

Various PCM Central Computer Fault Corrections: Re-Programming PCM Main Computer (65/23)

Change Overview

Version	Date	Change
0	07/26/2023	• First publication
1	01/19/2024	• Update of PIUS part numbers
2	05/17/2024	• Update of Cause

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

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

Concerns: **Control unit for central computer (PCM)**

Cause: **The PCM cannot be switched on, fails intermittently during vehicle operation or starts up again independently. Possible error patterns:**

- PCM screen remains black
- There is no sound output and hands-free device is faulty
- Navigation display fails
- The PCM can only be started again after some time or starts up again on its own

On vehicles with BOSE® Surround Sound System (M-No. 9VL) or Burmester® 3D High-End Surround Sound System (M-No. 9VJ), the sound settings in the main menu >> Media >> Bose/Burmester may also be lost after bus rest:

- No longer ticked on the "Heights and depths" settings
- No longer ticked on the settings "Balance and fibre"
- Setting the bars to "0"

Real Time Traffic display does not show traffic jams in the text in the route monitor.

Action: In the event of a complaint, re-code the central computer (PCM) with the latest PIWIS Tester software version.



Information

The minimum requirement for coding is the PIWIS Tester software version **42.500.020**.

Required tools

Tools:

- **P90999 - P90999 - PIWIS Tester 4**
- Battery charger with a current rating of **at least 90 A**, e.g. **VAS 5908 - battery charger 90 A**
- **USB storage medium Type A+C 32 GB (for PCM update)**, Part-No. V04014999WW000, already available at the Porsche Center

Overview of PCM update**Information**

The central computer (PCM) software update is performed using a USB storage medium. The software release that is specific to each region must be **downloaded** using the software tool **PiUS** (Porsche integrated Update Service) and must be **installed** on a blank USB storage medium.

Pay particular **attention** to the following:

- For this PCM software update, a USB storage medium must be used.
- To use the software tool, **one** blank or re-writable USB storage medium is required for **each** individual software.
- The software available in PiUS must **only** be used in accordance with the instructions provided in a Technical Information published for this purpose.

The software listed here may **only** be used for the action **described here**. Damage to the central computer cannot be ruled out if the software is used on other vehicles.

You will find further information on installation and use for the PiUS software tool in the PPN portal under ***PiUS (Porsche integrated Update Service) goes live***.

Overview:

Part No.	Designation – Region	Vehicle allocation
9Y2909000R	USB storage medium for PCM update – North America – Mexico	I-No. ER3 / ER4

Re-programming central computer (PCM) control unit



Information

Before starting programming, particular attention **must** be paid to the following:

- Switch off the charger off and on once; the battery charger display **must** be off before starting it again, because the battery charger automatically switches to trickle charge after 5 hours (default setting in the charger).
- The charger must be set to **14.6 V** charging voltage and operated in **charging mode**.
- Vehicles with a PVTs contract must be activated for Service mode.
- **The PIWIS Tester must not be charged using the cigarette lighter!**



Information

If Privacy mode is not active, programming may be aborted, resulting in a defect in the central computer (PCM).



Information

If control units are found to have faults that are **not** caused by control unit programming, these must first be **found** and **corrected**.

- Work Procedure: 1 Unless otherwise already done, prepare USB storage medium with the software required for the PCM central computer depending on the country variant in accordance with the above overview.
 ⇒ *Technical Information 'Overview of PCM update'*
- 2 The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual 'Basic Instructions and Procedure for Control Unit Programming Using the PIWIS Tester'*.
- 3 Select Guest account from the central display (PCM) and activate **Privacy mode** (available in some countries).
- 4 Re-program main computer (PCM).

For specific information on control unit programming during this campaign, see the table below.

Required PIWIS Tester software version:	42.400.030 (or higher)
Type of control unit programming:	<p>PCM central computer update using PIWIS Tester start code to start the guided programming sequence. The PCM application software is loaded via USB storage medium.</p> <p>In the control unit selection ('Overview' menu) select the PCM central computer control unit and select the 'Service/repairs' menu.</p> <p>Select the 'Install software update' function and press •F12" ('Next') to perform the software update.</p>
Programming code:	E3B5S
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 versions starts once programming and coding is complete.</p>
Required software (part number and software version):	<ul style="list-style-type: none"> • North America/Mexico (M-No. ER3/ER4): 9Y2909000R / 3882
Programming time (up to):	25 minutes
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 "Fault finding"</i>
Procedure in the event of a termination in the control unit programming:	<p>Repeat control unit programming by restarting programming.</p> <p>Additional instructions for aborted programming ⇒ <i>Technical Information '9X00IN Additional information if programming is aborted'</i></p>
Integration test procedure:	<ul style="list-style-type: none"> • The integration test shows a green result regardless of this update

- 5 Read out all **fault memories**, process and delete existing faults if necessary.
- 6 Press •F3" to start the integration test in the control unit selection.
All affected control units should now be successfully re-programmed or checked in the control unit overview and their status.



Information

If a deviation in the integration test is still indicated despite programming being carried out, this must be repeated. If the deviation persists, contact Technical Support.

- 7 End the diagnostic application. Switch off the ignition. Disconnect the Tester from the vehicle.
- 8 Set battery charger back to a charge voltage of 14.4 volts.

Additional instructions if programming is aborted



Information

If individual programming steps or reworking could not be carried out correctly, see Workshop Manual for the basic procedure for control unit programming using the PIWIS Tester → *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester – section on "Fault finding"*

In the event of a fault, logging must **always** be created during programming using •Ctrl" and •L" using the PIWIS Tester.

Notes:

Control unit:	Situation:	Action:
Cancelling individual control units:	One or more control units cannot be programmed or can no longer be accessed	<ul style="list-style-type: none"> • Check on whether the control unit can be accessed using the PIWIS Tester or if bus idle does not have to be carried out • Control unit still not accessible → Remove fuse for control unit → Ignition on → Ignition off → Re-insert fuse • Control unit still not accessible → Disconnect battery overnight • Check whether the control unit is accessible
Central computer (PCM)	The central computer freezes while loading	<ul style="list-style-type: none"> • Starting programming again • Performing PCM factory reset using the guided PIWIS Tester procedure

Central computer (PCM)	The central computer control unit cannot be accessed	<ul style="list-style-type: none"> Pulling out fuse for central computer control unit -> Ignition on -> Ignition off -> Re-insert fuse
Central computer (PCM)	Programming of the central computer (PCM) aborts when Fault 33 is detected	<ul style="list-style-type: none"> Fault 33 is displayed in the central computer display during programming Start the update in the Developer menu on the central computer (PCM). The update may only be started from the Developer menu in this case because the PCM is already in the Developer menu If the update still cannot be performed -> replace central computer (PCM)
Central computer (PCM)	No start of programming	<ul style="list-style-type: none"> Programming is started via the additional menu and not in the central computer (PCM) control unit under Service / repairs as described in the TI
Central computer (PCM)	Programming is not started or programming is interrupted	<ul style="list-style-type: none"> For other topics that are not listed in the TI, a PRMS ticket must be created before replacing the PCM system

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
91522520	Programming central computer	

PCSS encryption:

Location (FES5)	91520	Central computer
Damage type (SA4)	1614	function not as per specification

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