PORSCHE®

Technical Information

Various Error Messages Regarding Driver Assistance Systems in the Instrument Cluster (03/23)

Model Line: **Cayenne (9YA/9YB)**

Model Year: **As of 2019 up to 2020**

Concerns: **Control unit for driver assistance systems**

Cause: **After switching on the ignition, various messages in the instrument cluster show that driving assistance systems installed in the vehicle are not available or only reduced availability.**

Action: Perform a comprehensive update of the vehicle software network.
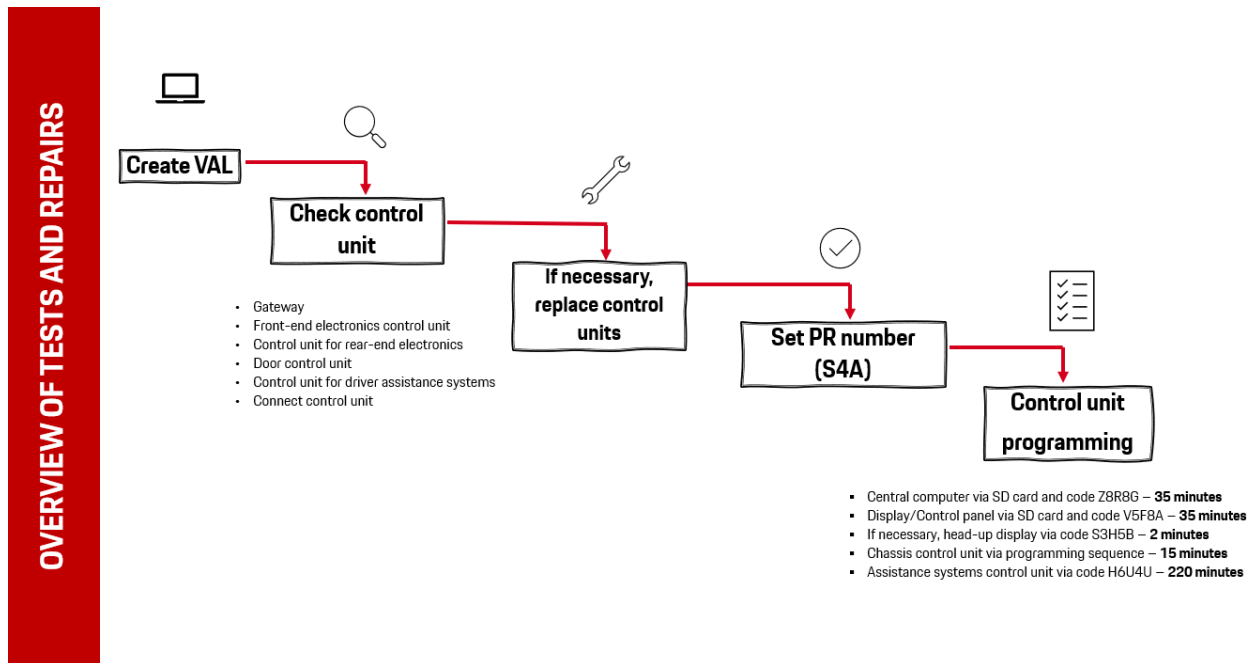
ℹ️ Information

A specific target software network was defined for the required update.
For this to be achieved, different scopes of actions may be required depending on the production date and the current status of the vehicle.
Therefore, the hardware and/or software release of various control units must first be checked and, depending on the test result, individual control units replaced and reprogrammed.

ℹ️ Information

The hardware or software release is checked using a previously created vehicle analysis log (VAL).
In order to shorten the workshop visit on an affected customer vehicle, the procedure can therefore be as follows:

- Arrange customer appointment for the creation of a VAL

- Only create the VAL on the agreed date and then return the vehicle to the customer

- Checking hardware and/or software release of the control units using the previously created VAL and the following description

- Order any necessary control units

- Arranging customer appointment on which the final action can be carried out (control unit replacement if necessary and control unit programming)

AfterSales

OVERVIEW OF TESTS AND REPAIRS

- Gateway
- Front-end electronics control unit
- Control unit for rear-end electronics
- Door control unit
- Control unit for driver assistance systems
- Connect control unit

Create VAL → **Check control unit** → **If necessary, replace control units** → **Set PR number (S4A)** → **Control unit programming**

- Central computer via SD card and code Z8R8G – **35 minutes**
- Display/Control panel via SD card and code V5F8A – **35 minutes**
- If necessary, head-up display via code S3H5B – **2 minutes**
- Chassis control unit via programming sequence – **15 minutes**
- Assistance systems control unit via code H6U4U – **220 minutes**

Dr. Ing. h.c. F. Porsche AG | After Sales Quality – 11.2023　　　　PORSCHE　　　　1

Overview of tests and repairs

Checklist: Due to the complexity of this Technical Information (TI), a checklist has been added to this document. You can find these in the 'Checklist' section at the end of this TI: ⇒ *Technical Information 'Checklist'*

Required tools

Tools:
- **P90999 - P90999 - PIWIS Tester 4**
- Battery charger with a current rating of **at least 90 A**, e.g., **VAS 5908 battery charger 90 A**
- **SD memory card** (free/writable)

Preliminary work

Work Procedure: 1　Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

Information

Programming can cause the individual customer settings to be lost. Always check these and write them down if necessary before getting started.

2   Connect a battery charger that is suitable for lithium starter batteries with a current rating of at least 90 A (e.g. **battery charger 90 A**) to the jump-lead starting terminals in the engine compartment. For procedure, see: ⇒ *Workshop Manual '2706IN External power connection, jump-lead starting'*

3   **Position** the driver key in the rear area of the left cupholder in the center console between the holding struts (emergency start tray) in order to ensure a permanent radio link between the vehicle and driver key⇒ *Emergency start tray*.

4   Connect **P90999 - P90999 - PIWIS Tester 4** to the vehicle communication module (VCI) via the **USB cable**. Then connect the communication module to the vehicle and switch on the PIWIS Tester.

5   Switch on the ignition.

Emergency start tray

6   On the PIWIS Tester start screen, call up the **'Diagnostics'** application.

The vehicle type is then read out, the diagnostic application is started and the control unit selection screen is populated.

Checking hardware release and software release of control units

Work Procedure: 1   Create Vehicle Analysis Log (VAL) using the PIWIS Tester. Mark the vehicle analysis log you have just created with the attribute **"Pre-VAL"** and return it using the PIWIS Tester.
Then perform the check of the respective hardware or software release using the created Pre-VAL.

Information

For the control units listed below, there is a possibility that the hardware or software release are not compatible with the software target network described here. For this reason, the respective control units must be checked and replaced if necessary.

2   Check the gateway control unit and replace if necessary.

Control unit	Replacement of control unit required	Control unit OK (no replacement required)
	Hardware release	Hardware release
Gateway Connect (cGW)	H14 *	H16
Gateway (bGW)	H07	H08
Gateway 3.1	H05	H06

   ℹ️   **Information**

* No hardware solution is currently available for vehicles in the North America region (NAR‑USA, Canada, Puerto Rico) with Gateway Connect and hardware release 14. In this case, therefore, the action described here cannot currently be carried out.

A corresponding hardware solution is communicated when it becomes available.

The action ends here for these vehicles, since the following procedure is not productive without updating the Gateway control unit.

2.1   If the gateway control unit matches a hardware release specified in the **"Replacement control unit required" field,** the **control unit must be replaced**. To this end, select the corresponding part number (or its successor) depending on the previous hardware release and replace the gateway control unit.

    For procedure, see:
⇒ *Workshop Manual '903519 Remove and install gateway control unit'*
and
⇒ *Workshop Manual '903555 Replace gateway control unit'*

    Then continue with Step 3.

Old hardware release	Part No.	Designation – Location	Number
	PAB907468L	⇒ Control unit for Gateway – China	1 piece
	PAB907468M	⇒ Control unit for Gateway – Russia	
H14	PAB907468N	⇒ Control unit for Gateway – Japan	
	PAB907468P	⇒ Control unit for Gateway – ECE	
H07 + hardware part number: 4N**0**907468BA	PAA907468A	⇒ Control unit for Gateway (min)	1 piece
H07 + hardware part number: 4N**2**907468BA	PAB907468K	⇒ Control unit for Gateway (Max+)	1 piece
H05	9A7907468C	⇒ Control unit for Gateway	1 piece

Additional parts required for replacing the Gateway control unit.

Part No.	Designation – Location	Number
N 91205201	⇒ Cheese head bolt with multiple-tooth head – Seat rail	4 pieces

    2.2   If the Gateway control unit matches one of the data in the **"Control unit OK (no replacement required)" field ,** the **control unit does not need to be replaced**. Continue with Step 3.

3   Check the control unit for assistance systems and replace if necessary.

Control unit	Replacement of control unit required		Control unit OK (no replacement required)	
	Hardware release	Software release	Hardware release	Software release
Assistance systems	H07	0291	H08 / H09	0291 (or higher)

    3.1   If the control unit for assistance systems matches the data in the **"Replacement of control unit required" field,** the **control unit must be replaced**. To this end, use the following part number (or its successor) and replace the control unit for assistance systems.

For procedure, see:
⇒ *Workshop Manual '910219 Remove and install central control unit for assistance systems'*
and
⇒ *Workshop Manual '910255 Replacing central control unit for assistance systems'*

Then continue with Step 4.

Part No.	Designation – Location	Number
PAB907107A	⇒ Control unit for driver assistance systems	1 piece
N 91205201	⇒ Cheese head bolt with multiple-tooth head – Seat rail	4 pieces

    3.2   If the control unit for assistance systems matches the data in the **"Control unit OK (no replacement required)" field ,** the **control unit does not need to be replaced**. Continue with Step 4.

4   Check the control unit for front-end electronics (BCM1) and replace if necessary.

Control unit	Replacement of control unit required		Control unit OK (no replacement required)	
	Hardware release	Software release	Hardware release	Software release
Front-end electronics (BCM 1)	H10	less than 0690	H10	0690 (or higher)

4.1   If the front-end electronics control unit (BCM1) matches the data in the **"Replacement control unit required" field,** the **control unit must be replaced**. To this end, use the following part number (or its successor) and replace the front-end electronics control unit (BCM1).

For procedure, see:
⇒ *Workshop Manual '944919 Remove and install front-end electronics'*
and
⇒ *Workshop Manual '944955 Replacing front-end electronics control unit'*

Then continue with Step 5.

Part No.	Designation – Location	Number
971907063M	⇒ Control unit (BCM) for comfort system and vehicle electrical system for front end	1 piece

4.2   If the front-end electronics control unit (BCM1) matches the data in the **"Control unit OK (no replacement required)" field,** the **control unit does not need to be replaced**. Continue with Step 5.

5   Check rear-end electronics control unit (BCM2) and replace if necessary.

Control unit	Replacement of control unit required		Control unit OK (no replacement required)	
	Hardware release	Software release	Hardware release	Software release
Rear-end electronics (BCM 2)	H14	not relevant for the test	H15	0202 (or higher)

5.1 If the rear-end electronics control unit (BCM2) matches the data in the **"Replace control unit required" field,** the **control unit must be replaced**. To this end, use the following part number (or its successor) and replace the rear-end electronics control unit (BCM2).

For procedure, see:
⇒ *Workshop Manual '578919 Remove and install control unit for rear-end electronics'*
and
⇒ *Workshop Manual '578955 Replacing control unit for rear-end electronics'*

Then continue with Step 6.

Part No.	Designation – Location	Number
9Y0907064DK	⇒ Control unit, rear end – RoW	1 piece
9Y0907064DT	⇒ Control unit, rear end – Japan only	1 piece

5.2 If the rear-end electronics control unit (BCM2) matches the data in the **"Control unit OK (no replacement required)" field,** the **control unit does not need to be replaced**. Continue with Step 6.

6 Check the front left and right door control unit and replace if necessary.

Control unit	Replacement of control unit required	Control unit OK (no replacement required)
	Software release	Software release
Front left door control unit	0848	not 0848
Right front door control unit	0848	not 0848

6.1 If **software release 0848** is entered in one of the front left or front right control units, all four **door control units** (front left, front right, rear left and rear right) **and** the respective **switches for power windows must be replaced**. To this end, use the following part numbers (or their successors) and replace the control units and switches.

For procedure, see:
⇒ *Workshop Manual '577319 Remove and install front door control unit'*,
⇒ *Workshop Manual '587319 Remove and install rear door control unit'*,
⇒ *Workshop Manual '645819 Remove and install switch for power windows'*,
⇒ *Workshop Manual '577355 Replace front door control unit'*
and
⇒ *Workshop Manual '587355 Replace door control unit, rear'*

Then continue with Step 7.

Switch for power windows

Part No.	Designation – Location	Number
971959855C HOU	⇒ Switch for power windows – Passenger side – rear left – rear right	3 pieces
971959858C HOU	⇒ Switch for power windows, exterior mirror, luggage compartment/cargo space – Driver side	1 piece

Door control units for vehicles with one of the following M-Nos.:

- Closing aids for doors (GZ2)
- Rear electric sun blind for side windows (M-No. 3Y7)
- Lane Change Assist (M-No. 7Y1)

Part No.	Designation – Location	Number
PAB95979312	⇒ Door control unit – Driver side	1 piece
PAB95979212	⇒ Door control unit – Passenger side	1 piece
PAB95979512	⇒ Door control unit – rear	2 pieces

Door control units for vehicles without one of the following M-Nos.:

- Closing aids for doors (GZ2)
- Rear electric sun blind for side windows (M-No. 3Y7)
- Lane Change Assist (M-No. 7Y1)

Part No.	Designation – Location	Number
PAB959793	⇒ Door control unit – Driver side	1 piece
PAB959792	⇒ Door control unit – Passenger side	1 piece
PAB959795A	⇒ Door control unit – rear	2 pieces

6.2 If **software release 0848** is not entered in any of the front left or front right door control units, the **control units do not need to be replaced**.
Continue with Step 7.

7 Check the Connect control unit and replace if necessary.

Control unit	Replacement of control unit required	Control unit OK (no replacement required)
	Hardware release	Hardware release
Connect	H08	not H08

7.1 If the Connect control unit matches the data in the **"Replacement of control unit required" field,** the **control unit must be replaced**. To this end, use the following part number (or its successor) and replace the control unit for Connect.

For procedure, see:
⇒ *Workshop Manual '912519 Remove and install external communication control unit'*
and
⇒ *Workshop Manual '912555 Replacing control unit – external communication'*

Then continue to adjust with ⇒ *Technical Information '912555 vehicle data'*

Part No.	Designation – Location	Number
9Y0035283J	⇒ Control unit for emergency call module and communication unit (Connect) – NAR	1 piece
992035286F	⇒ Control unit for emergency call module and communication unit (Connect) – RoW	1 piece

Additional parts required for replacing the Connect control unit.

N 91205201	⇒ Cheese head bolt with multiple-tooth head – Seat rail	1 piece

7.2 If the Connect control unit matches the data in the **"Control unit OK (no replacement required)" field,** the **control unit does not need to be replaced**.
Continue adjusting with ⇒ *Technical Information '912555 vehicle data'*.

Match vehicle data

> **NOTICE**

IMPORTANT: PLEASE READ

Work Procedure: 1   In the control unit selection (**'Overview'** menu), press •F7" to call up the Additional menu.

2   Select the **'Vehicle data maintenance with PIWIS ONLINE'** function and press •F12" ('Next') to confirm.

3   Press •F12" ('Next') to skip the displays containing information about vehicle description, colors / materials and X numbers.

4   On the second page of the M-numbers, add the coding value **'S4A - CAREPAKET 2.0 (SW- AND HW-UPDATE)'** to the vehicle data. Moreover, for the relevant coding value, click on the tick in the "Installed" field to select the value.
Make sure that the 'Installed' column is subsequently **ticked** and that the pen symbol is displayed in the 'Changed' column.
Then press •F12" ('Next') to close the PR numbers display.

5   Press •F8" in the overview that is then displayed to save the changed vehicle data.

6   Once you have saved the vehicle data, press •F11" ('Back') to return to the control unit selection screen.

Check the software of the PCM central computer, the front display/control panel and the head-up display and update if necessary.

Work Procedure: 1   Start extended logging using the key combination •Ctrl" + •L" on the PIWIS Tester.

> **ⓘ   Information**
>
> Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted.

2   Select the control unit for 'Central computer (PCM)'.

3   Select the 'Extended identification' menu.

4   Read out the software release of the central computer (PCM).

- The **software release** is **2870** or higher. Continue with Step 6.
- The **software release** is **lower than 2870**, re-programming the central computer (PCM). Continue with Step 5.

5   Re-program the control unit for the central computer (PCM).

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

Prepare SD memory card with the required software (depending on country release).

Overview of the software to be used for the central computer (PCM): See ⇒ *Technical Information '912555 Overview of PiUS data records'*

Required PIWIS Tester software release:	**42.600.020** (or higher)
Type of control unit programming:	In the control unit selection (**'Overview'** menu), select the **PCM central computer** control unit and select the **'Service/repairs'** menu. Select the **'Install software update'** function and press •F12" ('Next') to perform the software update.
Programming code:	**Z8R8G**
Programming sequence:	Read and follow the **information and instructions for the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software releases starts as soon as programming and coding is complete.
Programming time (up to):	**35 minutes**
Control unit programmed during this action:	• Control unit for central computer (PCM) North America (NAR): **2870** • Control unit for central computer (PCM) Rest of World (RoW): **2872** Following control unit programming, the software release can be read out from the relevant control unit using the PIWIS Tester in the menu ⇒ 'Incremented identifications'.

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:	Repeat the control unit programming by restarting programming. Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional information if programming is aborted'*

6   Check the software status of the display/control panel and update if necessary.

    6.1   In the overview of the control units, select the 'central computer (PCM)' control unit.

    6.2   Select the 'Extended identification' menu.

    6.3   Read out software release of the display/control panel.

        •   The **software release** is **0120** or higher. Continue with Step 8.
        •   The **software release** is **lower than 0120**. Continue with Step 7.

7   Re-programming PCM display and control panel.

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

Prepare SD memory card with the **required** software (depending on country release).

Overview of the software to be used for the display/control panel: See ⇒ *Technical Information '9X00IN Overview of PiUS data records'*

Required PIWIS Tester software release:	**42.600.020** (or higher)
Type of control unit programming:	In the control unit selection (**'Overview'** menu), select the **PCM central computer** control unit and select the **'Service/repairs'** menu. Select the **'Install software update'** function and press •F12" ('Next') to perform the software update.
Programming code:	**V5F8A**

Programming sequence:	Read and follow the **information and instructions for the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software releases starts as soon as programming and coding is complete.
Programming time (up to):	**35 minutes**
Control unit programmed during this action:	Control unit for central computer (PCM) / display/control panel: **0120** Following control unit programming, the software release can be read out from the relevant control unit using the PIWIS Tester in the menu ⇒ 'Incremented identifications'.
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:	Repeat the control unit programming by restarting programming. Additional instructions for aborted programming ⇒ *Technical Information '9X00IN Additional information if programming is aborted'*

8   If the vehicle is connected via a head-up display (M-No. KS1), check the software status of the head-up display and update it if necessary.
Otherwise continue with: ⇒ *Technical Information '9X00IN Re-programming control unit for chassis control (PASM)'*

  8.1   Select the 'Head-up display' in the overview of the control units.

  8.2   Select the 'Extended identification' menu.

  8.3   Read out the software release of the head-up display.

  •   The **software release** is **1846** or higher. Continue re-programming with the ⇒ *Technical Information '9X00IN control unit for chassis control (PASM)'.*
  •   The **software release** is **lower than 1846**. Continue with Step 9.

9　Re-programming head-up display.

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

Required PIWIS Tester software release:	**42.600.020** (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:	**S3H5B**
Programming sequence:	Read and follow the **information and instructions for the PIWIS Tester** during the guided programming sequence.
Programming time (approx.):	**2 minutes**
Software release programmed during this action:	**Head-up display** Software release: **1846**
	Following control unit programming, the software release can be read out in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of a termination in the control unit programming:	• Switch the ignition off and on again. • Read out and delete the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - "Rework" section'*. • Repeat the control unit programming by entering the programming code again.
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"'*.

Re-programming control unit for chassis control (PASM)

Work Procedure: 1　In the Overview of the control units, select the control unit for chassis control (PASM).

2　Select the 'Maintenance/repairs' menu.

3　Select "Commissioning and calibration" procedure and carry out menu-guided operation.

4   Select "Programming after control unit replacement" procedure, start with •F8" and perform menu-guided operation.

Programming time (approx.):	**15 minutes**
Software release programmed during this action:	**Control unit for chassis control (PASM)** Software release: **0924**
	Following control unit programming, the software release can be read out in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of a termination in the control unit programming:	• Switch the ignition off and on again. • Read out and delete the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - "Rework" section'.* • Repeat the control unit programming by entering the programming code again.
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"'.*

Re-programming control unit for assistance systems

Work Procedure: 1   If not done yet, start extended logging using the key combination •Ctrl" + •L" on the PIWIS Tester.

   ℹ️   **Information**

Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted.

2   Re-program control unit for assistance systems.

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

Required PIWIS Tester software release:	**42.600.020** (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:	**H6U4U**
Programming sequence:	Read and follow the **information and instructions for the PIWIS Tester** during the guided programming sequence. During programming, the **assistance systems control unit** is **re-programmed** and then **automaticallyre-coded**. **Switch the ignition off and then on again only when prompted to do so by the PIWIS Tester because otherwise, programming will be interrupted and will then have to be started again.**
Programming time (approx.):	**220 minutes**
Software release programmed for the control unit for assistance systems during this action: Control units programmed during this action:	**Control unit for assistance systems** Software release: **0295** • Instrument cluster • Gateway • Connect • Distance measuring sensor (ACC) • Power steering (EPS) • Brake electronics (PSM, including parking brake) • Front-end electronics (BCM1) • Rear-end electronics (BCM2) • Night vision system • Front driver side door • Front passenger side door • Rear driver side door • Rear passenger side door • Right radar sensor, front corner radar • Left radar sensor, front corner radar • Lane Change Assist, right (master) • Lane Change Assist, left (slave) • Airbag (SC)
	Following control unit programming, the software release can be read out in the 'Extended identifications' menu using the PIWIS Tester.

Procedure in the event of a termination in the control unit programming:	• Switch the ignition off and on again. • Read out and delete the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - "Rework" section'.* • Repeat the control unit programming by entering the programming code again.
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"'.*

Follow-up actions

Work Procedure: 1   Read out the fault memories of all control units.

2   If fault memory entries in the ACC control unit refer to recalibration, recalibrate the ACC control unit.

3   Delete the fault memories of all control units.

ℹ️   Information

If fault memory entries for individual control units cannot be deleted, proceed as follows:

•   Switch off the ignition.

•   Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.

•   Lock the vehicle using the driver's key.

•   Wait approx. 5-10 minutes before unlocking the vehicle again.

•   Start the engine briefly and then stop it again.

•   Switch off the ignition and wait approx. 10 seconds before switching it back on again.

•   Plug the PIWIS Tester diagnostic connector into the diagnostic socket again and restore communication with the vehicle.

•   Read the fault memory again and delete any fault memory entries that are stored.

4   Create Vehicle Analysis Log (VAL) using the PIWIS Tester. Mark the vehicle analysis log you have just created with the attribute **"Post-VAL"** and return it using the PIWIS Tester.

5   Check the software versions of the updated control units using the vehicle analysis log (VAL) created after repair.

Control unit	Software release
Assistance systems	0295
Chassis control (PASM)	0924
Head-up display (M-no. KS1)	1846
Display and operator control panel	0120
Central computer (PCM)	North America (NAR): 2870 Rest of World (RoW): 2872

Symptom correction

Work
Procedure:

iPhone cannot be connected to the vehicle after the update:

1   Delete all Bluetooth connections between iPhone and vehicle.

2   Select the 'Settings' application on the iPhone and select the 'Wi-Fi' menu.

3   Delete all vehicle networks under 'Known networks'.

4   Switch off the ignition, lock the vehicle and place the driver's key outside the vehicle reception area (distance to the vehicle at least 5 meter/ 16 ft).

5   Restart iPhone (switch off and on again).

6   After waiting for 30 minutes, unlock the vehicle, switch on the ignition and connect the iPhone to the vehicle.

Working position and PCSS encryption

![i] **Information**

The working positions listed below must be selected based on the actual expend of the respective vehicle.

Describe the working positions created specifically for this action and include the following scopes:

91020150 - Checking central control unit for assistance systems
Includes:

- Connecting and disconnecting battery charger

- Connecting and disconnecting PIWIS Tester

- Creating 2x Vehicle Analysis Log (VAL)

- Reading out and deleting fault memories

- Checking hardware and software release of the control units

- Setting PR number

- Starting logging

- Re-programming control unit for chassis control (PASM)

- Control unit programming with code H6U4U

- Checking software status of all programmed control units

91020151 - Checking central control unit for assistance systems (with HeadUp Display M-No. KS1)
Includes:

- Content analogous to "91020150 - Checking central control unit for assistance systems"

- Re-programming head-up display control unit using code V5F8A

91104980 - Reworking front display and control panel

- Re-programming front display and control panel with code Z8R8G

91524980 - Reworking central computer

- Re-programming central computer with code Z8R8G

57735000 - Reworking front door control units
Includes:

- Replacing front left and right door control unit

- Replacing rear left and right door control unit

- Replacing front left and right switch for power windows

- Replacing rear left and right switch for power windows

Working position:

APOS	**Labor** operation	I No.
91020150	Checking central control unit for assistance systems	
91020151	Checking central control unit for assistance systems (with Head-up display M-No. KS1)	
91104980	Reworking front display and control panel	
91524980	Reworking central computer	
91025500	Replacing central control unit for assistance systems	
94495500	Replacing front-end electronics control unit	
57895500	Replacing control unit for rear-end electronics	
57735000	Reworking control units for front doors	
90355500	Replacing gateway control unit (RoW)	
90355503	Replacing gateway control unit (USA)	
91255500	Replacing control unit – external communication	
44950300	Measuring vehicle front/rear (steel chassis)	
44950303	Measuring vehicle front/rear (air suspension system)	
27851550	Adjusting control unit for distance measuring sensor	

PCSS encryption:

Location (FES5)	91020	Central control unit for assistance systems
Damage type (SA4)	9735	Repair according to PAG instructions

Overview of PiUS data records

Information

The central computer (PCM) software update is performed using a SD storage card. The software version that is specific to each region must be **downloaded** using the software tool **PiUS** (Porsche integrated Update Service) and must be **installed** on a blank SD storage card.

Pay particular **attention** to the following:

- For this PCM software update, a USB storage medium must be used.

- To use the software tool, **one** blank or re-writable USB storage medium is required for **each** individual software.

- The software available in PiUS must **only** be used in accordance with the instructions provided in a Technical Information published for this purpose.

The software listed here may **only** be used for the measure **described here**. Damage to the central computer cannot be ruled out if the software is used on other vehicles.

You will find further information on installation and use for the PiUS software tool in the PPN portal under ***PiUS (Porsche integrated Update Service) goes live***.

Overview: **PCM software update:**

Part No.	Designation – Region	Vehicle allocation
9Y0909400D	SD memory card for PCM update – North America – Mexico	I-No. ER3 / ER4

Software update of display and control panel:

Part No.	Designation
9Y0909400F	SD memory card for central display update

Checklist

Work step:	Comple-ted:
1. Vehicle Analysis Log (pre-VAL) created?	
2. Gateway control unit checked (hardware H06, H08 or H16)?	
3. Assistance systems control unit checked (hardware H08/H09 and software 0291)?	
4. Front-end electronics control unit (BCM1) checked (hardware H10 and software 0690)?	
5. Rear-end electronics control unit (BCM2) checked (hardware H15 and software 0202)?	
6. Front door control units checked (software not 0848)?	
7. Connect control unit checked (hardware not H08)?	
8. Control devices with incompatible hardware/software release replaced?	
9. Vehicle data adjusted (M-No. S4A set)?	
10. Software release of the central computer checked and updated if necessary (target 2870)?	
11. Software release of the display/control panel checked and updated if necessary (target 0120)?	

12. On vehicles with head-up display (M-No. KS1) software release checked and updated as needed (target 1846)?	
13. Control unit for chassis control (PASM) reprogrammed?	
14. Sequence "Re-program control unit assistance systems" carried out?	
15. Vehicle analysis log (Post-VAL) created?	
16. Software versions of the updated control units checked?	
Vehicle Ident. No. (VIN):	
Signature of Porsche Center:	