WRM0 – Update to Software Network VR28.11 (Stop Delivery)

Information

Prerequisite: Ensure the PIWIS Tester is updated to v42.950.015 (or higher).

1. **DO NOT PERFORM A VEHICLE HANDOVER OR PDI ON THE VEHICLE AS A FIRST STEP.**
2. **WRM0 Stop Delivery** – Update to software network VR28.11. This must be performed before conducting a Vehicle Handover or PDI.
3. **Vehicle Handover is now possible**
4. **WRP6 Stop Delivery** - Replacing electric power distributor control unit (J1282)
5. **WRP7 Stop Delivery** - Replacing adhesive strips for sensor on left and right charge port door
6. **WRN2 Stop delivery** - Checking parking lock and replace drive unit if necessary
7. **WRN1 Stop Delivery** - Check rear axle drive and replace if necessary
8. **WRP8 Workshop Campaign** - Checking sliding roof and replacing control unit for sliding roof, if necessary

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.

Change overview:

Version	Date	Change
1	09/12/2024	• First publication
2	09/30/2024	• Addition of Before and After VAL

Model Year: **2024**

Model Line: **Macan Electric (XAB)**

Concerns: **Software update (software version VR28.11)**

Cause: **Software optimizations are available for various control units for the new Macan.**

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'*.

Action:
- Update control units in the vehicle network to network release VR28.11.
- Execute repair script on the **Infotainment main control unit (HCP3)** using a USB memory stick
- Repeat vehicle commissioning if it already occurred before the update to network release VR28.11.

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

Required parts

Information

As part of the update to the VR28.11 software network, a repair script must be run using a USB memory stick on the Infotainment main control unit (HCP3).

Pay particular **attention** to the following:

- An empty USB memory stick (e.g. Part No. V04014999WW000) with a **maximum storage capacity of 32GB** must be used for the update
- The USB memory stick must be formatted to the **file system FAT32**
- The repair script required for the update must be downloaded **via PiUS under Navigation data** and saved on the empty USB memory stick
- The repair script to be installed on the USB memory stick in PiUs must have the following meta data:
- Part number: **V04007009BS**
- File name: **srm_repair_20240719T142743_prod.zip**

* Every Porsche Center responsible for looking after a vehicle affected by the campaign is provided with **one** USB memory stick for programming. Therefore, the USB memory stick must only be ordered **once**, to remain at the supervising Porsche Center as a tool.

Parts Info:

Part No.	Designation	Quantity
WRM00000001*	USB memory stick (32 GB max.)	1 piece

*When processing the warranty claim, the **part number WRM00000001** with the designation 'USB memory stick (32 GB)' can be **billed once for every Porsche Center** concerned as an **additional part**. **Maximum amount $11.10**

Required tools

Tools:
- **P90999 - PIWIS Tester 4**
- Battery charger with a current rating of **at least 90 A**, e.g., **VAS 5908 - 90-A battery charger**. For further information about the battery chargers to be used, see the corresponding Workshop Manual. ⇒ *Workshop Manual '270689 Charge battery and vehicle electrical system'*

Update to software network VR28.11

NOTICE

Sitting inside the vehicle during the update

- **Abort update by automatically activating the ignition**

⇒ **Avoid sitting inside the vehicle during the update.**

Information

Vehicle update - general information

The entire vehicle network will be checked for a necessary update or calculated to ensure error-free functioning of the vehicle. The following preparations must be made:

- Latest release on PIWIS Tester 4 and PiUS available
- Vehicle is fully constructed
- VCI and PIWIS Tester 4 must be connected to each other via the workshop WiFi
- The user must be logged in to the PIWIS Tester 4 in the PPN
- The vehicle must be supported by an external charger
- Seat heating and seat ventilation must not be active
- Place **only one hand-held transmitter** in the emergency start tray (see Workshop Manual)
- Must only have **one hand-held transmitter** in the vehicle while performing WRM0.

Once the update on the vehicle has started, the PIWIS Tester 4 can be disconnected from the vehicle. The vehicle carries out the update independently and informs the user of the current status.

Work Procedure:
1 Create Before VAL

2 Prepare USB the memory stick.

Information

Please reformat the USB memory stick, if the software update fails. The corresponding repair script must be re-loaded.
Do not insert the USB memory stick into the vehicle unless instructed by the PIWIS Tester.

For further information, see: ⇒ *Technical Information '270689 Required parts'*

The repair script to be installed on the USB memory stick in PiUs must have the following meta data:

- Part number: **V04007009BS**
- File name: **srm_repair_20240719T142743_prod.zip**

Furthermore, the following points must be observed:

- The software available in PiUS must **only** be used with the corresponding technical information and instructions.
- The software listed may only be used for the action described here. When using the software on other vehicles, damage to various systems cannot be ruled out.

3 Observe preconditions for control unit programming.
⇒ *Technical Information '9X10IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*

NOTICE

The specified update process was not followed.

- **Update cancelled**
- **Destruction of control units**

⇒ **Observe and follow the process displayed for the update and instructions for the PIWIS Tester**

⇒ **Do not replace the ignition without instructions by the PIWIS Tester**

⇒ **Do not repeat the programming unless a failed update is displayed on the PIWIS Tester**

Information

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

The technician **must** log in to PPN with the PIWIS tester.

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

WARNING

During the update, the power windows and rear spoiler are automatically re-initialized with a standardization run. The anti-pinch protection is deactivated during the standardization run.

- **Danger of limbs being crushed or severed**

- **Pinching of tools, cables or covers**
- **Damage to actuators**

⇒ **Keep distance from components**

⇒ **Keep space for movement of windows and rear spoiler clear**

⇒ **Do not start the standardization run on the PIWIS Tester until the space is clear for movement**

Information

Once the diagnosis has begun, the VCI is automatically initialized. The control unit data is then loaded automatically.

4 Updating the software of various control units to software version VR28.11.

4.1 Start new logging via •P2 “ .

4.2 As soon as the control unit overview is displayed, open the additional menu •F7 “ .

4.3 Select the campaign **“WRM0 - Update to software network VR28.11”** from the displayed campaigns for the respective vehicle and start the campaign by pressing •F8 “ .

4.4 Enter action code **“H2KDG”** in the field **“Value”** and press •Enter “ to confirm.

4.5 Press **“Next”**•(F12) “ to start the update to software network VR28.11 and follow the instructions of the PIWIS Tester.

Information

During the guided update procedure on the VR28.11 software network, a repair script must be run using a USB memory stick on the **Infotainment main control unit (HCP3)**.

To do this, plug the USB memory stick into the vehicle as instructed by the PIWIS Tester and note the display on the central display. After successful execution of the repair script **(display on the central display "completed successfully"),** remove the USB memory stick from the multimedia interface. Then continue programming according to the instructions from the PIWIS Tester.

If no reaction is detectable on the central display of the vehicle **5 seconds** after inserting the USB memory stick in the multimedia interface, the USB memory stick must be removed and re-inserted.

After **3 failed** attempts, the USB memory stick must be prepared again.

NOTICE

The specified update process was not followed.

- **Update cancelled**
- **Destruction of control units**

⇒ **Observe and follow the process displayed for the update and instructions for the PIWIS Tester**

⇒ **Do not replace the ignition without instructions by the PIWIS Tester**

⇒ **Do not repeat the programming unless a failed update is displayed on the PIWIS Tester**

Information

During the update process, all displays in the vehicle (instrument cluster, central display and passenger display) are occasionally switched off. Programming nevertheless continues. **The ignition sequence must not be changed**.

If WiFi coverage is insufficient, the connection between the PIWIS Tester and VCI can be interrupted (battery charge indicator inactive on the Tester display at the top right). The vehicle will nevertheless continue programming **independently**. In the meantime, no entry must be made on the PIWIS Tester, and the programming must not be restarted. In such a case, the progress of the update can still be followed inside the vehicle via the central display by activating the **"Messages"** tile.

Update progress on the central display

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

Required PIWIS Tester software version:	**42.950.015** (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:	**H2KDG**
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):	**120 minutes**

Control units programmed in this campaign:	See ⇒ *Technical Information '9X10IN Overview of the new features of the software update'*.
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Technical Information '9X10IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*
Procedure in the event of a termination of 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 '9X10IN Additional information if programming is aborted'*

Follow-up actions

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

Work Procedure: 1 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
Due to the vehicle diagnosis and programming of the network update VR28.11, fault memory entries can be stored that do not indicate an actual fault in the vehicle.
These fault memory entries can be largely deleted after repeated commissioning and a test drive.
For an overview of fault memory entries, see: ⇒ *Technical Information '9X10IN Valid fault codes after update 28.11'*

Control unit	Fault Code	Description
“Various” control units	B184C00	Protection of vehicle diagnostics, actuation active

2 Create After VAL.

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

4 Switch off and disconnect the battery charger.

5 Vehicles **already commissioned as part of the handover inspection**, **must** be recommissioned using the PIWIS Tester after updating to software network VR28.11.

6 Now acceptable to proceed to perform Vehicle Handover/PDI.

7 Now acceptable to proceed to perform Campaign WRP6.

Warranty processing

Information

The specified labor times were determined specifically for carrying out this campaign and include all necessary preliminary and subsequent rework. The labor times may differ from those published in the Labor Operation List in the PCSS.

Scope 1: **Update to software network VR28.11**

Labor time:

Update to software network VR28.11 — Labor time: **135 TU**

Includes:
- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Updating various control units to software version VR28.11
- Reading out and deleting fault memories
- Creating Vehicle Analysis Logs (VALs) before and after the campaign

Required materials:

WRM00000001*	USB memory stick (32 GB)	1 piece

*When processing the warranty claim, the **part number WRM00000001** with the designation "**USB memory stick (32 GB)**" can be billed **once for every Porsche Center concerned** as an additional part. Maximum amount $11.10

⇒ **Damage number WRM0 066 000 1**

Scope 2: **Update to software network VR28.11 and repeat commissioning**

Labor time:

Update to software network VR28.11 and repeat commissioning — Labor time: **194 TU**

Includes:
- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Updating various control units to software version VR28.11
- Reading out and deleting fault memories
- Perform commissioning
- Creating Vehicle Analysis Logs (VALs) before and after the campaign

Required materials:

WRM00000001*	USB memory stick (32 GB)	1 piece

*When processing the warranty claim, the **part number WRM00000001** with the designation "**USB memory stick (32 GB)**" can be billed **once for every Porsche Center concerned** as an additional part. Maximum amount $11.10

⇒ **Damage number WRM0 066 000 1**

Scope 3: **Not relevant for the US Market**

Scope 4: **Not relevant for the US Market**

Overview of the new features of the software update

Information

The software update modifies **two** key properties in the vehicle:

- Upgrade to the user interface in the Infotainment main control unit (HCP3) to the **"Simplified DX concept"**
- Software updates for **various** control units

Overview: **The following table shows the most important changes in the "Simplified DX" segment.**

Function	Description
Main tab bar	• Integration of the status line into the Main Tab bar to provide more space for applications • Transparent design • Dynamic layout and assignment for smartphone integration and priority icons

My Screen	• Upgraded tiles with reduced headers and enlarged tiles • Tile transparency to background
Background and transparency	• Overlaying elements can be displayed transparently
Car app	• 3D representation of the vehicle to show the selected function • Revised location of functions
Navigation layout and transparency	• Large impact of the display through full-screen map display • Upgraded navigation
Media Player	• Upgraded full-screen display of album covers • “Floating” Media Player
Start-up scene	• Upgraded 3-D scene with impressive staging
Telephone	• Upgraded to spacious layout • Smartphone orientation

Return to the introduction ⇒ *Technical Information '9X10IN Introduction'*

FAQs for VR28.11 implementation

Information

If individual programming or rework procedures could not be carried out correctly, please refer to the Workshop Manual for the basic procedure for control unit programming with the PIWIS tester. ⇒ *Technical Information '9X10IN Basic information and procedure for control unit programming with the PIWIS tester. Information'*:

In the event of an error, **always** create a log with the PIWIS tester during programming with •P2 “ .

As a general rule, if programming is **aborted** during programming, programming must be continued. It is possible to restart the complete sequence at any time using the action code, skipping the control units that have already been programmed.
In addition, you will find further information and instructions in the following table, especially for **updating to software network VR28.11**:

Work procedure:

General:

Fault indication	Cause	Error source	Remedial action
V28.11 procedure	The affected control unit did not respond or did not respond completely when the vehicle information was read out.	vehicle	• Cancel procedure • Close diagnosis • Terminal 15 Change • Restart process

Before the update:

Fault indication	Cause	Error source	Remedial action
Diagnostic application crashes (JAVA error message)		Diagnostic application	• Restarting the diagnostic application
VCI connection has been aborted (diagnosis has no information on battery voltage - see battery symbol at the top right in the tester display).		VCI has poor Wi-Fi connection	• Restart tester, reinsert VCI and try again • Ensure that the WLAN connection is stable, move the vehicle to a suitable position in the workshop if necessary

During the update:

Fault indication	Cause	Error source	Remedial action
Diagnostic application crashes (JAVA error message)		Diagnostic application	• Checking update progress in the vehicle is mandatory • **No ignition change during the update** • Do not restart the tester until **the update** has been completed in the vehicle (tile "Messages" --> installation "successful") • When the update has finished in the vehicle, verify that the update is complete. To do this, restart the update on the PIWIS Tester by entering campaign code **H2KDG**.
The following error occurs at the step **"Attempting to connect to SOD"**: **"The release versions of Tester and PIUS do not match."**	PIWIS Tester 4 did not receive the required release update. Since the PIUS automatically installs the updates, the release versions no longer match.	PIWIS Tester and PiUS	• Install current release on PIWIS Tester 4 • Check availability of current release on PiUS workshop server

PIWIS Tester 4 cannot establish communication with the diagnostic tester; error message on first attempt to establish the communication	Date / time in the vehicle is incorrect after disconnecting / re-connecting the 12 V battery (terminal 30)	vehicle	Correct date/time in the vehicle: • Open **"Control unit overview"** • Access the **"Gateway HCP5"** main control unit • Open the menu **"Maintenance / repairs"** • Select menu item **"Set time"** and execute • Cancel procedure • Close diagnosis • Lock vehicle and wait for bus rest • Re-attempt update
When the update calculation result is displayed, the following fault occurs in all control units to be programmed/coded: **"Error in determining the target state for coding / programming"**	Error while calculating in the backend system	Backend system	• Lock vehicle and wait for bus rest • Repeat update
On PIWIS Tester 4, the progress of the vehicle update is **no shown until approx. 27%** have been completed.	Diagnostic service (RPC+) will not forward the progress of the update to the Tester until it is approx. 27% complete.	vehicle	• Wait until progress is displayed
Charging communication 1 (J1245) **or** charging communication 2 (J1246) in **update attempt not OK --> communication error** .		Vehicle, GOBW	• Final integration test reports a communication error • Pull fuse from affected control unit • Remove fuse • Wait 30 seconds • Re-insert fuse • Re-attempt update

After the update:

Fault indication	Cause	Error source	Remedial action
Delete the error from the fault memory.		vehicle	• Error can be ignored
VCI connection has been aborted (diagnosis has no information on battery voltage - see battery symbol at the top right in the tester display).		VCI has poor Wi-Fi connection	• Restart tester, reinsert VCI and try again • Ensure that the WLAN connection is stable, move the vehicle to a suitable position in the workshop if necessary
Diagnostic application crashes (JAVA error message)		Diagnostic application	• Restarting the diagnostic application
Passive fault memories from high-voltage control units cannot be erased.			• Switch ignition off and on • Re-read and delete fault memory

Back to the programming sequence for the ⇒ *Technical Information '9X10IN update to software network VR28.11'*

Valid fault codes after update VR28.11

Control unit	Fault Code	Description	Remedy
“Various” control units	B184C00	Protection of vehicle diagnostics, actuation active	• Valid fault memory entry
Front camera (R242)	C13F7F1	Bedding-in function, active	• Valid fault memory entry after vehicle handover • Brake bedding-in function
Front camera (R242)	U198C00	Road graph, received fault value	• After approval drive: DTC passive
Front camera (R242)	B200FF2	Implausible signal	• After approval drive: DTC passive

Front camera (R242)	U12EF00	Front camera for driver assistance systems, implausible signal	• After approval drive: DTC passive
Front camera (R242)	U147C00	Emergency call module and communication unit, implausible signal	• Remove flight mode • After approval drive: DTC passive
Front camera (R242)	U194E00	Application server 3 for system 1 (HCP3), Infotainment, implausible signal	• After approval drive: DTC passive
Front camera (R242)	U160B00	Transport Layer Security subscriber, non-permitted extensions	• No action • Ignore fault
Main control unit for drive and chassis HCP1 (J1312)	U202300	Drive torque longitudinal distribution, recuperation, bedding-in function active	• Valid fault memory entry after vehicle handover • Brake bedding-in function
Main control unit for drive and chassis HCP1 (J1312)	U045D00	Main control unit for driver assistance HCP2 (J1274), ETHERNET data bus driver assistance, implausible signal	• After approval drive: DTC passive
Main control unit for drive and chassis HCP1 (J1312)	C140DF0	Vehicle Protected Environment (VPE), vehicle protection activated	• Valid fault memory entry • Ignore fault
Main control unit for driver assistance HCP2 (J1274)	B200FF2	Implausible signal	• After approval drive: DTC passive
Main control unit for driver assistance HCP2 (J1274)	B200FF2	Implausible signal	• After approval drive: DTC passive

Main control unit for gateway HCP5 (J1273)	C12D8F0	Vehicle function, Speed Assist, feedback faulty	• No action • Ignore fault
Main control unit for gateway HCP5 (J1273)	U17A000	Diagnostic filter, access protection deactivated	• Valid fault memory entry • Ignore fault