

ANA6 Re-Programming Central Computer (PCM) (Stop Delivery / Recall Campaign)

Revision: This bulletin replaces bulletin Group 9 133/22 ANA6, dated May 10, 2023.

Model Year: **As of 2020 up to 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: **Central computer (PCM)**



Information

ANA6 must **not** be carried out **without** first carrying out AMB5/WMHO/WND4/WNF5!

Information: **Due to a possible internal software error in the central computer (PCM) control unit, the following two faults may occur on the affected vehicles:**

- The center and passenger displays as well as the touch control panel do not start immediately when readiness for operation is switched on and the screens remain black

or

- Real Top View (RTV) is displayed with a flickering image

Measures:

- Reprogram the instrument cluster with the **latest** PIWIS Tester software version.
- Minimum requirement: Version **42.250.050**
- Replace Owner's Manual in the on-board folder in the vehicle with an updated version.

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:
- **P90999- PIWIS Tester 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

Software update (software version VR19.0.1)

Work
Procedure:



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**.
 - The vehicle must be on a level surface.
 - Air suspension must be at Normal level.
 - Switching off air conditioning system.
 - Place original remote control in emergency start tray (note the position and orientation of the key remote).
 - Activate Private Mode in the PCM
- 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'*.



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:	42.250.050 (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):	<ul style="list-style-type: none"> • MY 2020-2021 / 250 minutes • MY 2022 / 120 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:	<ul style="list-style-type: none"> • See ⇒ <i>Technical Information 'Overview of control units, VR19.0.1'</i>

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>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.</p> <p>Additional instructions for aborted programming ⇒ <i>Technical Information '9X00IN Additional instructions if programming is aborted'</i></p>

- 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. This process must be repeated up to three times.

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

Sequence 2 must **not** be started until all control units are programmed **correctly** in the integration test (exception: central computer (PCM)).

- 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).



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.



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:	42.250.050 (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):	25 minutes

Control unit programmed in this campaign:	<ul style="list-style-type: none"> See ⇒ <i>Technical Information '9X00IN Overview of control units, VR19.0.1'</i>
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 instructions if programming is aborted'</i></p>

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
2020 - 2021	Assistance systems (zFAS)
2022	Rear-end electronics (BCM2)

Required PIWIS Tester software version:	42.250.050 (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

<p>Programming sequence:</p> <p>The instructions for selecting the required control unit for teaching component protection must always be observed!</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>
<p>Programming time (up to):</p>	<p>approx. 25 minutes</p>
<p>Control units programmed in this campaign:</p>	<ul style="list-style-type: none"> See ⇒ <i>Technical Information '9X00IN Overview of control units, VR19.0.1'</i>
<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.</p> <p>Additional instructions for aborted programming ⇒ <i>Technical Information '9X00IN Additional instructions if programming is aborted'</i></p>



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 Standardise side windows.

**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.
 - 13.1 Lock the vehicle.
 - 13.2 Establish bus idle for **at least** 10 minutes.
 - 13.3 and end the **diagnosis** process
- 14 Read out all **fault memories**, process and delete existing faults 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.

**Information**

If there are active fault memory entries **U008A00** in the airbag control unit and/or **U13BE00** in the gateway control unit after the update, these must be ignored. These entries do not result in a function restriction.

- 15 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.

- 16 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.

- 17 Exit the diagnostic application. Switch off ignition. Disconnect the Tester from the vehicle.
- 18 Update navigation database.



Information

If the navigation database is **not** up-to-date, **malfunctions** after updating the central computer (PCM) cannot be ruled out.

The complete update process can take up to 45 minutes.

After inserting the USB stick, a **minimum waiting time** of up to 5 minutes must be observed before starting the update.

If the update does **not start** and the message **Data for the update on the storage medium is invalid** appears, the current navigation database is already on the vehicle. The update can then be cancelled.

The ignition switches off automatically after 30 minutes. For this reason, the driver's door **must** be opened and closed again once after **25 minutes**. If this is not done, the installation process must be repeated.

By re-inserting the USB stick, one can check at any time whether the data was loaded successfully.

- 19

For more information, see: Programming central computer data update: ⇒ *Workshop Manual '9X00IN Programming navigation update on central computer'*

For an overview of the navigation database, see ⇒ *Technical Information '9X00IN Overview of navigation software for USB stick'*.

- 20 Switch off and disconnect the battery charger.
- 21 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.

- 22 Exchange Owner's Manual in the vehicle.
For an overview of the Owner's Manuals for **model years 2020-2021**, see: ⇒ *Technical Information '9X00IN Overview of Order Numbers for Owner's Manual (MY20-21)'*
For an overview of the Owner's Manuals for **model year 2022**, see: ⇒ *Technical Information '9X00IN Overview of Order Numbers for Owner's Manual (MY22)'*



Information

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

- 23 Attach the completed checklist to the PQIS quality line. ⇒ *Technical Information '9X00IN Checklist'*

- 24 Enter the campaign in the Warranty and Maintenance booklet.
- 25 During the test drive, a navigation destination that is further away than the available remaining range of the vehicle must be entered at least **4 times** until charge planning is **fully** calculated. Updating the central computer (PCM) takes a set time for charging planning.

**Information**

The PCM must be connected with a Porsche ID.

Warranty processing

Scope 1:

Labor time:

Update software for various control units

Labor time: **347 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
- Update navigation database
- Replace Owner's Manual
- Create Vehicle Analysis Logs (VALs) before and after the campaign

Required materials:

ANA60000001	Owner's Manual*	1 piece
ANA60000002	Shipping costs**	1 piece

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty invoicing, enter the Part No. **ANA60000001** 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. **ANA60000002**, with the designation "**Shipping costs**" as an additional part. Maximum cost **\$6.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage code ANA6 099 000 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 The number of control units to be programmed depends on the build status and may differ.
Sequence 1: Combined software update of various control units (Update via PIWS Tester) Includes:	Model year 2020–2021 Up to 250 minutes Model year 2022 Up to 120 minutes
Connect	up to. 25 minutes
Gateway	approx. 2 minutes
Battery sensor	approx. 4 minutes
High-voltage charger (OBC)	approx. 5 minutes
High-voltage battery (BMCE)	approx. 8 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
Thermal management (TME)	approx. 4 minutes
Head-up display (from MY21)	approx. 5 minutes
Engine electronics (DME)	approx. 2 minutes
Instrument cluster	approx. 20 minutes
Assistance systems	Up to 110 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 2020–2022 up to 25 minutes
Sequence 3: Start rework for various control units (Update via PIWIS Tester)	Model year 2020–2022 up to 25 minutes
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 version 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 2020-2021	Model year 2022
Vehicle electrical system	<ul style="list-style-type: none"> • The functionality of the battery management system is optimized to prevent intermittent discharging of 12V batteries • Increased stability of 12V vehicle electrical system during long idle periods 	■	
Function on Demand	<ul style="list-style-type: none"> • A subsequent activation of the comfort opening/closing (KESY) and the virtual pedal for opening the rear lid is now via Function on Demand 	■	■
Navigation and infotainment: Porsche Communication Management (PCM)	<ul style="list-style-type: none"> • After setting up Spotify, Spotify is available as a separate media source in the PCM • Android Auto is available via a cable connection • New PCM design (colored tiles) • Voice control with new functions and improvements (intelligibility of voice commands) • Adaptation of the layout of the route monitor and the setting for deactivating traffic symbols (e.g. roadworks, one-way streets)(Navigation Plus) • Charging stations can be filtered and selected in the search function for their charging power • The On Board Owner's Manual can be used via voice control ("Hey Porsche...") • Improved route overview and operation display • Omission of AM radio function in the Porsche Middle East market 	■	■

View	<ul style="list-style-type: none"> Upgrading of the all-wheel drive display by repositioning it in the central computer (PCM) Revised and optimized display in the instrument cluster 	■	
Rear display unit	<ul style="list-style-type: none"> Display in national language for the Ukraine market is now available 	■	
Connectivity	<ul style="list-style-type: none"> Longer availability of the VTS alarm 	■	
Connectivity	<ul style="list-style-type: none"> Better availability of the colorful and grey services (News, Weather, Online radio, etc.) 	■	■
Head-up display	<ul style="list-style-type: none"> Revised and optimized display in the head-up display Extension of display content in head-up display Optimized teaching of the head-up display in the workshop case 	■	
Assistance systems	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Increased diagnostic reliability with external access 	■	■
Vehicle handling	<ul style="list-style-type: none"> Further comfort enhancement of vehicle handling Further optimization of braking performance 	■	■

Power train	<ul style="list-style-type: none"> • Increase in power train efficiency to increase range through improved all-wheel drive distribution (4WD only) • Acoustic optimization of power train noise from electric machines 	■	
Power train	<ul style="list-style-type: none"> • Enhanced stability of the power train 	■	■
Thermal management	<ul style="list-style-type: none"> • Range optimization/increased efficiency due to improved thermal management in the vehicle 	■	■
Air conditioning	<ul style="list-style-type: none"> • Avoidance of failure of the air-conditioning compressor and reduction of the risk of misting on the windscreen 	■	■
Charging	<ul style="list-style-type: none"> • Increased charging stability during AC charging • More frequent availability of fast-charging when utilising the charging planner due to preconditioning of the high-voltage battery (not available for model year 2020) • Better availability of the plug-and-charge function • Selection of more powerful charging pedestal in charge planning • Avoidance of very short charging stops in charge planning • Adapted energy content of the battery during charging stop (adapted to removal of the quick-charging network) 	■	■
OTA	<ul style="list-style-type: none"> • Enabling online updates for various control units • Significantly improved charge planning in navigation 	■	■

Return to the introduction ⇒ *Technical Information '9X00IN Model series:'*

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
9Y2909000R	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 version VR19.0.1)'*

Overview of navigation software for USB stick



Information

The USB sticks with the navigation database are available as special tools at the Porsche dealer.

Overview:

Part No.	Designation - Region
9J1909000F	USB storage medium for PCM update - NAR

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

Overview of Order Numbers for Owner's Manual (MY20-21)



Information

Owner's Manuals with order numbers that are still in place (zz = counter, e.g. 01, 02, etc.; xx = language code, e.g. 21, 31, etc.) WKD Y1A zz xx **20** and WKD Y1A zz xx **21** must neither be supplied with new vehicles nor used as replacement Owner's Manuals. Owner's Manuals with these order numbers still in stock must be disposed of.

From now on, **only** use the Owner's Manuals with the order number (y = market identifier A, B, C, D, E or F; xx = language code, e.g. 21, 31, etc.) for the **vehicles assigned to the campaign** WKD Y1A 04 y xx **22**. 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.

If no additional USB storage medium is available for carrying out this campaign, a replacement USB storage medium (e.g. Part No. V04014999WW000) must be purchased. The costs for the USB storage medium cannot be invoiced under the workshop campaign number (**allowed once per Porsche dealer**).

Parts Info:

Order No.	Designation - Language	Ordering via	Onboard Owner's Manual
		Polaris (PPL)	
WKDY1A04B2122	Owner's Manual - English US	■	■
WKDY1A04B3122	Owner's Manual - French (Canada)	■	■

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

Overview of Order Numbers for Owner's Manual (MY22)



Information

Owner's Manuals with order numbers with (y = market code A, B, C, D, E or F; xx = language code, e.g. 21, 31, etc.) WKD Y1A y xx **22** must neither be supplied with new vehicles nor used as replacement Owner's Manuals. Owner's Manuals with these order numbers still in stock must be disposed of.

From now on, **only** use the Owner's Manuals with the order number WKD Y1A 02 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.

If no additional USB storage medium is available for carrying out this campaign, a replacement USB storage medium (e.g. Part No. V04014999WW000) must be purchased. The costs for the USB storage medium cannot be invoiced under the workshop campaign number (**allowed once per Porsche dealer**).

Parts Info:

Order No.	Designation - Language	Ordering via		Onboard Owner's Manual
		Polaris (PPL)		
WKDY1A02B2122	Owner's Manual - English US		■	■
WKDY1A02B3122	Owner's Manual - French (Canada)		■	■

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

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 - 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	<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 • Carry out programming individually using the integration test (•F3" in the control unit overview

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)
Chassis control	Control unit for chassis control aborts during programming but reports the correct software version Airbag cannot be locked	<ul style="list-style-type: none"> Enter the campaign programming code EFP_J1_OW in the Additional menu → Campaign function.
Head-up display	The head-up display control unit cannot be reached	<ul style="list-style-type: none"> 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
Head-up display	Active error B200049 DTC (000050) in the fault memory	<ul style="list-style-type: none"> This error can be ignored as long as the head-up display is working
OTA control unit	Programming aborted	<ul style="list-style-type: none"> 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) Start programming again via Serv.-sales and breakdown control

Rear end electronics	An error message appears on the PIWIS Tester when programming the rear end electronics	<ul style="list-style-type: none"> There can only be one remote control in the vehicle; this must be at the position described under ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i> in the Workshop Manual If the sequence still stops: Check whether the remote control battery has sufficient voltage
Central computer (PCM)	The central computer freezes while loading	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Pulling out fuse for central computer control unit → Removing fuse for 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"> • Check software version • If software version is lower than 3397, WMA5/WMA6/AMB5 were not performed correctly! • Update PCM to software 3397 as described in TI WMA5/WMA6/AMB5 • Start sequence 2
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 an faulty Internet connection	<ul style="list-style-type: none"> • 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
Sequence 3	2: Ignition on	<ul style="list-style-type: none"> • In sequence 3 (terminal change), five seconds must be maintained before the Tester automatically continues the sequence • If •F12" is pressed in this step, this will result in the sequence being aborted • The procedure is currently being changed

Component protection	Component protection activation has failed	<ul style="list-style-type: none"> Start Sequence 3 again, and select the component protection gateway
	Fault memory entry for OTA FC control unit Component protection active	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Deactivate flight mode. For procedure, see: ⇒ <i>Workshop Manual '903525 Deactivating flight mode'</i> Then start programming again
	Activation of component protection for assistance systems (zFAS) has failed	<ul style="list-style-type: none"> Teach component protection again. For manual procedure, see: ⇒ <i>Workshop Manual '903555 Replacing gateway control unit'</i>. 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: ⇒ <i>Workshop Manual '903555 Replacing gateway control unit'</i> Code all control units

Parking brake (PSM)	Parking brake position lost after coding	<p>Read the information on the instrument cluster and follow the instructions on the central display:</p> <ul style="list-style-type: none"> • Press the footbrake completely • Move selector lever to "N" and wait 5 seconds • After a waiting time of 5 seconds, operate the parking brake <p>If the "Brake" warning light in the instrument cluster still comes on, perform calibration again and wait for longer</p>
HV booster, DC/DC converter, HV heater, BMCe, AC Compressor, OBC	Programming aborted	<p>If only individual control units are programmed, this can result in programming being aborted. In this case, the HV system must first be deactivated, and then programming of that HV component can be carried out again.</p>
Connect	Programming aborted at 98%	<ul style="list-style-type: none"> • Programming aborts at 98%, the control unit still reports the correct software version via the integration test • Error message must be ignored as long as there are no faults in the integration test
Connect	Active fault B200000 (DTC 020018) in Connect control unit after carrying out the campaign	<ul style="list-style-type: none"> • Deactivating flight mode in the Connect control unit two times successively (without a break in between) • Follow the Tester Instruction. Sufficient GPS (Navigation location) and GSM (Cellular signal) reception is required to deactivate flight mode

		<p>and fully provision the embedded SIM card.</p> <ul style="list-style-type: none"> If the fault is still entered, create a PRMS ticket
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.
Electronic air-conditioning compressor	Programming aborted	<ul style="list-style-type: none"> Check whether the air-conditioning system was switched off as described in the TI before starting programming If restarting is not possible -> switch off air conditioning -> ignition off -> open HV service disconnect -> restart programming via the system test
Electronic air-conditioning compressor	No communication with the electronic air-conditioning compressor after update	<ul style="list-style-type: none"> Following sequence 1, communication with the electronic air-conditioning compressor is still not indicated. TI point 5 must be observed The electronic air conditioning compressor control unit still cannot be accessed after the integration test is repeated. Complete the following steps Disconnect the battery charger Open Service Disconnect Connect a battery charger Select the Additional menu [F7] --> Campaign function --> Enter campaign action

		<p>R4Z3W and carry out the operation</p> <ul style="list-style-type: none"> • Check whether the electronic air-conditioning compressor can be accessed again • Close Service Disconnect • Continue campaign
High voltage voltage converter and high-voltage booster	After the update, the integration test in the voltage converter control unit shows a necessary hardware test	<ul style="list-style-type: none"> • Disconnect the battery charger • Open Service Disconnect • Connect a battery charger • Select the Additional menu in the Diagnostic start overview -> Enter action code B4D6H -> carry out sequence • Check whether the voltage converter or HV booster can be reached again • Close Service Disconnect • Continue campaign
11kW OBC	Active fault U16D600 (DTC 32003A) in the fault memory	<ul style="list-style-type: none"> • The fault can be ignored if there are no restrictions or issues observed when charging the vehicle. • The Plug and Charge function must be checked at a charging station (only necessary for model year M (2021) and N (2022) vehicles)
SoC display	SoC is not displayed	<ul style="list-style-type: none"> • Switch off ignition -> remove fuse for the OBC -> switch on ignition -> switch off ignition -> re-insert fuse -> erase fault memory
High-voltage battery	Programming of the high-voltage battery control unit in model year L (2020) vehicles is aborted	<ul style="list-style-type: none"> • Check whether the high-voltage battery was replaced on this vehicle in the past • The information in the Workshop Manual on

		replacing the high-voltage battery was ignored <ul style="list-style-type: none"> • Carry out TI (48/21) and amend the vehicle order • Continue campaign
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Back to the programming sequence for the ⇒ *Technical Information '903555 Software update (software version VR19.0.1)'*

Checklist

Checklist:

Work step:	Completed:
The checklist only refers to campaign ANA6 . A different checklist or another campaign must not be used.	
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. Fault memory deleted?	
16. Integration test performed?	
17. Result of the integration test free of faults?	

18. Vehicle Analysis Log (VAL) created?	
19. Central computer navigation update programmed?	
20. Is the battery charger set to a charge voltage of 14.4 V?	
21. Owner's Manual replaced?	
22. Campaign entered in the Warranty and Maintenance booklet?	
VIN:	
Signature of Porsche dealer:	

Return to the introduction ⇒ *Technical Information '903555 Model series:'*

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