WKC6 - Re-programming Air-conditioning Control Unit and Various Other Control Units (Workshop Campaign)

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

Model Year: **2019**

Subject: **Re-programming air-conditioning control unit and various other control units**

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.

Information: **Due to incorrect servo motor control, the air-conditioning system flaps on the affected vehicles may not be moved to the required positions at times.**
If this happens, the temperature distribution and air distribution in the interior of the vehicles can differ from the selected settings.

To prevent this from happening, the air-conditioning control unit must be re-programmed with an updated data record.

The software of other control units will also be updated at the same time*. This software update contains improvements, for example, for the systems

- Driver assistance
- Instrument cluster
- Chassis control

* You will find an overview of the problems and symptoms that will also be corrected with the software update in the attachment under ⇒ *Technical Information 'Overview of problems and symptoms that will be corrected with the software update'*.

Action Required:
- Update software of the affected control units using the PIWIS Tester or SD card. For details of affected control units, see overview below.
- Update Onboard Owner's Manual
- Replace Owner's Manual in the on-board folder in the vehicle with an updated version

Control unit	Programming time	Update via	
		SD card	PIWIS Tester
Assistance systems (bootloader)*	approx. 8 minutes		■

Assistance systems (application software) Variant A or A0 Variant B or C	 up to 100 minutes** up to 30 minutes**	 ■	 ■
PCM 5.0**	approx. 40 minutes	■	
Combined software update of various control units **Includes:** – Brake electronics (PSM incl. parking brake) – Chassis control (PASM) – Lane Change Assist, left and right** – Radar sensor for front corner radar, left and right** – Roll stabilization (PDCC)** – Air-conditioning system	up to 40 minutes*		■
Instrument cluster*	approx. 60 minutes		■

***** Depending on the software version of the relevant control unit

****** Depending on equipment

Information

Important points that must be observed before carrying out the software update:

- Set the battery charger to a charge voltage of **14.8 V**
- Set the maximum charging time of the battery charger to at least **7 hours**
- Place driver's key in **emergency start tray**
- **Read and follow** instructions for carrying out programming
- Operate the PIWIS Tester using the power supply unit/docking station

Affected Vehicles: Only the vehicles assigned to the campaign (see also PIWIS Vehicle Information). This campaign affects 6,344 vehicles in North America.

Information

To make warranty processing easier, each vehicle is assigned **one** campaign scope. The assignment is based on the data available for the respective vehicle relating to the software versions installed on the control units.
Irrespective of the assigned campaign scope, **all steps** described in the Technical Information must be **carried out** in order to ensure that all affected control units have the required software version after carrying out the campaign.

Exception: Steps that are required only for certain vehicle models must be carried out only on this vehicle.

Parts required

Parts Info: **Owner's Manual**

An overview of the required Owner's Manuals is provided under ⇒ *Technical Information 'Overview of order numbers for Driver's Manuals'*.

Required tools

Information

A blank or re-writable SD memory card is required for installing the Onboard Owner's Manual.

The Porsche dealers were provided with a blank SD memory card for installing the Onboard Owner's Manual during the market launch of the Panamera. The SD memory card must be re-used as part of the workshop equipment and remain in the Porsche dealership.
The SD memory card therefore must not be left in the vehicle or handed over to the customer.

If there is no **SD memory card** available for carrying out this campaign, a replacement SD memory card must be purchased from the PET or on the open market. The costs for the SD memory card cannot be invoiced under the workshop campaign number.

Tools:

- Battery charger with a current rating of **at least 90 A** and a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 - Battery charger 90A**
- **9900 - PIWIS Tester 3** with PIWIS Tester test software version **38.400.020** (or higher) installed
- **SD memory cards (for PCM and assistance systems update)**

Information

The **assistance systems update** is performed using an **equipment-dependent** SD memory card and the **PCM update** is performed using a **specific SD memory card for the region**. The SD memory cards for the assistance systems update and the PCM update must be **re-used** as part of the workshop equipment and **remain in the Porsche dealership**. The SD memory cards **must not therefore be left in the vehicle** or **handed over to the customer**.

Alternatively, if PiUS is not used, SD cards can be obtained from the spare parts system. The following specifications apply here:

- **Blank SD memory card for installing Onboard Owner's Manual**, e.g. 000721990WW999 Blank SD card

Overview of SD memory cards		
Part No.	**Designation**	**Vehicle assignment**
9Y0919866B	SD memory card for **assistance systems update**	Assistance systems variant **B**
9Y0919866A	SD memory card for **assistance systems update**	Assistance systems variant **C**
9Y0919360D	SD memory card for **PCM update**	I-no. **ER3** (North America)

Information

From now on, you can also create the SD cards mentioned in this campaign **yourself**.

To do this, **download** the software for the **required** SD card using the SD card tool **PiUS** (Porsche integrated Update Service) and **install** it on a blank SD card.

Pay particular attention to the following:

- The **name** of the software in PiUS **corresponds to** the respective **part number** of the SD card.
- For using the software tool, **one** blank or re-writable SD card 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 (SD cards) mentioned here must **only** be used on the **vehicles assigned to the campaign**. An exception to this can **only** be granted via another Technical Information.

You will find further information on how to install and use the PiUS software tool in the PPN under "**PiUS (Porsche integrated Update Service) goes live**" (PPN portal ⇒ Dr. Ing. h.c. F. Porsche AG ⇒ Aftersales ⇒ Workshop ⇒ PIWIS ⇒ Blog ⇒ 2018 ⇒ June ⇒ 21).

Preparatory work

NOTICE

Abnormal termination of control unit programming

- **Increased current draw during programming can cause a drop in voltage, which can result in the abnormal termination of the programming process.**
- **Due to the long programming time, the charging process can end prematurely, resulting in the abnormal termination of the programming process, if a sufficiently long charging time is not set for the battery charger.**

⇒ **Before starting control unit programming, connect a suitable battery charger set to a charging voltage of 14.8 V and a charging current of at least 90 A to the vehicle.**

⇒ **Set a maximum charging time of at least 7 hours in the battery charger menu if possible before starting control unit programming.**

⇒ **Route the line between the PIWIS Tester and the vehicle communication module (VCI) without tension to prevent the line from slipping out.**

⇒ **Make sure that the connectors are inserted fully into the PIWIS Tester and into the diagnostic socket.**

⇒ **Connect the PIWIS Tester to the power supply unit.**

NOTICE

Control unit programming will be aborted if the WLAN connection is unstable.

- **An unstable WiFi connection can interrupt communication between the PIWIS Tester and the vehicle communication module (VCI). As a result, control unit programming may be aborted.**

⇒ **During control unit programming, always connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable.**

NOTICE

Control unit diagnosis will be aborted if the driver's key is not recognized

- **If the driver's key is not recognized in the vehicle, control unit diagnosis cannot be started or will be interrupted.**

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

Information

The new Cayenne is equipped as standard with a **lithium starter battery**, which must only be charged using suitable battery chargers.
For further information about the battery chargers to be used, see:

- ⇒ *Workshop Manual '2706IN General information on the 12-volt lithium-ion battery'*
- ⇒ *Workshop Manual '270689 Charging vehicle electrical system battery'*

Information

Work Procedure: 1 Connect a battery charger that is suitable for lithium starter batteries with a current rating of at least 90 A (e.g. **VAS 5908 - Battery charger 90A**) to the jump-start terminals in the engine compartment.
For instructions, see ⇒ *Workshop Manual '2706IN External power connection, jump-lead starting'*.

Pay particular attention to the following points:

- Set the charging voltage to **14.8 V**.
- Set a maximum charging time of **at least 7 hours**

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

Emergency start tray

3 Switch on the ignition.

4 **9900 - PIWIS Tester 3** must be connected to the vehicle communication module (VCI) via the **cable**. Then connect the communication module to the vehicle and switch on the PIWIS Tester.

Due to the long programming time, the **PIWIS Tester** must be **operated via the power supply unit**.

5 On the PIWIS Tester start screen, call up the **'Diagnostics'** application.
The vehicle type is then read out, the diagnostic application starts and the control unit selection screen is populated.

6 Create vehicle analysis log (VAL) using the PIWIS Tester.
Mark the vehicle analysis log you have just created with the attribute "Initial VAL" and after carrying out the campaign, return it using the PIWIS Tester.

7 Read out fault memory.

Information

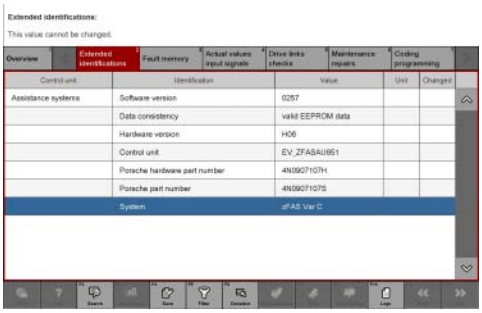
If there are faults in the control units, these must first be **found** and **corrected**. This work **cannot** be invoiced under the workshop campaign number.

Reading out software version installed in the vehicle and assistance system variant

Work Procedure: 1 Select the **Assistance systems** control unit in the control unit selection screen (**'Overview'** menu) and confirm your selection by pressing •F12 “ ('Next').

2 Once the control unit for assistance systems has been found and is displayed in the 'Overview', select the **'Extended identifications'** menu.

3 Read out the value in the 'Identification' column under 'Software version' and under 'System' and write it down ⇒*Assistance system variant*.



Assistance system variant

4 Depending on the software version that was read out, go to the next step as described below.

- **Software version isless than 0290**:

Continue with Step 5 and re-program the bootloader of the control unit for assistance systems first.

- **Software version is 0291: There is no need to program the control unit for assistance systems. Subsequent procedure:**

- Vehicles **without** I-no. ER3 (North America): Continue with ⇒*Technical Information '2706IN Vehicles with I-no. ER3: Re-programming Porsche Communication Management (PCM)'*.
- Vehicles with I-no. **ER3** (North America): Continue with ⇒*Technical Information '2706IN Performing software update of various control units'*.

- **Software version is 0290and system is "zFAS Var A" or"zFAS Var A0"**:

Continue with ⇒*Technical Information '2706IN Re-programming control units for assistance systems - variant A'*.

- **Software version is 0290 and system is "zFAS Var B"or"zFAS Var C"**:

Continue with ⇒*Technical Information '2706IN Re-programming control unit for assistance systems - variant B or variant C'*.

5 **Re-program control unit for assistance systems (bootloader)**.

The basic procedure for control unit programming is described in the Workshop Manual ⇒*Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

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

Required PIWIS Tester software version:	**38.400.020** (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:	**B7A5Q**

Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. The **bootloader** for the **control unit for assistance systems** is **re-programmed** during the programming sequence. **Do not interrupt programming.**
Programming time (approx):	**8 minutes**
Software version programmed during this campaign:	**B250** Following control unit programming, the software version can be read out of the control unit for assistance systems in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	Replace control unit.
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"'*.

Depending on the variant of the installed assistance system that you read out and wrote down earlier, go to the next step as described below.

- For **"zFAS Var A"** or **"zFAS Var A0"**, continue with ⇒ *Technical Information '9X00IN Re-programming control units for assistance systems - variant A'*.
- For **"zFAS Var B"** or **"zFAS Var C"**, continue with ⇒ *Technical Information '9X00IN Re-programming control unit for assistance systems - variant B or variant C'*.

Information

If the control unit for assistance systems (bootloader) is re-programmed and the variant of the control unit for assistance systems was **not** read out beforehand, the installed variant can be determined using the Porsche part number.
To do this, read out the value under 'Porsche part number' in the **'Extended identifications'** menu in the selected control unit for **assistance systems**.

- **For 4N6907107 or 4N6907107A, continue with ⇒ *Technical Information '9X00IN Re-programming control units for assistance systems - variant A'*, Perform Procedure 1.**
- **For 4N6907107Bor 4N6907107C, continue with ⇒ *Technical Information '9X00IN Re-programming control unit for assistance systems - variant B or variant C'*, Perform Procedure 2.**

Re-programming control units for assistance systems - variant A

Work Procedure: 1 The basic procedure for control unit programming is described in the Workshop Manual ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'*.

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

Required PIWIS Tester software version:	**38.400.020** (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:	**Z9B4D**
Programming sequence:	Once the update has started, the PCM is restarted and the individual components and modules are then updated. Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. The **assistance system control unit** is **re-programmed** during the programming sequence. **Do not interrupt programming and coding.**
Programming time (approx):	**65 – 100 minutes*** * The time required for the update depends on the respective vehicle equipment.
Software version programmed during this campaign:	**0291** Following control unit programming, the software version can be read out of the control unit for assistance systems in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	Repeat 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 "Fault finding"'*.

After programming the control unit for assistance systems variant A or A0, proceed as follows:

- For vehicles with I-no. **ER3** (North America), continue with ⇒ *Technical Information '9X00IN Re-programming PCM'*.
- For vehicles **without** I-no. ER3, continue with ⇒ *Technical Information '9X00IN Performing software update of various control units'*

Re-programming control unit for assistance systems - variant B or variant C

Work Procedure: 1 **Open the glove compartment and remove any inserted SD card from the SD card slot. To do this, first press on the SD card to release it. Then, pull the SD card out of the card slot.**

NOTICE

Using the SD cards on vehicles that are not assigned to this campaign

- **Risk of damage to control unit**

⇒ **Use the specified SD cards only for the vehicles assigned to the campaign.**

2 Depending on the variant of the control unit for assistance systems you read out earlier, insert the relevant **SD card** for the **assistance systems update** into the **SD card slot** in such a way that the bevelled edge of the SD card is at the front right.

Part No.	Designation	Assistance systems variant
9Y0919866B	SD memory card for assistance systems update	B
9Y0919866A	SD memory card for assistance systems update	C

3 Perform assistance systems software update using the PIWIS Tester.

3.1 Select the **Assistance systems** control unit in the control unit selection screen (**'Overview'** menu) and confirm your selection by pressing •F12 “ ('Next').

3.2 Once the assistance systems control unit has been found and is displayed in the 'Overview', select the **'Maintenance / repairs'** menu.

3.3 Select the **'Software update'** function and press •F12 “ ('Next') to perform the software update.

3.4 Confirm the information that is displayed by pressing •F12 “ ('Next').

3.5 Press •F8 “ ('Start') to start.

3.6 After checking the software data, programming starts automatically.

Once the update has started, the PCM is restarted and the individual components and modules are then updated.

The time required for the update depends on the respective vehicle equipment and can be up to 30 minutes.

During the update, check the PIWIS Tester display and follow the instructions. The PCM is **restarted several times** during the software update. The PCM screen remains **dark** for up to **3 minutes**.

3.7 Once the update has been performed successfully, a tick will appear in the Status column in the 'Software update' field.
Press • F12 “ ('Next') to confirm.

4 Open the glove compartment and remove the inserted SD card from the SD card slot.

5 Re-code assistance systems automatically.

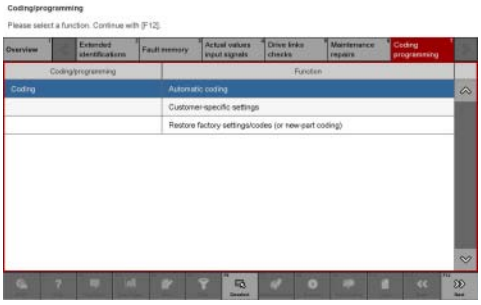
5.1 Select the **'Assistance systems'** control unit in the control unit selection screen (**'Overview'** menu) and confirm your selection by pressing • F12 “ ('Next').

5.2 Once the control unit for assistance systems has been found and is displayed in the overview, select the **'Coding / programming'** menu.

5.3 Select the **'Automatic coding'** function and press • F12 “ ('Next') to start coding ⇒ *Automatic coding*.

5.4 When coding is complete, the message “Coding has been completed successfully” is displayed and a tick appears in the 'Status' box.

If coding is not completed successfully (error message “Coding was not completed successfully”), coding must be **repeated**.



Automatic coding

5.5 When coding is completed successfully, continue by pressing • F12 “ (‘Next’) to return to the start page of the **'Codings / adaptations'** menu.

5.6 Select the **'Overview'** menu and press • F11 “ ('Back') to return to the control unit selection screen.

Once the control unit for assistance systems variant B and C has been programmed and coded, proceed as follows:

- For vehicles with I-no. **ER3** (North America), continue with ⇒ *Technical Information '9X00IN Vehicles with I-no. ER3: Re-programming Porsche Communication Management (PCM)'*.
- For vehicles **without** I-no. ER3, continue with ⇒ *Technical Information '9X00IN Performing software update of various control units'*.

Vehicles with I-no. ER3: Re-programming Porsche Communication Management (PCM)

Work Procedure: 1 Read out the current Porsche Communication Management (PCM) software version.

1.1 Select the **PCM 5.0** control unit in the control unit selection screen (**'Overview'** menu) and press •F12 " ('Next') to confirm your selection.

1.2 Once the control unit has been found and is displayed in the 'Overview', select the **'Extended identifications'** menu.

1.3 Read out the value in the 'Identification' column under "Software version".

- If the software version is **2483**, continue with Step 2.
- For **all other** software versions, **no** PCM 5.0 software update is necessary. In this case, continue with ⇒ *Technical Information '9X00IN Performing software update of various control units'*.

2 Open the glove compartment and remove any inserted SD card from the SD card slot.
To do this, first press on the SD card to release it. Then, pull the SD card out of the card slot.

NOTICE

Using the SD cards on vehicles that are not assigned to this campaign

- **Risk of damage to control unit**

⇒ **Use the specified SD cards only for the vehicles assigned to the campaign.**

3 **Insert SD card** for the **PCM update** into the **SD card slot** in such a way that the bevelled edge of the SD card is at the front right.

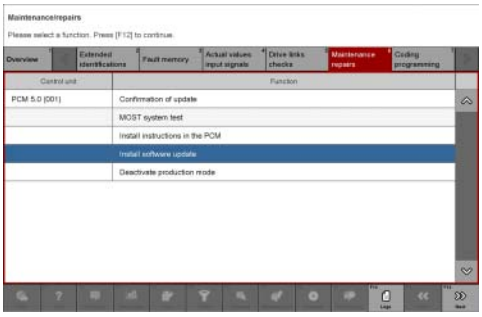
Part No.	Designation – Region	Vehicle assignment
9Y0919360D	SD memory card for PCM update – North America	I-no. ER3

4 Start the PCM 5.0 software update using the PIWIS Tester.

4.1 Select the **PCM 5.0** control unit in the control unit selection screen (**'Overview'** menu) and press •F12 " ('Next') to confirm your selection.

4.2 Once the PCM 5.0 control unit has been found and is displayed in the 'Overview', select the **'Maintenance / repairs'** menu.

4.3 Select the **'Install software update'** function and press •F12 “ ('Next') to perform the software update ⇒*Installing PCM 5.0 software update*.

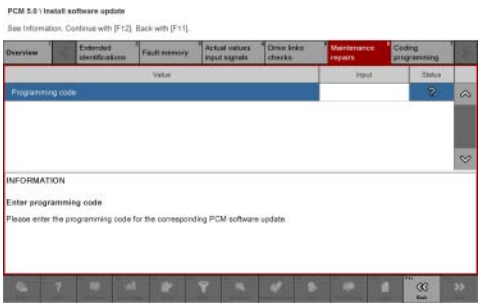


Installing PCM 5.0 software update

4.4 Confirm the information that is displayed by pressing •F12 “ ('Next').

4.5 After meeting the preconditions, confirm by ticking the 'Status' column. Then, press •F12 “ ('Next') to continue.

4.6 Enter the programming code **M2T4V** in the relevant column ⇒*Entering PCM 5.0 programming code* and press •F12 “ ('Next') to confirm ⇒*Entering PCM 5.0 programming code*.



Entering PCM 5.0 programming code

4.7 Press •F8 “ ('Start') to start.

4.8 After checking the software data, press •F8 “ ('Start') to start programming.

Once the update has started, the PCM is restarted in the Update menu and the individual components are then updated.

The time required for the update depends on the respective vehicle equipment and can be up to 40 minutes.

Read and follow the instructions displayed on the PIWIS Tester during the update. The PCM is **restarted several times**. The PCM screen remains **dark** for up to **3 minutes**.

Information

Once the PCM software update has been performed, the last step 'Check PCM status' is next. An error message may be displayed here. This error message can be ignored if there is no active fault memory entry in the PCM fault memory after carrying out this campaign.

If there is an active fault memory entry, it must be **found** and **corrected**.

4.9 Once the update is complete, an overview is displayed showing processes that have been completed successfully marked with a tick in the Status box. Press •F12 “ ('Next') to confirm.

- **Software version programmed during this campaign: 9807**

Following control unit programming, the software version can be read out of the PCM 5.0 control unit in the 'Extended identifications' menu using the PIWIS Tester.

5 Open the glove compartment and remove the inserted SD card from the SD card slot.

Once the Porsche Communication Management (PCM) has been programmed, continue with ⇒ *Technical Information '9X00IN Performing software update of various control units'*.

Performing software update of various control units

Information

The PIWIS Tester **automatically** performs the programming sequence described below. This does not require any interaction with the PIWIS Tester.
Control units that are not installed are skipped automatically.

The time required for the update depends on the respective vehicle equipment and can be up to **40 minutes**.

The following control units are **re-programmed** and then **re-coded** in the specified sequence:

- Brake electronics (PSM incl. parking brake)
- Chassis control (PASM)
- Lane Change Assist 2, left*
- Lane Change Assist 1, right*
- Radar sensor for front corner radar 1*
- Radar sensor for front corner radar 2*
- Roll stabilization (PDCC)*
- Air conditioning

***** Depending on equipment

WARNING

Electrically moved side windows and rear spoiler

- **Danger of limbs being trapped or severed**
- **Risk of damage to components**

⇒ **Do not reach into the danger area.**

⇒ **Keep third parties away from the danger area.**

⇒ **Do not move components or tools into the danger area.**

⇒ **Retract roll-up sun blinds on the rear side windows before starting programming or coding.**

1 **For specific information on control unit programming during this campaign, see the table below:**

Required PIWIS Tester software version:	**38.400.020** (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:	**V4S6G**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Several control units** are **re-programmed** and **re-coded** during the programming sequence. **Do not interrupt programming and coding.**
Programming time (approx.):	**up to 40 minutes*** * The time required for the update depends on the respective vehicle equipment.
Software versions programmed during this campaign:	• Brake electronics (PSM incl. parking brake) 0101
	• Chassis control (PASM) 0918
	• Lane Change Assist, left and right* 0266
	• Radar sensor for front corner radar 1 and 2* 0266
	• Control unit for roll stabilization (PDCC)* 0412
	• Air-conditioning control unit 1040
	Following control unit programming, the software version can be read out of the relevant control unit in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by entering the programming code again. During **repeated** control unit programming, all control units that have already been programmed successfully are automatically **skipped** and are **not** programmed 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 "Fault finding"'*.

2 Carry out teaching processes.
Once programming and coding has been performed, commissioning and teaching processes for the servo motors for the air-conditioning flaps are **activatedautomatically** by the PIWIS Tester.

To do this, **follow** the **instructions** displayed on the Tester and **carry out** the relevant teaching processes.

Once various control units have been programmed, continue with ⇒ *Technical Information '9X00IN Reading out software versions of the instrument cluster and re-programming instrument cluster if necessary'*.

Reading out software versions of the instrument cluster and re-programming instrument cluster if necessary

1 Read out the current software versions of the instrument cluster

1.1 Select the **Instrument cluster** control unit in the control unit selection screen (**'Overview'** menu) and confirm your selection by pressing • F12 " ('Next').

1.2 Once the instrument cluster control unit has been found and is displayed in the 'Overview', select the **'Extended identification'** menu.

1.3 Read out the value in the 'Identification' column under "Software version".

Depending on the software version that was read out, go to the next step as described below

- Software version is **less than** 0905, continue with Step 2 and re-program the instrument cluster.
- Software version is **0905** or **higher**, continue with ⇒ *Technical Information '9X00IN Concluding work'*

2 Re-program the instrument cluster
For specific information on control unit programming during this campaign, see the table below:

Required PIWIS Tester software version:	**38.400.020** (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:	**D2D2Q**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. The **instrument cluster** and - depending on the instrument cluster hardware - the **control unit for brake electronics (PSM incl. parking brake)** are **re-programmed** and then **re-coded automatically** during the programming sequence. **Do not interrupt programming and coding.**

Programming time (approx.):	**60 minutes**
Software version programmed during this campaign:	Instrument cluster (HW11): **0905** Following control unit programming, the software version can be read out of the relevant control unit in the 'Extended identifications' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	Repeat 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 "Fault finding"'*.

Once the instrument cluster has been programmed, continue with ⇒ *Technical Information '9X00IN Concluding work'*.

Concluding work

Information

The currently **valid version** of the Onboard Owner's Manual is **available** online **since April 17, 2019**.

The Onboard Owner's Manual is downloaded from the backend for each specific vehicle. The Tester **must** be **connected online** in order to do this.

A blank SD card is required for installing the onboard operating instructions (approx. 100 MB). If there is already data stored on the SD card, this will be deleted during the procedure.

Work Procedure: 1 Re-code all control units.

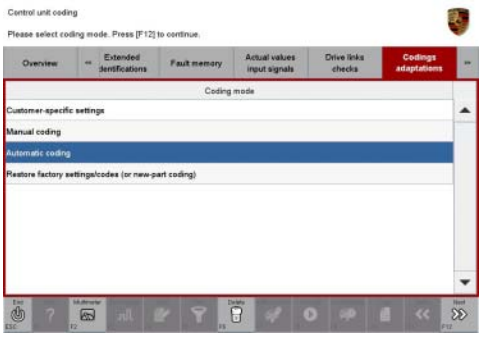
1.1 Select all control units in the control unit selection screen (**'Overview'** menu) and press • F12 " ('Next') to confirm your selection.

1.2 Once the control units have been found, select the **'Codings / adaptations'** menu.

1.3 Select the **'Automatic coding'** function and press • F12 " ('Next') to start control unit coding ⇒ *Automatic coding*.

1.4 When coding is complete, the message "Coding has been completed successfully" is displayed and a tick appears in the 'Status' box.

If coding is **not** completed successfully (error message "Coding was not completed successfully"), coding must be **repeated**.



Automatic coding

Information

It may not always be possible to code the control unit for Tire Pressure Monitoring (TPM). This will also be indicated as 'not carried successfully' by an X in the 'Status' box in the general overview following control unit coding.

If this is the case, the tire size must be set in the Vehicle menu.
To do this, set the size of the fitted tires under **'CAR'** ⇒ **'CONTROL'** ⇒ **'Vehicle'** ⇒ **'Tire pressure monitoring'** ⇒ **'Tire selection'** in the Porsche Communication Management (PCM) menu.

Then, perform automatic coding **again** in the **'Codings / adaptations'** menu in the **'Tire Pressure Monitoring (TPM)'** control unit.

1.5 Once coding is completed successfully, press • F12 " ('Next').

1.6 Compare the tire size and type set in the Vehicle menu with the tires fitted on the vehicle. To do this, compare the size of the fitted tires and set the correct size if necessary under **'CAR'** ⇒ **'CONTROL'** ⇒ **'Vehicle'** ⇒ **'Tire pressure monitoring'** ⇒ **'Tire selection'** in the Porsche Communication Management (PCM) menu.

1.7 Press • F11 " ('Back') to return to the control unit overview.

2 Install updated Onboard Owner's Manual.

Information

The PIWIS Tester instructions take precedence since the description may be different with later Tester releases.

The procedure described here has been structured in general terms. Different text or additional information may appear on the PIWIS Tester.

2.1 Insert a blank SD card into the SD card slot on the PIWIS Tester.

2.2 Select the **PCM 5.0** control unit in the control unit overview and press • F12 " ('Next') to confirm your selection.

2.3 **Maintenance / repairs** must now be selected.

2.4 **Install instructions in PCM** must now be selected. Then, press • F12 " ('Next') to confirm.

2.5 Read and follow the information and instructions displayed on the Tester and press • F12 " ('Next') to continue.

2.6 Select the required language and press • F12 " ('Next') to continue.

2.7 Press • F8 " ('Start') to start installing the Onboard Owner's Manual.

2.8 Read and follow the instructions displayed on the Tester and press • F12 " ('Next') to confirm.
The SD card must then be re-formatted. The current Onboard Owner's Manual is then downloaded and saved to the SD card.

2.9 Remove the SD card from the Tester and insert it into the SD card slot in the glove compartment. Press • F12 " ('Next') to confirm.

After starting the installation, the PCM is restarted in the Update menu and the Onboard Owner's Manual is then updated.

The update takes approx. 7 minutes.

Read and follow the instructions displayed on the PIWIS Tester during the update.

2.10 Check that the Onboard Owner's Manual was installed on the central computer.

To do this, go to **'CAR'** ⇒ **'CONTROL'** ⇒ **'Instructions'** ⇒ **'Technical data'** in the PCM menu, scroll down and read out the version.

- If the version that is read out is **"WKD9Y004xx19 - 46/2018"** (xx = language code, e.g. 10, 20, 30, etc.), press • F12 " ('Next') to continue.
- If the version that is read out is not "WKD9Y004xx19 - 46/2018", continue with Step 2.1 and install the Onboard Owner's Manual **again**.

2.11 Open the glove compartment and remove the inserted SD card from the SD card slot. Press • F12 " ('Next') to continue.

3 Calibrate the parking brake.
To do this, apply and release the parking brake using the button in the center console.

If the calibration process was not carried out successfully and a fault memory entry is stored, the brake shoes for the parking brake must be adjusted and re-calibrated.
For instructions, see ⇒ *Workshop Manual '9X00IN Adjusting and calibrating brake shoes'*.

This work **cannot** be invoiced under the workshop campaign number.

4 Disconnect the PIWIS Tester from the vehicle.

5 Switch off the ignition and lock the vehicle with the driver's key.

6 Wait approx. 2 minutes before unlocking the vehicle again.

7 Start the engine and switch the ignition off again after approx. 5 seconds.

8 Switch on the ignition.

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

10 Read out and erase all fault memories.

10.1 In the control unit selection screen (**'Overview'** menu) ⇒ *Control unit selection*, press •F7 “ to call up the **'Additional menu'**.

10.2 Select the function **“Read all fault memories and erase if required”** and press •F12 “ ("Next") to confirm your selection ⇒ *Erasing fault memories*.

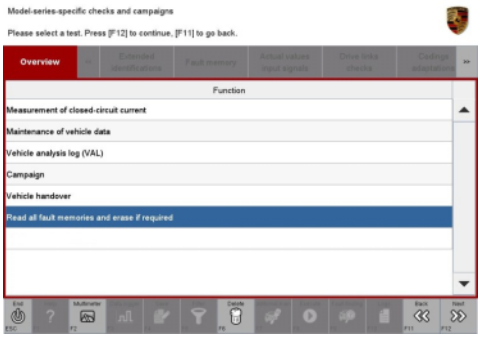
Control unit selection

The fault memories of the control units are read out.

10.3 Once you have read out the fault memories, check the fault memory entries.

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.



Erasing fault memories

10.4 Press •F8 “ to delete fault memory entries.

10.5 Press •F12 “ (“Yes”) in response to the question as to whether you really want to delete all fault memory entries.

The faults stored in the fault memories of the various control units are deleted.

11 Create vehicle analysis log (VAL) using the PIWIS Tester.
Mark the vehicle analysis log you have just created with the attribute "Final VAL" and return it using the PIWIS Tester.

12 Disconnect the PIWIS Tester from the vehicle.

13 Switch off the ignition.

14 Switch off and disconnect the battery charger.

15 Perform function test.

Information

The values for the Tire Pressure Monitoring (TPM) system may be lost during re-coding of the instrument cluster.
If the Tire Pressure Monitoring (TPM) system is reset, the wheel electronics must be re-taught and adapted to the system.

Preconditions and procedure for teaching the wheel electronics units:

- Vehicle is stationary for at least 5 minutes.
- Select the type of tires fitted (type and size) in the TPM menu in the PCM. The message "No monitoring. System is learning from 15 mph (25 km/h)" then appears in the multi-function display.
- Drive at a speed of more than 15 mph (25 km/h) - ideally without stopping - until the tire pressure values are displayed (learning time: less than 2 minutes).

The system learns the wheel electronics only while driving. Intermediate stops and deviations from the described teaching procedure can result in a much longer learning time.

Teaching can be performed during the test drive or later while the customer is driving. Please inform your customer about this if necessary.

16 Replace Cayenne Owner's Manual with an updated Cayenne Owner's Manual with order number WKD9Y0**04**xx19 (xx = language code, e.g. 10, 20, 30, etc.).
Also remove the old Owner's Manual from the vehicle and dispose of it.

Information

The information contained in the following supplements is already **integrated** in the current Owner's Manual (WKD9Y004xx19). The following supplements must therefore be removed from the vehicle and **disposed of**:

- WKD9Y050019 – Emergency Stop Assist Supplement

The following must **not** be disposed of and must **remain** in the vehicle:

- Assistance booklet
- Warranty and/or Maintenance booklet

17 Enter the campaign in the Warranty and Maintenance booklet.

Overview of order numbers for Owner's Manuals

Information

Existing Owner's Manuals with order numbers (xx = language code, e.g. 10, 20, 30, etc.)

- WKD9Y000xx18
- WKD9Y001xx18
- WKD9Y099xx18
- WKD9Y000xx19
- WKD9Y002xx19

must neither be supplied with new vehicles nor used as replacement Owner's Manuals. Any of these Owner's Manuals that are still in stock must be disposed of.
From now on, **only** use the Owner's Manuals with the order number WKD9Y0**04**xx19 for the **vehicles assigned to the campaign**.

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.

Parts Info.:

Order No.:	Designation - Language	Ordering via		Onboard Owner's Manual
		PROS (Arvato)	PCNA	
WKD9Y0042119	Owner's Manual - **English (USA, Canada)**	■	■	■
WKD9Y0043119	Owner's Manual - **French (Canada)**		■	■

Warranty processing

Information

The specified working times were determined specifically for carrying out this campaign and include all necessary preliminary and subsequent work.
The working times may differ from the working times published in the Labor Operation List in PIWIS.

Scope 1: Re-program air conditioning control unit and various other control units

The following control units are **not** re-programmed:

- Assistance systems (bootloader)
- Assistance systems (application software)

- Instrument cluster
- PCM 5.0

Working time*:

Re-programming air-conditioning control unit and various other control units — Labor time: **134 TU**

Includes:
- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Reading out instrument cluster software version
- Reading out software version and variant of assistance systems
- Performing combined software update of various control units
- Teaching servo motors for air-conditioning flaps
- Re-coding all control units
- Installing updated Onboard Owner's Manual
- Replacing Owner's Manual
- Calibrating parking brake
- Calibrating trailer hitch (only with I-no. 1D9)
- Reading out and erasing fault memories
- Creating vehicle analysis log (VAL) before and after repairs
- Performing function test

Required materials:

WKC60000001**	Owner's Manual**	1 ea.
WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage Code WKC6 066 000 1**

Scope 2: Re-program air conditioning control unit and various other control units

The following control units are **not** re-programmed:

- Assistance systems (bootloader)
- Assistance systems (application software)
- PCM 5.0

Working time*:

Re-programming air-conditioning control unit and various other control units	Labor time: **180 TU**
Includes:	Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Reading out instrument cluster software version Re-programming instrument cluster Reading out software version and variant of assistance systems Performing combined software update of various control units Teaching servo motors for air-conditioning flaps Re-coding all control units Installing updated Onboard Owner's Manual Replacing Owner's Manual Calibrating parking brake Calibrating trailer hitch (only with I-no. 1D9) Reading out and erasing fault memories Creating vehicle analysis log (VAL) before and after repairs Performing function test

Required materials:

WKC60000001**	Owner's Manual**	1 ea.
WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage Code WKC6 066 000 1**

Scope 3: Re-program air conditioning control unit and various other control units

The following control units are **not** re-programmed:

- Assistance systems (bootloader)
- PCM 5.0

Working time*:

Re-programming air-conditioning control unit and various other control units	Labor time: **198 TU**

Includes:
- Connecting and disconnecting battery charger
- Connecting and disconnecting PIWIS Tester
- Reading out instrument cluster software version
- Re-programming instrument cluster
- Reading out software version and variant of assistance systems
- Re-programming assistance systems (application software)
- Performing combined software update of various control units
- Teaching servo motors for air-conditioning flaps
- Re-coding all control units
- Installing updated Onboard Owner's Manual
- Replacing Owner's Manual
- Calibrating parking brake
- Calibrating trailer hitch (only with I-no. 1D9)
- Reading out and erasing fault memories
- Creating vehicle analysis log (VAL) before and after repairs
- Performing function test

Required materials:

WKC60000001**	Owner's Manual**	1 ea.
WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

Required tools:

9Y0919866B	SD memory card – Assistance systems update for variant **B**	up to 8 ea.****
or		
9Y0919866A	SD memory card – Assistance systems update for variant **C**	up to 8 ea.****

**** Only the **actual number of SD memory cards** that are available to the Porsche dealership for carrying out this campaign must be invoiced for each Porsche dealership.
The number of SD cards provided for each Porsche dealership depends on how many vehicles will have to be worked on by each Porsche dealership as part of this campaign (see section ⇒ *Technical Information '9X00IN Required tools'*).

The SD memory cards must only be **invoiced once** for the first vehicle during **warranty processing**. Only the **working time** must be invoiced in the warranty claim for all other vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage Code WKC6 066 000 1**

Scope 4: Re-program air conditioning control unit and various other control units

The following control unit is **not** re-programmed:

- PCM 5.0

Working time*:

Re-programming air-conditioning control unit and various other control units		Labor time: **213 TU**
Includes:	Connecting and disconnecting battery charger	
	Connecting and disconnecting PIWIS Tester	
	Reading out instrument cluster software version	
	Re-programming instrument cluster	
	Reading out software version and variant of assistance systems	
	Re-programming assistance systems (bootloader)	
	Re-programming assistance systems (application software)	
	Performing combined software update of various control units	
	Teaching servo motors for air-conditioning flaps	
	Re-coding all control units	
	Installing updated Onboard Owner's Manual	
	Replacing Owner's Manual	
	Calibrating parking brake	
	Calibrating trailer hitch (only with I-no. 1D9)	
	Reading out and erasing fault memories	
	Creating vehicle analysis log (VAL) before and after repairs	
	Performing function test	

Required materials:

WKC60000001**	Owner's Manual**	1 ea.

WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

Required tools:

9Y0919866B	SD memory card – Assistance systems update for variant **B**	up to 8 ea.****
or		
9Y0919866A	SD memory card – Assistance systems update for variant **C**	up to 8 ea.****

**** Only the **actual number of SD memory cards** that are available to the Porsche dealership for carrying out this campaign must be invoiced for each Porsche dealership.
The number of SD cards provided for each Porsche dealership depends on how many vehicles will have to be worked on by each Porsche dealership as part of this campaign (see section ⇒ *Technical Information '9X00IN Required tools'*).

The SD memory cards must only be **invoiced once** for the first vehicle during **warranty processing**. Only the **working time** must be invoiced in the warranty claim for all other vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage Code WKC6 066 000 1**

Scope 5: Re-program air conditioning control unit and various other control units

The following control units are **not** re-programmed:

- Assistance systems (bootloader)
- Instrument cluster
- PCM 5.0

Working time*:

Re-programming air-conditioning control unit and various other control units	Labor time: **172 TU**
Includes:	Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Reading out instrument cluster software version Reading out software version and variant of assistance systems Re-programming assistance systems (application software) Performing combined software update of various control units Teaching servo motors for air-conditioning flaps Re-coding all control units Installing updated Onboard Owner's Manual Replacing Owner's Manual Calibrating parking brake Calibrating trailer hitch (only with I-no. 1D9) Reading out and erasing fault memories Creating vehicle analysis log (VAL) before and after repairs Performing function test

Required materials:

WKC60000001**	Owner's Manual**	1 ea.
WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

Required tools:

9Y0919866B	SD memory card – Assistance systems update for variant **B**	up to 8 ea.****
or		
9Y0919866A	SD memory card – Assistance systems update for variant **C**	up to 8 ea.****

**** Only the **actual number of SD memory cards** that are available to the Porsche dealership for carrying out this campaign must be invoiced for each Porsche dealership.
The number of SD cards provided for each Porsche dealership depends on how many vehicles will have to be worked on by each Porsche dealership as part of this campaign (see section ⇒ *Technical Information '9X00IN Required tools'*).

The SD memory cards must only be **invoiced once** for the first vehicle during **warranty processing**. Only the **working time** must be invoiced in the warranty claim for all other vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage Code WKC6 066 000 1**

Scope 6: Re-program air conditioning control unit and various other control units

The following control units are **not** re-programmed:

- Assistance systems (bootloader)
- Assistance systems (application software)

Working time*:

Re-programming air-conditioning control unit and various other control units		Labor time: **210 TU**
Includes:	Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Reading out instrument cluster software version Re-programming instrument cluster Reading out software version and variant of assistance systems Re-programming PCM 5.0 Performing combined software update of various control units Teaching servo motors for air-conditioning flaps Re-coding all control units Installing updated Onboard Owner's Manual Replacing Owner's Manual Calibrating parking brake Calibrating trailer hitch (only with I-no. 1D9) Reading out and erasing fault memories Creating vehicle analysis log (VAL) before and after repairs Performing function test	

Required materials:

WKC60000001**	Owner's Manual**	1 ea.

WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

Required tools:

9Y0919360D	SD memory card – PCM update for **North America**	up to 8 ea.****

**** Only the **actual number of SD memory cards** that are available to the Porsche dealership for carrying out this campaign must be invoiced for each Porsche dealership.
The number of SD cards provided for each Porsche dealership depends on how many vehicles will have to be worked on by each Porsche dealership as part of this campaign (see section ⇒ *Technical Information '9X00IN Required tools'*).

The SD memory cards must only be **invoiced once** for the first vehicle during **warranty processing**. Only the **working time** must be invoiced in the warranty claim for all other vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage Code WKC6 066 000 1**

Scope 7: Re-program air conditioning control unit and various other control units

The following control unit is **not** re-programmed:

- Assistance systems (bootloader)

Working time*:

Re-programming air-conditioning control unit and various other control units		Labor time: **228 TU**
Includes:	Connecting and disconnecting battery charger Connecting and disconnecting PIWIS Tester Reading out instrument cluster software version Re-programming instrument cluster Reading out software version and variant of assistance systems Re-programming assistance systems (application software) Re-programming PCM 5.0 Performing combined software update of various control units	

Teaching servo motors for air-conditioning flaps
Re-coding all control units
Installing updated Onboard Owner's Manual
Replacing Owner's Manual
Calibrating parking brake
Calibrating trailer hitch (only with I-no. 1D9)
Reading out and erasing fault memories
Creating vehicle analysis log (VAL) before and after repairs
Performing function test

Required materials:

WKC60000001**	Owner's Manual**	1 ea.
WKC60000002***	Shipping costs***	1 ea.

** The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. WKC60000001 with the designation "**Owner's Manual**" as **accessories** costing $12.50.

*** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WKC60000002**, with the designation "**Shipping costs**" as an additional part. Please document a copy of the invoice for this in the warranty claim.

Required tools:

9Y0919360D	SD memory card – PCM update for **North America**	up to 8 ea.****
9Y0919866B	SD memory card – Assistance systems update for variant **B**	up to 8 ea.****
or		
9Y0919866A	SD memory card – Assistance systems update for variant **C**	up to 8 ea.****

**** Only the **actual number of SD memory cards** that are available to the Porsche dealership for carrying out this campaign must be invoiced for each Porsche dealership.
The number of SD cards provided for each Porsche dealership depends on how many vehicles will have to be worked on by each Porsche dealership as part of this campaign (see section ⇒ *Technical Information '9X00IN Required tools'*).

The SD memory cards must only be **invoiced once** for the first vehicle during **warranty processing**. Only the **working time** must be invoiced in the warranty claim for all other vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage Code WKC6 066 000 1**

Information

* Information on the working time:

Generally, the working time includes all work that requires the active participation of the service technician.
This also covers all required preliminary work and subsequent work.

The working time includes the following activities during control unit programming:

- All required steps for starting or finishing programming
- Required interaction during a programming sequence
- Waiting times until programming starts
- Occasionally checking the programming status (twice per programming block)

If no further interaction by the service technician is required once control unit programming has started because programming is performed automatically, there is no need for the service technician to remain at the vehicle for the entire programming time.
These waiting times are not included in the working time if the total programming time is more than 15 minutes.
If programming takes up to 15 minutes, the full waiting time is included in the working time.

Information

If malfunctions occur or if programming is aborted during this workshop campaign and these result in additional time being spent (e.g. if a control unit has to be replaced), this cannot be invoiced under the workshop campaign number. This work must be invoiced under an additional warranty claim using the following coding:

- Function unit code (FES) **91020**
- Damage category (SA) **9738** "Does not function following PAG campaign"

Overview of problems and symptoms that will be corrected with the software update

Overview: **Overview of problems and symptoms**

Component / control unit	Function / symptom	Fault symptom description
Chassis control PASM	Messages "Chassis system fault" and "Chassis system failure" in the instrument cluster	Sporadic resets of the control unit due to a timing problem.

Roll stabilization PDCC	Message "Chassis system fault" in the instrument cluster	The PDCC system fails at low speeds (up to 3 mph/5 km/h) due to temporary asynchronous data processing between the front and rear axle.
	Message "Chassis system fault" in the instrument cluster - only for Hybrid vehicles	Sporadic failure of PDCC system. The function is available again after an ignition reset.
Instrument cluster	Display flickers	After scrolling quickly in the Vehicle menu in the instrument cluster, the right display in the instrument cluster flickers.
Gateway	eCall function in China	The Emergency Call function cannot be used in some parts of China due to incorrect coding of the connected gateway. A breakdown call can be made.
Vehicle electrical system battery	Vehicle electrical system battery flat	The vehicle electrical system battery is flat due to a high closed-circuit current because control units are not switched to sleep mode or are woken up at times.
Porsche Communication Management (PCM)	Touch display in the dashboard freezes	After pressing the individually programmable button on the steering wheel, individual parts of the touch display can no longer be used in some areas of North America. The function is available again after BUS idle.