

WNT1 - Re-Programming Connect Control Unit and Central Computer (PCM) (Cluster 37) (Workshop Campaign)

Important: **CRITICAL WARNING** -This campaign includes steps where control unit(s) in the vehicle will be programmed with the PIWIS Tester. The vehicle voltage must be maintained between 13.5 volts and 14.5 volts during this programming. Failure to maintain this voltage could result in damaged control unit(s). Damage caused by inadequate voltage during programming is not a warrantable defect. The technician must verify the actual vehicle voltage in the PIWIS Tester before starting the campaign and also document the actual voltage on the repair order.

Model Year: **2022**

Model Line: **Panamera (971)**

Concerns: **Connect control unit and central computer (PCM)**

Cause: **Optimized software is available for the Connect control unit and central computer (PCM) control unit.**

- Measures:
- Depending on the booked scope, the Connect control unit and the central computer (PCM) control unit must be re-programmed with the **latest** PIWIS Tester software version.
 - Minimum requirement: Version **42.000.030**
 - Replace Owner's Manual in the on-board folder in the vehicle with an updated version.

Checklist: For better clarity, a checklist was created as an aid for carrying out the campaign. This does **not** replace TI.
The checklist does not have to be attached to the job line in PCSS.
For checklist, see ⇒ *Technical Information 'Checklist'*

Affected Vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information).

Required tools

- Tools:
- **9900 - PIWIS Tester 3/ 4**
 - Battery charger with a current rating of **at least 90 A**, e.g. **VAS 5908 battery charger 90A**
 - **USB storage medium Type A+C 32 GB (for PCM update)**, Part No. V04014999WW000
 - **USB storage medium, type C (for onboard Owner's Manual update)**, e.g. Part No. V04014999WW000

Re-programming Connect control unit and central computer (PCM) (Cluster 37)



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.

Work
Procedure:



Information

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

- The charger must be switched off and on once; the battery charger display **must** be off before starting it again, because the battery charger automatically switches to trickle charging after 5 hours (default setting in the charger).
 - Set charge voltage to **14.6 volts**.
 - Operate 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!**
- 1 Create Vehicle Analysis Log (VAL) using the PIWIS Tester. Mark the vehicle analysis log you have just created with the attribute "**Pre-VAL**" and after carrying out the campaign, return it using the PIWIS Tester.

If **Scope 1** is assigned to the vehicle, continue with **Step 2**.

If **Scope 6** is assigned to the vehicle, continue with **Step 3**.
 - 2 Program Connect control unit.

If **Scope 6** is assigned to the vehicle, continue with **Step 4**.

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

Required PIWIS Tester software version:	42.000.030 (or higher)
Type of control unit programming:	Control unit programming using the ' Automatic programming ' function of the Connect control unit.

Programming sequence:	<p>The basic procedure for control unit programming is described in the Workshop Manual ⇒ <i>Workshop Manual 'Basic Instructions and Procedure for Control Unit Programming Using the PIWIS Tester'</i>.</p> <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 as soon as programming and coding is complete.</p>
Programming time (up to):	25 minutes
Control units programmed in this campaign:	<ul style="list-style-type: none"> • Connect control unit
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>

- 3 Select Guest account from the central display (PCM) and activate **Privacy mode** (available in some countries).



Information

If Privacy mode is not active, programming may be aborted, resulting in a defect in the central computer (PCM). Central computers that are replaced as part of the workshop campaign are checked by Porsche AG. If private mode was not set in the central computer before starting programming, the costs will be re-debited.

- 4 Re-program main computer (PCM).



Information

Intermittently, there is a possibility that the mobile phone will be lost. If this is the case, the customer must be informed when returning the vehicle.

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

Prepare USB stick with the **required** software (depending on country version).

Overview of the software to be used for the central computer (PCM): See ⇒ *Technical Information '9X00IN overview of PCM update'*

Required PIWIS Tester software version:	42.000.030 (or higher)
Type of control unit programming:	Programming with USB drive
Programming code:	G2B5S
Programming sequence:	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>In the control unit selection ("Overview" menu) select the PCM central computer control unit and select the "Maintenance/repairs" menu.</p> <p>Select the 'Install software update' function and press •F12" ('Next') to perform the software update.</p> <p>Do not interrupt programming and coding.</p> <p>A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.</p> <p>⇒ <i>Workshop Manual '9X00IN Programming data update on central computer'</i></p>
Programming time (up to):	25 minutes
Control unit programmed in this campaign:	<ul style="list-style-type: none"> Control unit for central computer (PCM)

<p>Procedure in the event of error messages appearing during the programming sequence:</p>	<p>⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i></p>
<p>Procedure in the event of a termination in the control unit programming:</p>	<p>Repeat control unit programming by restarting programming. Additional instructions for aborted programming ⇒ <i>Technical Information '9X00IN Additional information if programming is aborted'</i></p>

5 Play electronic Owner's Manual. For more information, see ⇒ *Workshop Manual '9X00IN Diagnostic system: Performing vehicle handover'* (Install Owner's Manual section)

6 Read out all **error memories**, process and delete existing errors if necessary.



Information

If control units are found to have faults that are **not** caused by control unit programming, these must first be **found** and **corrected**. This work **cannot** be invoiced under the workshop campaign number.

7 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.

8 Create Vehicle Analysis Log (VAL) using the PIWIS Tester.

Mark the vehicle analysis log you have just created with the attribute **"Post-VAL"** and after carrying out the campaign, return it using the PIWIS Tester.

9 Exit the diagnostic application. Switch off ignition. Disconnect the Tester from the vehicle.

10 Set battery charger back to a charge voltage of 14.4 volts.



Information

An excessively high charge voltage can lead to battery defects in other model lines.

11 Replace Owner's Manual in the vehicle.

For an overview of the Owner's Manuals, see: ⇒ *Technical Information '9X00IN Overview of Order Numbers for Driver's Manual'*



Information

The vehicle may **only** be handed over to the customer with the new Owner's Manual.

12 Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing

Scope 1:

Labor time:

Re-programming Connect control unit and central computer (PCM)

Labor time: **166 TU**

Includes: Connecting and disconnecting battery charger
 Connect and disconnect PIWIS Tester
 Playing electronic Owner's Manual
 Reading out and deleting fault memories
 Create Vehicle Analysis Logs (VALs) before and after the campaign

Required materials:

WNT10000001	Owner's Manual*	1 piece
WNT10000002	Shipping costs**	1 piece

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty invoicing, enter the Part No. **WNT10000001** with the designation "**Owner's Manual**" as **accessories** costing **\$ 0.01**.

** **If you incur shipping costs** when ordering the Owner's Manual, please invoice these costs under the Part No. **WNT10000002**, with the designation "**Shipping costs**" as an additional part. Maximum cost **\$ 5.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage code WNT1 066 000 1**

Scope 6:

Labor time:

Re-programming main computer (PCM)

Labor time: **120 TU**

Includes: Connecting and disconnecting battery charger
 Connect and disconnect PIWIS Tester
 Playing electronic Owner's Manual
 Reading out and deleting fault memories
 Create Vehicle Analysis Logs (VALs) before and after the campaign

Required materials:

WNT10000001	Owner's Manual*	1 piece
WNT10000002	Shipping costs**	1 piece

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty invoicing, enter the Part No. **WNT10000001** with the designation "**Owner's Manual**" as **accessories** costing **\$ 0.01**.

** If you incur **shipping costs** when ordering the Owner's Manual, please invoice these costs under the Part No. **WNT10000002**, with the designation "**Shipping costs**" as an additional part. Maximum cost **\$ 5.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage code WNT1 066 000 1**

Overview of PCM update



Information

The central computer (PCM) software update is performed using a SD storage card. The software version 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 SD storage card.

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 measure **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
9Y2909000M	USB storage medium for PCM update – North America – Mexico	I-No. ER3 / ER4+KDO

Overview of Order Numbers for Owner's Manual



Information

From now on, **only** use the Owner's Manuals with the order number WKD 971 01 y xx **22** for the **vehicles assigned to the campaign**. These reflect the technical status of the vehicles following the software update.

The order numbers for the various language versions of the updated Owner's Manual are provided in the following table. You can order the Owner's Manual in the quantity you need using the standard ordering process.



Information

A blank or re-writable USB storage medium is additionally required for installation of the onboard Owner's Manual.

Parts Info:

Order No.	Designation - Language	Ordering via	Onboard Owner's Manual
		Polaris (PPL)	
WKD97101B2122	Owner's Manual - English US	■	■
WKD97101B3122	Owner's Manual - French (Canada)	■	■

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 required:
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
Error message DoIP switchover:	There is no DoIP switchover	<ul style="list-style-type: none"> • Switch off VCI and try again (do not operate VCI via WiFi) • Use a different VCI • Use another PIWIS Tester • Check PINs on OBD socket • Check fuses of the OBD socket • Check Ethernet lines between OBD socket and gateway (resistance measurement)
Central computer (PCM)	The central computer freezes while loading	<ul style="list-style-type: none"> • Start programming again • Perform 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)	During the tester procedure, a message appears reporting that the software is already up-to-date	<ul style="list-style-type: none"> • In the Tester, 2020 is displayed as the vehicle type in the top line next to model year • Re-write vehicle order using PIWIS Online
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 Maintenance / 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
Log in to PPN	Electronic Owner's Manual cannot be installed due to a faulty Internet connection	<ul style="list-style-type: none"> • Always proceed as described in the work procedure! • After the PCM update, the diagnostics must be completely closed before the electronic Owner's Manual can be installed using the PIWIS Tester

Connect	Active fault B200000 (020018) in Connect control unit after carrying out the campaign	<ul style="list-style-type: none"> Perform "Deactivate flight mode" procedure in the Connect control unit twice in quick succession(There must be no pause between them) Follow the Tester instructions; sufficient reception is required for deactivating
Connect	Programming will be aborted on the VTS alarm	<ul style="list-style-type: none"> If programming of the Connect control unit is aborted with the feedback "Active VTS Alarm", a PRMS ticket must be sent to TCC Connect Support.

Checklist

Checklist:

Work step:	Completed:
The checklist is an aid for carrying out the campaign and does not replace the TI information.	
1. Owner's Manual available? The campaign must not be carried out without the Owner's Manual.	
2. Charger set to 14.6V and charging mode?	
3. Internet connection for PIWIS Tester active?	
4. Vehicle Analysis Log (VAL) created?	
5. Connect control unit programmed? (depending on the scope)	
6. Select Guest account from the central display (PCM) and activate Privacy mode ?	
7. Central computer control unit programmed? Read the warnings displayed on the Tester.	
8. Electronic Owner's Manual installed?	
9. Fault memory deleted?	
10. Vehicle Analysis Log (VAL) created?	
11. Is the battery charger set to a charge voltage of 14.4 V?	

12. Owner's Manual replaced?	
13. Campaign entered in the Warranty and Maintenance booklet?	

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