PORSCHE®

WPJ5 - Update to Software Network VR10 (Workshop Campaign)

Revision:	This bulletin replaces bulletin Group 9 118/23 WPJ5, dated August 18, 2023.
Model Year:	**2024**
Model Line:	**Cayenne (9YA/9YB)**
Concerns:	**Software update (software network VR10)**
Cause:	**Software optimizations are available for various control units for the Cayenne.**

An overview of the new features that will be implemented with the software update can be found in the enclosure under ⇒ *Technical Information 'Overview of new features of the software update'*

Actions:
- Re-program the control units with the **latest** PIWIS Tester software release.
- Minimum requirement: Release **42.100.035** or higher. It is recommended to use the latest PIWIS Tester software version for optimized execution of all tester operations and backend system communications.

Checklist: Due to the high number of programming steps **incorrectly** carried out as part of the last software update, a checklist was created to improve the overview of the work to be carried out. The checklist **must be** completed, 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

Tools:
- Battery charger with a current rating of **at least 90 A**, e.g. **VAS 5908 battery charger 90 A**
- **P90999 - P90999 - PIWIS Tester 4**

Update to software network VR10

Work
Procedure:

ℹ️ Information

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

- Operated in **SUPPLYMODE with a 14.6 Volt setpoint and 90 A current limit.**

Verify the settings of your VAS 5908 power supply before applying power to the vehicle.

NOTE: The vehicle electrical system must never exceed 14.8 Volts. Use a quality DMM/DVOM to verify voltage at the power supply connection points of the vehicle.

Electrical resistance in the power supply cables and the clamp connection points greatly affect power supplied to the vehicle. For example, resistance of 0.015 Ohm in the cable set results in a 1.35 V drop in the cables when a 90 A current is required. Perform a CABLE CHECK / Cable Compensation periodically, approximately once per month, to ensure proper power supply.

- The vehicle must be on a level surface.

- Air suspension must be at normal level.

- There must be an active PPN connection.

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'*.

   Place vehicle key remote in rear of left cupholder (emergency start position).

2   After the "Creating Documentation Updates" process, the integration test is started automatically. The result must first be **ignored**.

3   Create a Vehicle Analysis Log (VAL) - **Service (Serv.) VAL** using the PIWIS Tester - Additional Menu [F7]. 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 software for various control units to VR10.

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

ℹ️ Information

If programming or coding is aborted, the programming must be carried out again. In order to be able to invoice for the new programming in scope 2, a screenshot of the general overview **must** be created at the end of the programming.

ℹ️ Information

As of the 2024 Cayenne, two separate Gateway control units are identified by the PIWIS Tester in the full control unit list as well as programming and coding screens: the typical Gateway 3.1 control unit and a new **Gateway 3.1 (00x) RxSwin**. Where applicable, the Gateway 3.1 (00x) RxSwin indicates an individual Regulation-specific (RXXX) Software Identification Number.

Note for North American Region (NAR) As of this publication, no such regulation-specific software identification number (RxSwin) is handled by the Gateway control unit. Coding errors pertaining to Gateway 3.1 (00X) RxSwin do not indicate an error in the Gateway control unit coding or configuration. Such errors can typically be ignored if they are not remedied by either running the campaign sequence a second time or by individually completing Automatic Coding of the Gateway control unit.

Required PIWIS Tester software release:	**42.100.035** (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:	**E3P1A**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** **After programming has been carried out, the result of the programming must be checked and, in the event of deviations from individual control units, the corresponding control unit must be re-programmed or re-coded.** A backup documentation process for the re-programmed software releases starts once programming and coding is complete.
Programming time (up to):	• **270 minutes** • The duration of the programming the control units depends on the build status and can differ from the specified time.
Control units programmed in this campaign:	• See ⇒ *Technical Information 'Overview of control units VR10'*

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 "Fault finding"'*
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.**
	Create a screenshot of the overview menu at the end of programming if one or more control units have not been successfully programmed or coded.
	Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional instructions if programming is aborted'*

5 Select Instrument cluster control unit.

   5.1 Select "Drive links checks".

   5.2 Perform the routine "Reset user and guest accounts".

   This may be listed as "Benutzerkonten und Gastkonten zurücksetzen" in the PIWIS Tester depending upon tester software Successful execution of the routine is indicated by "Routine Info: Routine Results: 1."

6 Select Assistance systems control unit.

   6.1 Select "Drive links checks".

   6.2 Perform the routine "Coding step 2".

   Successful execution of the routine is indicated by "Routine Results: 1".

   6.3 **Wait 20 seconds.**

   6.4 Perform the routine "Front camera, download calibration result".

   Successful execution of the routine is indicated by "Routine Results: 1".

7 Select Front-end electronics (BCM1) control unit.

   7.1 Select "Maintenance repairs".

   7.2 Perform the "Teach headlight beam adjustment" procedure.
   "Adjust headlights mechanically" in the sequence can be skipped.

8 Select "Central headlights" in the control unit list **(only vehicles with I-No. 8IU "HD-Matrix Design LED Headlights" or 8JU "HD-Matrix Design LED Headlights in Black").**

8.1   Select "Maintenance repairs".

8.2   Perform the "HD matrix headlights, calibration" procedure.

The value **"Production"** must be used when selecting the Activation value. Successful execution of the routine is indicated by "Routine Results: 1".

9   Select "Diff. lock" control unit **(only vehicles with I-No. GH3 Porsche Torque Vectoring Plus (PTV+))**.

9.1   Select "Maintenance repairs".

9.2   Perform the "Start of operations" procedure.

10   Perform PSM position detection by operating the brake and P (Park) button. Follow the PCM Central Display instructions for detecting brake position.

11   Standardize side windows. Teaching the basic window limit positions using the power window switches.

Note: The rear spoiler will raise during the programming sequence in Cayenne Coupe variants. The spoiler can be returned to the normal lowered position by the PCM Central Display controls or during a road test where the spoiler is automatically deployed and retracted. It is not necessary to standardize the spoiler using the PIWIS Tester.

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

12   Remove the **PIWIS Tester (VCI)** from the vehicle.

12.1   Lock the vehicle.

12.2   Establish bus idle for **at least** 5 minutes.

12.3   Re-connect the PIWIS Tester (VCI) after bus idle.

13   Read out all **fault memories**. If necessary, work through existing faults and delete them.

ⓘ 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
Faults pertaining to 'Diagnostic access protection', e.g. PSM fault "B184C00 - Vehicle diagnostics portection - activation activated" are normal side-effects of the security for vehicle diagnosis (SFD) function and can be ignored.

14   Press •F3" to start the integration test in the control unit selection.
All affected control units should now be successfully 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, programming must be repeated. If the deviation persists, contact Technical Support.

15   Create a Vehicle Analysis Log (VAL) - **Service (Serv.) VAL** using the PIWIS Tester
Mark the vehicle analysis log you have created with the attribute **"Post-VAL"** and after carrying out the campaign, return it using the PIWIS Tester.

16   End the diagnostic application and switch off the vehicle ignition. Before the diagnostic application closes, the PT4G may again verify the PPN User has sufficient rights for security of vehicle diagnostics and documentation updates.

17   Switch off and disconnect the battery charger.

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

19   Enter the campaign in the Warranty and Maintenance logbook.

Warranty processing

Scope 1:   Update software for various control units

Labor time:	
Update software for various control units	Labor time: **157 TU**
Includes: Connecting and disconnecting battery charger	
Connecting and disconnecting PIWIS Tester	
Updating various control units to software release VR10	
Carrying out rework	
Reading out and deleting fault memories	
Creating Vehicle Analysis Logs (VALs) before and after the campaign	
⇒ **Damage number WPJ5 066 000 1**	

Scope 2:   Update software for various control units

ℹ️ Information

Scope 2 **may only be invoiced** if an error occurred during the first implementation.

For documentation, a screenshot of the programming and coding overview must be uploaded to the PCSS. It must be clear here that one or more control units have not been successfully programmed or coded.

The documentation is checked as part of the PSA (Porsche Service Audit).

Labor time:

Update software for various control units   Labor time: **177 TU**
Includes: Connecting and disconnecting battery charger
                   Connecting and disconnecting PIWIS Tester
                   Updating various control units to software release VR10
                   Carry out software campaign again due to faulty
                   programming or coding
                   Carrying out rework
                   Reading out and deleting fault memories
                   Creating Vehicle Analysis Logs (VALs) before and after the
                   campaign

⇒ **Damage number WPJ5 066 000 1**

Overview of VR10 control units

Overview:

Overview of VR10 control units to be programmed	
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.
Combined software update of various control units (Update via PIWIS Tester) **Includes:**	Up to 270 minutes
Inductive charger for mobile devices	up to 3 minutes
Instrument cluster	up to 30 minutes
PSM	up to 5 minutes
Central headlights	up to 25 minutes
Connect	up to 26 minutes

OBC 11 kW	up to 7 minutes
Assistance systems (zFAS)	up to 90 minutes
Door control unit	up to 36 minutes
Power steering	up to 2 minutes
Front-end electronics	up to 5 minutes
Steering column lock	up to 1 minute
Power electronics	up to 2 minutes
Transverse lock	up to 2 minutes
Airbag	up to 3 minutes
Gateway	Up to 15 minutes
Automatic coding of all control units	up to 20 minutes

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Overview of the new features of the software update

Overview:

Function	Description The increased robustness **depends on** the country and vehicle equipment	Cluster
Instrument cluster	• Intermittent black screen of the instrument cluster while driving (until terminal change) • Intermittent black screen with "Navigation" display in the instrument cluster (until terminal change 15) • Intermittent short-term flickering of the "Media playlist" display in the instrument cluster • No clear acoustic volume differentiation between "quiet/medium/loud" for acoustic warning of the lane keep warning system • The distance control reference speed (ACC) of the vehicle in front is briefly displayed incorrectly in the instrument cluster • The distance control reference speed (ACC) of the vehicle in front is displayed with flickering in the instrument cluster	• Bug fix
Brake electronics (PSM)	• After dynamic cornering, the power can be reduced briefly for several seconds	• Bug fix

Control unit for headlights, left and right	• Under certain preconditions, there may be an intermittent malfunction of the light control	• Bug fix
Control unit for external communication (cBox)/Connect	• Porsche Connect Services cannot be used despite the display of the Connect symbol/No connectivity	• Bug fix
High-voltage charger (OBC)	• No relevance to customer/workshop	• Bug fix
Control unit for assistance systems (zFAS)	• Increased robustness/stabilization of existing functions • New Functionality Speed Control Assist: Note/warning to the driver when changing speed limits	• Increased robustness
Driver's side/passenger's side door control unit, front	• If the radio key "Lock vehicle" is pressed twice, the mirror does not retract or remains in the current position	• Bug fix
Control unit for rear-end electronics (BCM2)	• No relevance to customer for increase in robustness to prevent unauthorized passive error entries	• Increased robustness
Power steering control unit (EPS)	• No relevance to customer/workshop	• Bug fix
Front-end electronics control unit (BCM1)	• No relevance to customer/workshop	• Bug fix
Electric steering column lock control unit	• No relevance to customer for electric steering column lock, does not lock with terminal change 15 • No error message in instrument cluster	• Bug fix
Roll stabilization (PDCC) control unit front/rear	• No relevance to customer/workshop	• Bug fix
Control unit for garage door opener	• No relevance to customer/workshop	• Bug fix
Control unit for external communication (cBox)/Connect	• No relevance to customer/workshop	• Bug fix
Control unit for high-voltage power electronics, front/rear	• No relevance to customer/workshop	• Bug fix

Transverse lock control unit	• No relevance to customer for increase in robustness to prevent unauthorized passive error entries	• Increased robustness
Airbag control unit	• No relevance to customer for increase in robustness to prevent unauthorized passive error entries	• Increased robustness

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Additional instructions if programming is aborted

i   **Information**

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

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

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. Starting to use the integration test is faster.

You will also find further information and instructions specifically for the **VR10 update** in the table below:

Work procedure:

Control unit:	Situation:	Action:
Cancelling individual control units:	One or more control units cannot be programmed or can no longer be accessed	• **Check whether the control unit can be reached using the PIWIS Tester.** If not, a bus idle must 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)
Connect control unit	Check sum for errors after programming	• Re-programming Connect control unit
Connect control unit	Connect control unit can no longer be reached after programming	• Remove Connect control unit battery and wait 30 minutes • Re-programming control unit
All control units	Coding is not written successfully	• Re-do automatic coding of the control unit
Airbag control unit	Coding aborts during the procedure	• Re-do automatic coding of the control unit
Inductive charger for mobile devices	Programming aborts	• Carry out programming again
Assistance systems (zFAS)	The routine "Front camera, download calibration result" aborts	• The 20-second waiting time was not observed • Perform step 7 again

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Checklist

Checklist:

Work step:	**Comple-ted:**
The checklist only refers to campaign **WPJ5**.	
1. Settings made on the battery charger?	

2. Internet connection for PIWIS Tester active?	
3. Vehicle Analysis Log created?	
4. Programming performed on VR10?	
5. Screen shot of the total overview of programming and coding created? **Only necessary if aborted**	
6. Rework performed?	
7. Bus idle performed for 5 minutes?	
8. Fault memory deleted?	
9. Integration test performed?	
10. Result of the integration test fault-free?	
11. Vehicle Analysis Log created?	
12. Campaign entered in the Warranty and Maintenance logbook?	
VIN:	
Signature of Porsche Center:	

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