WNK1 - Update to Software Network VR19.0.1 (Workshop Campaign)

Revision:	This bulletin replaces bulletin Group 9 141/22 WNK1, dated July 27, 2022
Model Year:	**2022**
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 Series:	**Taycan (Y1A/Y1B/Y1C)**
Concerns:	**Software update (software version VR19.0.1)**
Information:	**Software optimizations are available for various control units for the Taycan.**
	An overview of the new features that will be implemented with the software update can be found in the appendix under ⇒ *Technical Information 'Overview of new features of the software update'.*
	Campaign Exception for Punch Time Requirements: ANA6, WNJ8, and WNK1
	PCNA will make an exception to warranty policy regarding the necessary time keeping procedures when performing the following campaigns: ANA6, WNJ8, and WNK1.
	Though warranty policy guidelines state that no technician may be punched on more than one R.O. at the same time, an exception will be made for the ANA6/WNJ8/WNK1 campaigns. Due to the extensive programming time necessary a technician may perform multiple ANA6, WNJ8, and WNK1 campaigns at one time, **as long as there is a separate identifiable punch for each on the respective repair order and the total number of campaigns being performed at one time does not exceed 3.** The exception will be made so that full "active participation time" does not need to be documented for these 3 campaigns only.
Measures:	• Reprogram the instrument cluster with the **latest** PIWIS Tester software version. • Minimum requirement: Version **41.200.010**
Checklist:	Due to the high number of **incorrect** programming steps carried out as part of the last software update (VR12.1.1), a checklist was created to improve the overview of the work to be carried out. The checklist **must be** completed and signed and attached to the PQIS quality line in the PCSS. For checklist, see ⇒ *Technical Information 'Checklist'*

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

Required tools

Tool:
- **9900 - PIWIS Tester 3**
- 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

Software update (software version VR19.0.1)

Work Procedure:

ℹ️ Information

Before starting programming, the battery charger **must always be**:

- **Switched off and back on.** Switch it off, allow time for the charger display to go blank, then switch it back on. This is to reset a timer internal to the battery charger itself. There is a default setting in the charger which can cause it to automatically switch from the current Mode to Trickle Charging. Switching it off and on again ensures the charger does not automatically fall back to trickle charging mid-programming.

- Set charge voltage to **14.8 volts**.

- In **Supply Mode**.

1 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'*.

ℹ️ Information

An **active** Internet connection with the PIWIS Tester must be ensured.

It is **necessary** to enroll the technician using the PIWIS Tester.

Vehicles with a PVTS contract must be activated for Service mode to prevent unwanted theft detection during the campaign.

The PIWIS Tester must not be charged using the cigarette lighter!

2 After the backup documentation process, the integration test is started automatically. The result must first be **ignored**.

3 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.

4 Update various control units to software version VR19.0.1 **(Sequence 1)**.

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

Required PIWIS Tester software version:	**41.200.010** (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:	**J1K1T**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (up to):	• MY 2022 / **90 minutes** • The first interaction by the technician is required after about 30 minutes. The rest of the programming sequence runs through to the end **without** any necessary interaction.
Control units programmed in this campaign:	• See ⇒ *Technical Information 'overview of control units VR19.0.1.'*
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"'.*
Procedure in the event of a termination in the control unit programming:	**Continue the campaign sequence to the end, then carry out the integration test again when the test is complete and start programming from the integration test.** Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional information if programming is aborted'*

5 When programming is complete, backup documentation including the integration test is done again. The result must first be **ignored** because this sometimes displays control units that are displayed as faulty despite programming.

To check this, the integration test **must** be started again on the start page by pressing the •F3" button.

If this results in a discrepancy here, the relevant control unit **must** be re-programmed. The central computer (PCM) control unit must **not** be programmed initially because this is programmed in sequence 2.

6 The battery charger **must be** switched off and on **completely** once **before** sequence 2 due to the automatic switchover (trickle charging).

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

ℹ️ 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.

ℹ️ Information

Please inform the customer that all mobile phones must be re-paired following the campaign. Existing/paired mobile phones will appear in the Devices list, but must be deleted & re-paired to be functional.

Please inform the customer that Media --> Favorites have moved. Favorites are now accessed similar to all media sources. Therefore, it may be recommended to re-order the media sources to provide easy access to stored Favorites.

8

Re-program the central computer (PCM) **(sequence 2)**.

Sequence 2 may **only** be performed if sequence 1 was performed.

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

Preparing 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:	**41.200.010** (or higher)
Type of control unit programming:	Select the **PCM central computer** control unit in the control unit selection screen (**'Overview' menu**) and select the **'Maintenance/repairs'** menu. Select the **'Install software update'** function and press •F12" ('Next') to perform the software update.
Programming code:	**J1K2T**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (up to):	**10 minutes**
Control unit programmed in this campaign:	• See ⇒ *Technical Information '9X00IN overview of control units VR19.0.1.'*
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"'.*
Procedure in the event of a termination in the control unit programming:	Repeat control unit programming by restarting programming. Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional information if programming is aborted'*

9   Remove USB stick.

10   Start rework for various control units (**sequence 3**).

Sequence 3 may **only** be performed if sequences **1 and 2** have been performed.

Important Information!	
The teaching process for component protection **during the execution of sequence 3** is **different** between model years!	
Model year	Control unit required for execution
2022	**Rear-end electronics (BCM2)**

Required PIWIS Tester software version:	**41.200.010** (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:	**J1K3T**
Programming sequence: **The instructions for selecting the required control unit for teaching component protection must always be observed!**	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (up to):	**approx. 25 minutes**
Control units programmed in this campaign:	• See ⇒ *Technical Information '9X00IN overview of control units VR19.0.1.'*
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"'.*
Procedure in the event of a termination in the control unit programming:	Repeat control unit programming by restarting programming. Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional information if programming is aborted'*

ℹ️ Information
Important Information!

- Resetting the charging profiles is **only** necessary if a **high-voltage charger (OBC 22 kW)** is installed in the vehicle.

- As soon as the control unit is selected, the left side of the PIWIS Tester shows whether the charger is 11 kW or 22 kW.

- If the charging profiles are **not** reset, there is a possibility that the Plug and Charge function will **not** be available.

11

Reset charging profiles for high-voltage charger **(OBC 22 kW)**.

11.1   Select high-voltage charger (OBC 22 kW) control unit.

11.2   Select **Drive links/checks**.

11.3   Select **Load profile, factory setting**.

11.4   Start the routine with •F8" .

12   Perform direct rework **in the** vehicle.

12.1   Re-teach the handbrake by pressing the button in the vehicle.

12.2   Engage gear.

12.3   Retract extended rear spoiler.

12.4   Standardize side windows.

ℹ️ Information
The wheel electronics must be taught during the test drive and must **not** be carried out by the technician.

13   Remove the **PIWIS Tester (VCI)** from the vehicle and end the **diagnosis** process.

13.1   Lock the vehicle.

13.2   Establish bus idle for **at least** 10 minutes.

13.3   After bus idle, re-connect the PIWIS Tester (VCI) and start the diagnosis again.

14   Electronic operating instructions. For more information, see ⇒ *Workshop Manual '9X00IN Diagnostic system: Performing vehicle handover'*(Install Onboard Owner's Manual section).

15   Read out all **fault memories**, process and delete existing faults if necessary.

ℹ️ 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.

16 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.

ℹ️ 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.

17 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.

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

19 Switch off and disconnect the battery charger.

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

ℹ️ Information

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

21 Attach the completed checklist to the PQIS quality line. ⇒ *Technical Information '9X00IN Introduction'*

22 Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing

Campaign Exception for Punch Time Requirements: ANA6, WNJ8, and WNK1

PCNA will make an exception to warranty policy regarding the necessary time keeping procedures when performing the following campaigns: ANA6, WNJ8, and WNK1.

Though warranty policy guidelines state that no technician may be punched on more than one R.O. at the same time, an exception will be made for the ANA6/WNJ8/WNK1 campaigns. Due to the extensive programming time necessary a technician may perform multiple ANA6, WNJ8, and WNK1 campaigns at one time, **as long as there is a separate identifiable punch for each on the respective repair order and the total number of campaigns being performed at one time does not exceed 3.** The exception will be made so that full "active participation time" does not need to be documented for these 3 campaigns only.

Scope 1:

Labor time:

Update software for various control units   Labor time: **295 TU**
 	
Includes: Connecting and disconnecting battery charger
           Connect and disconnect PIWIS Tester
           Update various control units to software version VR19.0.1
           (Sequence 1)
           Update software for central computer (PCM) (sequence 2)
           Perform rework for various control units (sequence 3)
           Installing Owner's Manual in the PCM
           Perform rework in the vehicle
           Select and erasing fault memories
           Create Vehicle Analysis Logs (VALs) before and after the
           campaign
 	
⇒ **Damage code WNK1 066 000 1**

Overview of control units, VR19.0.1

Overview:

Overview of control units to be programmed VR19.0.1	
Control unit	**Programming time including coding of all control units**
Sequence 1: Combined software update of various control units (Update via PIWIS Tester) **Includes:**	Model year **2022** up to 90 minutes, depending on installation status
Gateway	approx. 2 minutes
Battery sensor	approx. 4 minutes
High-voltage charger (OBC)	approx. 5 minutes
High-voltage DC battery charger (booster)	approx. 2 minutes
HV voltage converter	approx. 4 minutes

Rear high-voltage power electronics	approx. 2 minutes
Front High-voltage power electronics Only for **4WD** vehicles	approx. 2 minutes
Rear-end electronics (BMC2)	approx. 4 minutes
Air spring chassis control	approx. 3 minutes
Air-conditioning compressor (ECC)	approx. 10 minutes
Instrument cluster	approx. 20 minutes
Head-up display	approx. 5 minutes
Engine electronics (DME)	approx. 2 minutes
Over the Air (OTA)	approx. 19 minutes
Coding of all control units	Up to 20 minutes
Sequence 2: PCM update (Update via PIWIS Tester and USB storage medium)	Model year **2022** up to 10 minutes, depending on installation status
Sequence 3: Start subsequent work for various control units (Update via PIWIS Tester)	Model year **2022** up to 25 minutes
Installing onboard operating instructions	
Teaching component protection	

Updating enabling functions	
Automatic coding of all control units	approx. 20 minutes

Back to the programming sequence for the ⇒ *Technical Information '9X00IN software update (software integrated VR19.0.1.)'*

Overview of the new features of the software update

Overview:

Function	Description The new features **depend on** the country and vehicle equipment	Model year 2021-2022
Vehicle electrical system	• The functionality of the battery management system is optimized to prevent sporadically discharged 12V batteries • Increased stability of 12V vehicle electrical system during long idle periods	■
Function on Demand	• A subsequent activation of the comfort opening/closing (KESSY) and the virtual pedal for opening the rear lid can now be activated via Function on Demand	■
Connectivity	• Longer availability of the VTS alarm	■
Assistance systems	• Higher precision of assistance systems and expansion of market-specific availability • Improved parking space detection for intelligent ParkAssist (even small parking spaces available) • Higher availability of Lane Change Assist in confusing traffic situations • Availability of Porsche Inno Drive in the markets Lithuania and Vatican • Optimization of traffic sign recognition • Extension of ParkAssist for the Lithuania market • Increased ParkAssist sensor range and better object detection	■

Diagnostics	• Increased diagnostic reliability with external access	■
Charging	• Increased charging stability during AC charging • Better availability of the plug-and-charge function	■

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Overview of PCM update

Information

The central computer (PCM) software update is performed using a USB storage medium. 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 USB storage medium.

Pay particular **attention** to the following:

- For this PCM software update, the USB storage medium USB Type A+C 32 GB with the part number V04014999WW000 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 mentioned here must **only** be used on the **vehicles assigned to the campaign**. 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 the PiUS software tool in the PPN portal under *PiUS (Porsche integrated Update Service) goes live*.

Overview:

Part No.	Designation – Region	Vehicle allocation
9J1919360M	USB storage medium for PCM update – North America – Mexico	I-No. ER3/ER4

Back to the programming sequence for the ⇒ *Technical Information '9X00IN software update (software integrated VR19.0.1.)'*

Additional instructions if programming is aborted

ℹ 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 - chapter on "Troubleshooting"*. :

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

Porsche AG programmed approx. 100 vehicles before the campaign was published as part of an internal pilot project; **not one single** control unit had to be replaced in the vehicles.

As a general rule, if programming is **aborted** during programming, programming must be continued.

The entire sequence can be started again at any time using the campaign code. The control unit that has already been programmed is skipped or programming is started via the integration test.

You will also find further information and instructions specifically for the **VR19.0.1 update** in the table below:

Work Procedure:

Control unit:	Situation:	Action required:
Cancelling individual control units:	One or more control units cannot be programmed or can no longer be accessed	• 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 • Carry out programming individually using the integration test (•F3" in the control unit overview

Error message DoIP switchover:	There is no DoIP switchover	• 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)
Head-up display:	The head-up display control unit cannot be reached	• Pulling out fuse for head-up display control unit –> Removing fuse for control unit –> Ignition on –> Ignition off –> Re-insert fuse • Carry out programming individually using the integration test (•F3" in the control unit overview
OTA control unit:	Programming aborted	• Remove fuses from the OTA control unit. Use the PIWIS Tester to check whether the OTA control unit can be reached in order to check whether the correct fuse was removed (multiple fuses installed for the OTA control unit) • Restart programming via the Integration test
Rear end electronics:	An error message appears on the PIWIS Tester when programming the rear end electronics	• There can only be **one** remote control in the vehicle; as described in the Workshop Manual ⟹ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'* this must be at the position

Central computer (PCM):	The central computer freezes while loading	• Start sequence 2 again • Perform PCM factory reset using the guided PIWIS Tester procedure
Central computer (PCM):	The central computer control unit cannot be accessed	• Pulling out fuse for central computer control unit –> Removing fuse for control unit –> Ignition on –> Ignition off –> Re-insert fuse
Log in to PPN:	Electronic Owner's Manual cannot be installed due to an faulty Internet connection	• Always proceed as described in the work instruction! • After the PCM update, the diagnostics must be completely closed before the electronic Owner's Manual can be installed using the PIWIS Tester
Component protection:	Component protection activation has failed	• Start sequence 3 again • If there is a repeated abort, perform change of terminal 30. For instructions, see: ⇒ *Workshop Manual '270619 Removing and installing vehicle electrical system battery'* • After the terminal 30 change, restart sequence 3 and select the component protection **assistance systems (zFAS)** for **model year 2020-2021** • After the terminal 30 change, restart sequence 3 and select the component protection **rear vehicle electronics BMC2** for **model year 2022**
	Fault memory entry for OTA FC control unit **Component protection active**	• Select the OTA FC control unit in the control unit overview and perform automatic programming

		• Then teach component protection again
	Activation of component protection for the control unit for external communication (connection box) has failed	• Deactivate flight mode. For procedure, see: ⇒ *Workshop Manual '903525 Deactivating flight mode'* • Then, start sequence 5 again
	Activation of component protection for assistance systems (zFAS) has failed	• Teach component protection again. For manual procedure, see: ⇒ *Workshop Manual '903555 Replacing gateway control unit'.* Select the control unit for assistance systems (zFAS) in the PIWIS Tester procedure in order to teach component protection for the control unit for assistance systems (zFAS) • Perform terminal 30 change • Enable functions. For instructions, see: ⇒ *Workshop Manual '903555 Replacing gateway control unit'* • Code all control units
Parking brake (PSM):	Parking brake position lost after coding	Read the information on the instrument cluster and follow the instructions on the central display: • Press the footbrake completely • Move selector lever to "N" and wait 5 seconds • After a waiting time of 5 seconds, apply the parking brake If the "Brake" warning light in the instrument cluster still comes

		on, perform calibration again and wait for longer
HV booster, DC/DC converter, HV heater, BMCe:	Programming aborted	If only individual control units are programmed, this can result in programming being aborted. In this case, the system must be disconnected from the power supply and the programming must be carried out again.

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Checklist

Checklist:

Work step: The checklist only refers to campaign **WNK1**. A different checklist or another campaign must **not** be used.	Comple-ted:
1. Settings are made on the battery charger?	
2. Original remote control in emergency start tray?	
3. Internet connection for PIWIS Tester active?	
4. Vehicle Analysis Log (VAL) created?	
5. Sequence 1 performed?	
6. Battery charger switched off and on before programming?	
7. Select Guest account from the central display (PCM) and activate Privacy mode?	
8. Sequence 2 performed?	
9. USB stick removed?	
10. Sequence 3 performed and **differentiated** between the **component protection tester sequence**? **Always check the TI! Different control unit selection, depending on the model years.**	
11. High-voltage charger (OBC 22 kW) installed? If **yes,** continue with Step 12. If **no,** Continue with Step 13.	
12. Factory setting for charging profiles performed, function Plug and Charge available in PCM?	
13. Rework carried out in the vehicle?	

14. Bus idle performed for 10 minutes?	
15. Electronic operating instructions installed?	
16. Fault memory deleted?	
17. Integration test performed?	
18. Result of the integration test free of faults?	
19. Vehicle Analysis Log (VAL) created?	
20. Is the battery charger set to a charge voltage of 14.4 V?	
21. Campaign entered in the Warranty and Maintenance booklet?	
VIN:	
Signature of Porsche dealer:	

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