		select
2.6		'Extended identifications'				select
		<b>Battery sensor software version</b> programmed during this campaign				<b>1000</b>
<p>If programming is not completed successfully (error message "Programming unsuccessful"), programming must be <b>repeated</b>.</p>						

**3 Subsequent work:**

3.1 Read out and erase all fault memories.

**Information**

If there are still fault memory entries in individual control units, start the engine briefly and then switch it off again. Wait for approx. 10 seconds before switching the ignition on again and re-establish the connection between the PIWIS Tester and the vehicle. Then read out and erase the fault memories of the affected control units again separately.

- 3.2 Switch off ignition.
- 3.3 Disconnect the PIWIS Tester from the vehicle.
- 3.4 Calibrate the battery by charging it fully.  
⇒ *Workshop Manual '2X00IN Trickle charging 12-volt lithium-ion battery'*
- 3.5 Switch off and disconnect the battery charger.

**End** of action required.

Invoicing: The work involved is invoiced under the labor operation:

APOS	Labor operation	I No.
90352500	Programing gateway control unit	

For invoicing and documentation using PQIS, enter the following coding:

<b>Location (FES5)</b>	27060	Vehicle electrical system battery
<b>Damage type (SA4)</b>	1611	does not function

References: ⇒ *Technical Information '944900 Complaint - Battery flat and specific fault code in front-end electronics control unit: Observe specified procedure (154/18)'*  
⇒ *Workshop Manual '2X00IN Trickle charging 12-volt lithium-ion battery'*

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