PORSCHE®

Technical Information

WMA5 - Updating Software for Various Control Units (Workshop Campaign)

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 closely monitored and maintained between 13.8 volts and 14.8 volts during this programming. Failure to maintain this voltage could result in damaged control unit(s). It is therefore advised to operate the Deutronics Power Supply (VAS 5908) in "SUPPLY MODE" with a voltage setting of 14.6 volts and the Air Conditioning System Blower switched OFF, followed by regular checks of the power supply status, voltage, and vehicle voltage. Certain steps of this campaign may not be possible until the power supply voltage setting is adjusted then verified by the PIWIS Tester. Damage caused by inadequate voltage during programming is not a warrantable defect. The technician must verify the actual vehicle voltage in the PIWIS Tester before starting the campaign and also document the actual voltage on the repair order.

Model Year: **2020**

Model Line: **Taycan (Y1A)**

Concerns: **Software update (software version VR12.1.1)**

Information: **Software optimizations are available for various control units for the Taycan.**

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

Action required: • Update the software for the following control units using the PIWIS Tester with software version **40.000.045** (or higher) installed or USB storage medium. For details of affected control units, see overview below.
 • Replace Owner's Manual in the on-board folder in the vehicle with an updated version.

ⓘ Information
During this campaign, the VR12.1.1 software version will be installed on the affected vehicles. The prerequisite for this is that the previous VR8.7 software version is installed on the vehicle. In order to ensure that the software updates are installed in the correct order on all vehicles - regardless of whether or not the VR8.7 software version is already installed - campaigns WLG2 and WLG6 for programming the VR8.7 software version were completed with the introduction of this campaign WMA5 and the corresponding programming scopes were transferred to this campaign.

Depending on whether or not the previous VR8.7 software version must first be programmed on the relevant vehicle as a prerequisite for the subsequent programming of the VR12.1.1 software version, the vehicles were assigned to the required campaign scope. Before carrying out the campaign, the scope of the campaign assigned to the relevant vehicle must therefore be checked and carried out accordingly.

ℹ️ Information

After carrying out this campaign WMA5, carry out campaign WMA7 so that the Porsche Mobile Charger Connect software is also **version VR12.1.1**. See ⇒ *Technical Information 'WMA700 WMA7 Workshop campaign - Performing software update for charger (Porsche Mobile Charger Connect)'.*
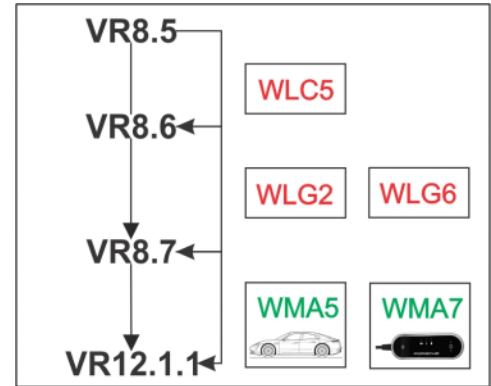
Evolution Taycan Software Versions

Overview of control units for software version VR12.1.1			
Control unit	**Programming time**	**Action required**	
		program	**code**
Sequence 1: Combined software update for various control units (Update via PIWIS Tester)	approx. 125 minutes		
Includes:			
Distance measuring sensor control unit (ACC)		■	■
Front-end electronics control unit (BCM1)		■	■
Rear-end electronics control unit (BCM 2)		■	■
Radar sensor for front corner radar		■	■
Lane Change Assist control unit, left and right		■	■
Central control unit for assistance systems (zFAS)		■	■
Airbag control unit		■	■
Reversing camera		■	■
Interior surveillance sensor			■
Seat occupancy detection			■
Weather sensor			■

Control unit for garage door opener			■
Rear lid proximity sensor control unit			■
Windscreen wiper motor			■
Sequence 2: Combined software update for various control units (Update via PIWIS Tester)	approx. 120 minutes		
Includes:			
Battery sensor for 12 V vehicle electrical system battery		■	
High-voltage charger (OBC), 11 kW		■	■
High-voltage battery control unit (BMCe)		■	■
High-voltage DC charger (booster)		■	■
HV voltage converter		■	■
Control unit for chassis control (PASM)		■	■
Power steering (EPS) control unit		■	■
Brake electronics (PSM) control unit		■	■
Control unit for steering column adjustment		■	■
Control unit for rear axle steering		■	■
Rear lid control unit		■	■
Air-conditioning control unit		■	■
Rear-differential lock control unit		■	■
Thermal management control unit (TME)		■	■
Electric passenger compartment heater (PTC)		■	■
Gateway control unit		■	■
Head-up display		■	■
Instrument cluster		■	■
Over-the-air (OTA) control unit		■	
Engine electronics (DME) control unit		■	■
Power electronics, front and rear		■	
Transmission electronics control unit (EGS)		■	

Roll stabilization control unit (PDCC)			■
Headlight, left and right			■
Sequence 3: Combined software update for various control units (Update via PIWIS Tester)	approx. 130 minutes		
Includes:			
Multi-function steering wheel		■	
Control unit for memory seat adjustment (driver side)		■	■
Additional instrument control unit (stopwatch)		■	
Door control unit, front and rear		■	■
Control unit for exterior acoustics (eSound)		■	■
Control unit for interior acoustics (iSound)		■	■
Display and operator control unit in rear center console		■	■
Connect control unit		■	■
Brake booster control unit (eBKV)			■
Night vision system control unit			■
Control unit for Tyre Pressure Monitoring (TPM)			■
Control unit for memory seat adjustment (passenger side)			■
Control unit for rear spoiler			■
Sequence 4: Combined software update for various control units (update via PIWIS Tester and USB storage medium)	approx. 60 minutes		
Includes:			
Porsche Communication Management (PCM) central computer		■	■
Loudspeaker booster			■
Front display and operator control unit			■

Affected vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information). This campaign affects 5,235 vehicles.

Parts required

Parts Info: **Owner's Manual**

An overview of the required Owner's Manuals is provided under ⇒ *Technical Information 'WMA700 Overview of order numbers for Driver's Manuals'*.

Required tools

ℹ Information

The Taycan (Y1A) is equipped as standard with a **lithium starter battery**.

Lithium starter batteries must only be charged using a **suitable battery charger** that has a current and voltage-controlled charge map.

For further information about the battery chargers to be used, see ⇒ *Workshop Manual '270689 Charging battery/vehicle electrical system'*.

ℹ Information

A blank or re-writable USB storage medium is additionally required for installing the onboard Owner's Manual.

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

Tools:
- Battery charger with a current rating of **at least 90 A** and - if required - **also** with a **current- and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 90 A battery charger**
- **9900 - PIWIS Tester 3** with software version **40.000.045** (or higher) installed.
- **USB storage medium Type A+C 32 GB (for PCM update)**, Part No. V04014999WW000
- **USB storage medium, type C (for onboard Owner's Manual update),** e.g. Part No. V04014999WW000

ℹ️ Information

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

Pay particular attention to the following:

- For this PCM software update, the USB storage medium USB Type A+C 32 GB with the part number VO4014999WW000 must be used.

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

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

The software mentioned here must **only** be used on the **vehicles assigned to the campaign**. Damage to the central computer cannot be ruled out if the software is used on other vehicles.

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

Overview of PiUS software versions – PCM update VR12.1.1		
Part No.*	Designation – Region	Vehicle assignment
9J1919360C	**PCM update** software – Europe – ROW	I-no. ER1/ER2
9J1919360D	**PCM update** software – North America – Mexico	I-no. ER3/ER4
9J1919360E	**PCM software update** – Japan – China – Korea – Taiwan	I-no. ER5/ER6/ER7/ER8

Preparatory work

NOTICE

Fault entry in the fault memory and control unit programming aborted due to undervoltage.

- **Increased current draw during diagnosis or control unit programming can cause a drop in voltage, which can result in one or more fault entries and the abnormal termination of the programming process.**
- ⇒ **Before starting control unit programming, connect a suitable battery charger with a current rating of at least 90 A to the vehicle.**

NOTICE

Control unit programming will be aborted if the WiFi 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

Programming interrupted

- **Malfunctions in control unit**

- **Risk of damage to control unit**

⇒ **Route the line between the vehicle communication module (VCI) and diagnostic socket on the vehicle without tension and make sure that the connector is inserted fully into the diagnostic socket.**

⇒ **Check that the rechargeable battery for the PIWIS Tester is charged sufficiently. Connect the PIWIS Tester to the power supply unit if necessary.**

Information

To carry out the campaign, the PIWIS Tester must be online and logged into the Porsche Partner Network (PPN).

ℹ️ Information

Use the **new** PIWIS Tester data cable to carry out the campaign. The difference between the old ⟹ *PIWIS Tester data cable* **-1-** and new ⟹ *PIWIS Tester data cable* **-2-** data cable is shown in the illustration.

If the connection between the vehicle and PIWIS Tester is interrupted, check the data cable for the PIWIS Tester for signs of damage. If the data cable is damaged, it **must** be **replaced**. To do this, follow the instructions in the PPN for "Returning faulty USB cable caps" (PPN portal > Dr Ing. h.c. Porsche AG > Aftersales > Workshop > PIWIS > Documents).

ℹ️ Information

The procedure described here is based on the PIWIS Tester 3 software version **40.000.045**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.

A discrepancy may arise with later software versions for example.

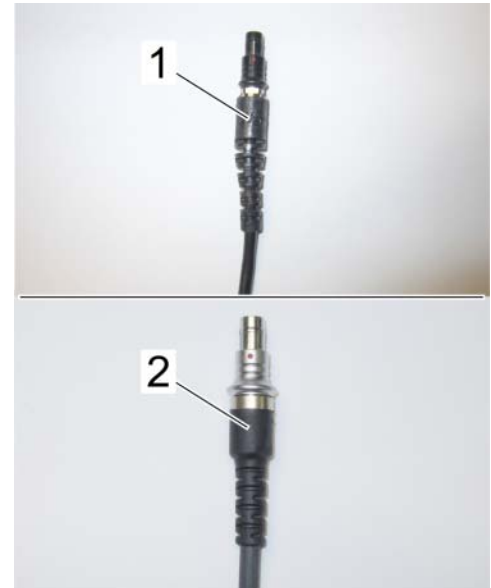*PIWIS Tester data cable*

ℹ️ Information

The state of charge of the high-voltage battery should not be less than 30% or more than 80% for the software update.

Work Procedure: 1 Connect a suitable battery charger, e.g. **Battery charger 90A**, to the jump-start terminals in the luggage compartment and switch it on.

ℹ️ Information

To prevent any excessive and potentially noticeable heating of the charging clamp of the negative cable while charging the 12-volt vehicle electrical system battery using an external battery charger, always check the following points:

- Always connect the charging clamp of the negative cable vertically from above to the ground point for the external power connection. Make sure that the charging clamp cable is routed loosely to prevent the charging clamp from tilting sideways at the ground point.

- When connecting the charging clamp, make sure that it is a sufficient distance away from peripheral parts (e.g. pneumatic supply line for air-spring strut).

- Before raising the vehicle using a lifting platform, always disconnect the battery charger completely from the vehicle to prevent the connecting line of the charging clamp from becoming taut and prevent the charging clamp from tilting sideways at the ground point.

2 Position the **driver's key** with the back facing forward upright between the holding struts in the rear cupholder (**emergency start tray**) to guarantee a permanent radio link between the vehicle and remote control ⇒ *Emergency start tray*.

Emergency start tray

NOTICE

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

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

⇒ **Position the driver's key with the back facing forward upright between the holding struts in the rear cupholder (emergency start tray) to ensure a permanent radio link between the vehicle and remote control.**

3 Connect the **9900 - PIWIS Tester 3** to the Vehicle Communication Module (VCI) via the **USB cable**. Then, connect the Communication Module to the vehicle and switch on the PIWIS Tester. Due to the long programming time, operate the **PIWIS Tester via the power supply**.

4 Establish operational readiness (switch on ignition).

5 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.

6 Create vehicle analysis log (VAL) using the PIWIS Tester.

   Mark the vehicle analysis log you have just created with the attribute "Pre- VAL" and after carrying out the campaign, return it using the PIWIS Tester.

ℹ️ Information

Depending on whether or not the previous software version VR8.7 must first be programmed on the relevant vehicle before programming software version VR12.1.1, the vehicles were assigned to the required campaign scope. Before carrying out the campaign, the campaign scope assigned to the relevant vehicle must therefore be checked and carried out accordingly.

7   Update software for various control units:

Allocation	Software release	Action required
Scope 1:	• **VR8.6** • **VR8.7** • **VR12.1.1**	To do this, continue with ⇒ *Technical Information '270689 Updating software for various control units (VR8.6)'*.
Scope 2:	• **VR8.7** • **VR12.1.1**	To do this, continue with ⇒ *Technical Information '270689 Updating software for various control units (VR8.7)'*.
Scope 3:	• **VR12.1.1**	To do this, continue with ⇒ *Technical Information '270689 Updating software for various control units (VR12.1.1)'*.

Updating software for various control units (VR8.6) - Required for Scope 1:

⚠ 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.**

NOTICE

Using the software on vehicles that are not assigned to this campaign:

• **Risk of damage to control unit**

⇒ **Use the listed software versions only for the vehicles assigned to the campaign.**

Work Procedure: 1   **Only relevant for vehicles with Scope 1:** Start control unit programming of **VR8.6**.

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 of VR8.6 during this campaign, see the table below:

Required PIWIS Tester software version:	**40.000.045** (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:	**P5P8E**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence.
	Do not interrupt programming and coding.
	A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx.):	**120 minutes**
Software versions programmed during this campaign:	• Over-the-air (OTA) control unit 0861
	• High-voltage power electronics, front and rear 0006
	• Control unit for high-voltage charger (OBC) 1073
	• High-voltage battery control unit (BMCe) E860
	• Chassis control (PASM) 0896
	• Rear air conditioning control 0897
	• Instrument cluster 0394
	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:	• End and restore operational readiness (switch ignition off and then on again).
	• Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.*
	• Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" .
	• Extended logging records diagnostic software data, particularly vehicle communication data,

	which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, stop operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here 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   Then, perform software update to software release **VR8.7**, see ⇒ *Technical Information '9X00IN Updating software for various control units (VR8.7)'.*

Updating software for various control units (VR8.7) - Required for Scopes 1 and 2:

⚠ 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.**

Work Procedure: 1   **Only relevant for vehicles with Scope 1 and 2:** Start control unit programming of **VR8.7**.

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 of VR8.7 during this campaign, see the table below:

Required PIWIS Tester software version:	**40.000.045** (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:	**V6P8C**

Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence.
	Do not interrupt programming and coding.
	A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx.):	**100 minutes**
Software versions programmed during this campaign:	• High-voltage power electronics, front and rear 0007
	• Control unit for high-voltage charger (OBC) 1079
	• High-voltage battery control unit (BMCe) E870
	• HV voltage converter 0899
	• Brake booster (electric brake booster) 0100
	• High-voltage DC charger (booster) 0990
	• Engine electronics (DME) 0005
	• Brake electronics (PSM) 0094
	• Driver's seat and passenger's seat adjustment 0064
	• Assistance systems (zFAS) 0355
	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:	• End and restore operational readiness (switch ignition off and then on again).
	• Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.*
	• Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl″ + •L″ .

	• Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, stop operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here 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   Then, perform software update to software release **VR12.1.1**, see ⇒ *Technical Information '9X00IN Updating software for various control units (VR12.1.1)'.*

Updating software for various control units (VR12.1.1) - Required for Scopes 1, 2 and 3:

⚠ **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.**

Work Procedure: 1   Select the guest account from the central display (PCM) and activate Privacy mode (available in some countries).

ℹ **Information**

To ensure that no user-specific settings from **cloud-based services (Porsche Connect & My Porsche)** are lost during the update, activate **Privacy mode** before starting the update. When Privacy mode is activated, communication between the vehicle and the Porsche Connect app and My Porsche is disabled. No vehicle-specific information is transferred. As a result, settings cannot be configured on the vehicle using the Porsche Connect app or My Porsche.

When the **instrument cluster** and **central computer** are re-programmed, the **individual settings** implemented **in the vehicle** by the customer will be lost and reset to the **default values** of the country version that applies to the vehicle.

After carrying out the campaign, please inform customers that personal settings they have implemented in the instrument cluster and central display of the central computer will have to be **set again** and provide them with any **help and support** they need for setting the relevant options.

This affects the following settings, for example:

- Individual settings for tubes 1 to 3 of the instrument cluster as well as the extended map view or reduced view of the instrument cluster

- Individual settings of the head-up display (HUD)

- Selected functions of individual tubes in the instrument cluster, e.g. auto zoom, 3D map and satellite map

- Arrangement of tiles in the home screen and MyScreen on the central display

- Individual seat, exterior mirror and ergonomic settings

- Air conditioning settings, such as ventilation and air quality

- Privacy settings

- Frequency setting of the garage door opener (Homelink)

Information

After carrying out the campaign, please inform customers that Infotainment updates are available via the central computer (PCM) and provide them with any help and support they need during installation ⇒ *Infotainment update in central display*.

These updates are only available if the customer has logged in on the vehicle using his/her main user credentials (Porsche ID). Several updates are available depending on equipment and these must be installed one after the other in steps. It can take several minutes to install these. New functions can only be used when all updates have been completed and the vehicle has established bus idle for at least 15 minutes.
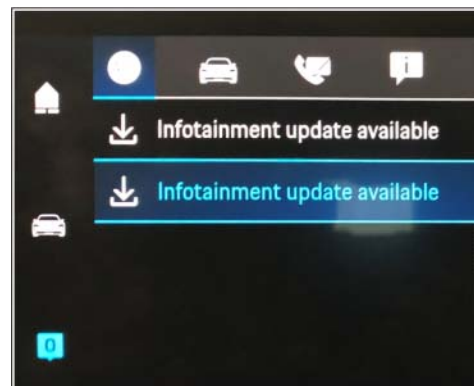
Infotainment update in central display

Information

Special features of sequence 1:

- **Distance measuring sensor control unit (ACC):** Programming is performed in two stages because of the high data volume. First, the bootloader ACC is programmed and an error message is displayed. This error message in step 5 can be ignored and you can continue with the campaign. Follow the instructions on the PIWIS Tester.

- **Airbag control unit:** Manual intermediate steps are required after programming the central control unit for assistance systems (zFAS). For safety reasons, the airbag is unlocked during a guided procedure prior to coding and is then locked again when coding is complete. Follow the instructions on the PIWIS Tester.

- **Rear-end electronics control unit (BCM 2):** If the driver's key is not detected in the vehicle, programming of the rear-end electronic cannot be started or will be interrupted. You must therefore position the **driver's key** with the back facing forward upright between the holding struts in the rear cupholder (**emergency start tray**) to guarantee a permanent radio link between the vehicle and remote control.

2 Start control unit programming **sequence 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'.*

Sequence 1:

For specific information on control unit programming in this sequence, see the table below:

Required PIWIS Tester software version:	**40.000.045** (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:	**K4M1S**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx.):	**125 minutes**
Software versions programmed during this sequence:	• Distance measuring sensor control unit (ACC) — 0496
	• Front-end electronics control unit (BCM1) — 0712
	• Rear-end electronics control unit (BCM2) — 0565
	• Radar sensor for front corner radar, left and right — 0485
	• Lane Change Assist control unit, left and right — 0486
	• Central control unit for assistance systems (zFAS) — 0365
	• Airbag control unit — 3303

	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:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.* • Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" . • Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, stop operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here 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"'.*

ℹ️ Information

Special features of sequence 2:

- **Battery sensor (12-volt vehicle electrical system battery):** An actual voltage of at least 14 volts is required for programming the 12-volt battery sensor. Switching the ignition off and on again after one minute is therefore integrated in the programming sequence. As a result, the voltage of the 12-volt vehicle electrical system battery increases briefly and the programming sequence can be started. Follow the instructions on the PIWIS Tester.

3   Start control unit programming **sequence 2**.

   For specific information on control unit programming in this sequence, see the table below:

Required PIWIS Tester software version:	**40.000.045** (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:	**K4M2S**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence.
	Do not interrupt programming and coding.
	A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx.):	**125 minutes**
Software versions programmed during this campaign:	• Battery sensor 4174
	• High-voltage charger (OBC) 11 kW 1083
	• High-voltage battery control unit (BMCe) 1401
	• High-voltage DC charger (booster) 1250
	• HV voltage converter 1230
	• Control unit for chassis control (PASM) 1160
	• Power steering control unit (EPS) 0430
	• Brake electronics (PSM) control unit 0120
	• Control unit for steering column adjustment 0210
	• Control unit for rear axle steering 0962
	• Rear lid control unit 0172
	• Air-conditioning control unit 1160
	• Rear-differential lock control unit 2021
	• Thermal management control unit (TME) 0323

•	Electric passenger compartment heater (PTC)	0015
•	Gateway control unit	2591
•	Instrument cluster	0595
•	Over-the-air (OTA) control unit	1221
•	OTA partition	1221
•	Engine electronics (DME) control unit	0012
•	Power electronics, front and rear	0011
•	Transmission control unit (EGS)	0250

	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:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.* • Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" . • Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, stop operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here 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"'.*

Information

Special features of sequence 3:

- The new software version of the **additional instrument (stopwatch)** and **multifunction steering wheel** is only shown after restarting these components. This restart takes place in bus idle during the concluding work.

4 Start control unit programming **sequence 3**.

For specific information on control unit programming in this sequence, see the table below:

Required PIWIS Tester software version:	**40.000.045** (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:	**K4M3S**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. **Do not interrupt programming and coding.** A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.
Programming time (approx.):	**130 minutes**
Software versions programmed during this campaign:	• Multi-function steering wheel 0091
	• Seat adjustment control unit, front 0064
	• Additional instrument control unit (stopwatch) 0015
	• Door control unit, front and rear 0390
	• Control unit for exterior acoustics (eSound) 0100
	• Control unit for interior acoustics (iSound) 0290
	• Display and operator control unit in rear center console 1170

	• Connect control unit 0236 or 0237 or 0238 or 0239 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:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.* • Repeat control unit programming by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" . • Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If control unit programming is aborted a second time, stop operational readiness for approx. 15 minutes (switch off ignition) and repeat the procedure described here 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"'.*

5   Re-program the central computer (PCM) (**sequence 4**).

    5.1   Open the armrest and remove the external device, e.g. iPod, USB storage medium, from the USB interface if necessary.

NOTICE

Using the software on vehicles that are not assigned to this campaign:

•   **Risk of damage to control unit**

⇒   **Use the listed software versions only for the vehicles assigned to the campaign.**

5.2   Insert the **USB storage medium** with the software version specific to the respective region for the **PCM update** into the **USB interface**.

Part No.	Designation – Region	Vehicle assignment
9J1919360C	USB storage medium for PCM update – Europe – ROW	I-no. ER1/ER2
9J1919360D	USB storage medium for PCM update – North America – Mexico	I-no. ER3/ER4
9J1919360E	USB storage medium for PCM update – Japan – China – Korea – Taiwan	I-no. ER5/ER6/ER7/ER8

5.3   See Technical Information **TI 101/20** if programming is aborted during central computer (PCM) software updates ⇒ *Technical Information '915200 Complaint - PCM update cannot be performed/stops. Observe specified procedure (101/20)'*.

5.4   Start the central computer (PCM) software update (**sequence 4**) using the PIWIS Tester.

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

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

5.7   Select the **'Install software update'** function and press •F12" ('Next') to perform the software update ⇒ *Installing PCM 6.0 software update*.

5.8   Confirm the information that is displayed by pressing •F12" ('Next').

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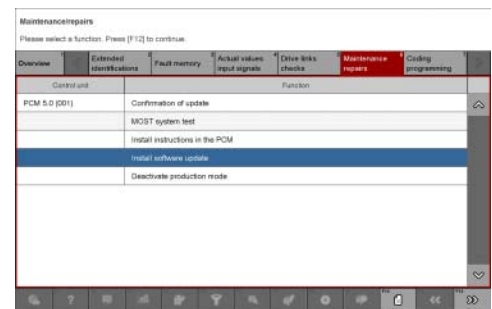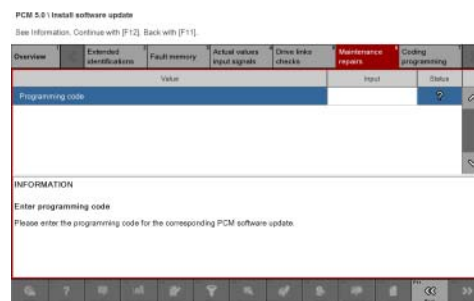

Installing PCM 6.0 software update

5.10   Enter the programming code **K4M4S** in the relevant column ⟹ *Entering PCM 6.0 programming code* and press •F12" ('Next') to confirm ⟹ *Entering PCM 6.0 programming code*.

5.11   Press •F8" ('Start') to start.

5.12   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.

Entering PCM 6.0 programming code

The update can take up to 60 minutes.

Read and follow the instructions displayed on the PIWIS Tester during the update. The PCM is restarted several times. **The PCM screen (central display) remains dark for a long time**.

5.13   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 versions programmed during this sequence

- Central computer (PCM): **3397**
- Front display and operator control unit (central display): **0210**
- Loudspeaker booster: **0150 (Bose)**, **0090 (Burmester)**
- Passenger display: **0310**
- Operator control unit in front center console: **1250**

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

5.14   Open the armrest and remove the USB storage medium from the USB interface.

6   Then, carry out concluding work (**sequence 5**).

Concluding work

⚠ **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.**

<div style="border: 1px solid blue;">**NOTICE**</div>

Programming interrupted

- **Malfunctions in control unit**

- **Risk of damage to control unit**

⇒ **Route the line between the vehicle communication module (VCI) and diagnostic socket on the vehicle without tension and make sure that the connector is inserted fully into the diagnostic socket.**

⇒ **Check that the rechargeable battery for the PIWIS Tester is charged sufficiently. Connect the PIWIS Tester to the power supply unit if necessary.**

Work Procedure: 1   Establish bus idle for at least 15 minutes.

    1.1   End operational readiness (switch off ignition).

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

    1.3   Lock the vehicle using the driver's key and remove the driver's key from the proximity of the vehicle (approx. 10 meter/ 32.8 ft).

    1.4   Unlock the vehicle again after waiting for at least 15 minutes.

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

2   Move the vehicle onto a lifting platform.

ⓘ   Information

The **current version** of the onboard Owner's Manual has been **available** online **since March 5, 2021**.

A blank USB storage medium is required for installing the onboard Owner's Manual (approx. 100 MB). If there is already data stored on the USB storage medium, this will be deleted during the procedure.

ⓘ   Information

Before starting sequence 5 (subsequent work), connect the PIWIS Tester to a network to establish an Internet connection. The PIWIS Tester **must** be **connected online** for the subsequent work described below and for installing the onboard Owner's Manual.

ℹ️ Information

Special features of sequence 5:

- **Component protection:** If the component protection teaching process is aborted, stop sequence 5 and read and follow the additional information provided under ⇒ *Technical Information '915200 Additional instructions for the concluding work'*.

- **Enabled functions:** If function activation is aborted, component protection must first be taught again. Then, start sequence 5 again in order to restore the enabled functions.

- **Coding of all control units:** Always allow coding to run to the end of the process. If individual coding routines fail, the relevant control units can be selected manually in the overview afterwards and coded again individually.

- **Note:** Sequence 5 requires the use of a service lift for DME/transmission calibration.

3 Start subsequent work for various control units (**sequence 5**).

Programming code:	**K4M5S**
Procedure:	Read and follow the **information and instructions on the PIWIS Tester** during the guided procedure for the subsequent work. **Do not interrupt the process**.
Programming time (approx.):	**approx. 55 minutes**
Subsequent work carried out during this process	• Distance measuring sensor (ACC) - Reset personalization For manual procedure, see ⇒ *Workshop Manual '278555 Replacing control unit for distance measuring sensor'*.
	• Air conditioning - Teach servo motors For the manual procedure, see relevant servo motor Workshop Manual 872019**xx**.
	• Commissioning rear-differential lock For manual procedure, see ⇒ *Workshop Manual '397555 Replacing control unit for rear-differential lock'*.
	• Engine electronics (DME) transmission adaptation For manual procedure, see ⇒ *Workshop Manual '247055 Replacing DME control unit'*.

	• Door standardization, front and rear
	For manual procedure, see
	• ⇒ *Workshop Manual '577355 Replacing front door control unit'*
	• ⇒ *Workshop Manual '587355 Replacing rear door control unit'*
	• Teaching component protection
	For manual procedure, see ⇒ *Workshop Manual '903555 Replacing gateway control unit'.* Select the gateway control unit during the PIWIS Tester procedure in order to teach component protection for all control units.
	• Restoring enabling functions
	For manual procedure, see ⇒ *Workshop Manual '903555 Replacing gateway control unit'.*
	• Installing onboard Owner's Manual/ instructions
	For manual procedure, see ⇒ *Workshop Manual '0X01IN Diagnostic system: Performing vehicle handover'.*
	• Automatic coding of all control units
Procedure if the sequence is aborted:	• End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'.* • Repeat subsequent work sequence by entering the programming code again, whereby extended logging must be started using the key combination •Ctrl" + •L" . • Extended logging records diagnostic software data, particularly vehicle communication data, which is required for analysing the issues that caused programming to be aborted. • If subsequent work is aborted a second time, end operational readiness for

	approx. 15 minutes (switch off ignition) and repeat the procedure described here again. • In the case of further aborts, the subsequent work must be successively carried out manually.
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"'.*

4   Establish bus idle for at least 15 minutes.

   4.1   End operational readiness (switch off ignition).

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

   4.3   Lock the vehicle using the driver's key and remove the driver's key from the proximity of the vehicle (approx. 10 meter/ 32.8 ft).

   4.4   Unlock the vehicle again after waiting for at least 15 minutes.

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

5   Teach steering lock settings.

   5.1   Select the **power steering 'EPS'** control unit in control unit selection (**'Overview'** menu) and press •F12" ('Next') to confirm.

   5.2   Once the power steering control unit has been found and is displayed in the list, select the **'Maintenance/repairs'** menu.

   5.3   Select the **'Start of Operations' function, then 'Commissioning Power Steering'** function and confirm with •F12" ('Next').

   5.4   Follow the instructions on the Tester to perform the commissioning process.

   5.5   If the left and right steering lock settings are not saved during the procedure, adjust the height and depth of the steering wheel position and repeat the commissioning procedure.

6   **Only relevant for vehicles with Scope 1 and 2 or if fault memory entries are stored for seat adjustment:** Standardize seat adjustment for driver's and passenger's side.

   6.1   Select the **'Seat adjustment on front passenger's side'** control unit in the control unit selection screen (**'Overview'** menu) and press •F12" ('Next') to confirm your selection.

   6.2   Once the seat adjustment on front passenger's side control unit has been found and is displayed in the overview, select the **'Maintenance/repairs'** menu.

6.3   Select the **'Standardize seat motors'** function and press •F12" ('Next') to confirm your selection.

6.4   Read the instructions and confirm by pressing •F12" ('Next').

6.5   Press •F8" ('Start') to run the procedure.

6.6   Once the seat motors on the **passenger's side** have been standardized, also teach the **driver's side**. To do this, select the **'Seat adjustment on front driver's side'** control unit in the control unit selection screen (**'Overview'** menu) and **repeat Steps 6.2 to 6.6**. Then, continue with **Step 2**.

7   Manually retract the rear spoiler, which extended automatically during programming.

7.1   Select the **'Rear spoiler'** control unit in the control unit selection screen (**'Overview'** menu) and press •F12" ('Next') to confirm.

7.2   Once the rear spoiler control unit has been found and is displayed in the overview, select the **'Maintenance/repairs'** menu.

7.3   Select the function '**Teach rear spoiler**' and press •F12" ('Next') to confirm.

7.4   Read the instructions and confirm by pressing •F12" ('Next').

7.5   Meet the displayed conditions that must be checked manually and tick the relevant **'Status'** box.

7.6   Select the **'Teach rear spoiler'** function and press •F8" ('Execute') to confirm.

7.7   Once the rear spoiler has been taught and retracted fully, select the **'Overview'** menu to return to the control unit selection screen.

8   Calibration of power electronics at front and rear.

8.1   Select the **'Rear high-voltage power electronics'** control unit in the control unit selection screen (**'Overview'** menu) and confirm with •F12" ('Next').

8.2   Once the high-voltage power electronics on rear axle control unit has been found and is displayed in the 'Overview', select the **'Drive links/checks'** menu.

8.3   Select the **'Electric motor – Reset calibration'** function and confirm with •F12" ('Next').

8.4   Set the entry to **Basic setting** in the Values column on the **'Parameters'** tab.

8.5   Confirm that **calibration** has been reset with •F8" ('Execute').

8.6   Go back to the control unit selection screen (**'Overview'** menu), select the **'Front high-voltage power electronics'** control unit and repeat **Steps 8.2 to 8.4** for the selected control unit.

8.7   After resetting both calibrations, select the two control units **'Front high-voltage power electronics' and 'Rear high-voltage power electronics'** in the control unit selection screen and open the **'Fault memory'** menu.

8.8   Check whether the fault code **'P171900'** is displayed for **both** control units:

- If the fault code **'P171900'** is displayed for the **'Rear high-voltage power electronics'** and **'Front high-voltage power electronics'** control unit, continue with Step 8.9.
- The fault code **'P171900'** is **not displayed** or is displayed only for **one of the two control units**. Carry out **Steps 8.1 to 8.6** for the relevant control units again.

8.9   Disconnect the PIWIS Tester from the vehicle.

8.10   Switch off and disconnect the battery charger.

ℹ️ Information

Resetting the high-voltage power electronics will limit the maximum vehicle speed to 70 km/h (43 mph). The warning message "Reduced speed" will be displayed on the instrument cluster. Any road on which it is possible to accelerate to a speed of at least 60 km/h (38 mph) can be used as the calibration route.

Read and follow safety instructions:

- Only perform calibration on public roads if the road and traffic conditions are conducive to doing so

- The road traffic regulations must always be observed

- Other road users must not be at risk when performing calibration

- Move the vehicle on public roads only if it is roadworthy

8.11   Start the calibration drive and complete the following steps.

- Accelerate the vehicle to at least 60 km/h (38 mph).
- Release the accelerator pedal and allow the vehicle roll in overrun for at least 1 second. Calibration is performed during this overrun phase.
- Switch ignition off and on again to reset the "Reduced speed" warning message.
- If the calibration drive and ignition cycle does not resolve the fault code P171900 on both axles in the same drive, then the Instrument Cluster warning may persist. It may be necessary to reset the front and rear axle calibration values again, followed by another calibration drive with overrun phase.

9   Read out and erase the fault memories of all control units.

9.1   Press •F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.

9.2   Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm ⇒ *Erasing fault memories.*

The fault memories of the control units are read out.

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

Erasing fault memories

ℹ️ **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.

9.4   Press •F8" to delete fault memory entries.

9.5   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.

ℹ️ **Information**

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

- End operational readiness (switch off ignition).

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

- Lock the vehicle using the driver's key and remove the driver's key from the proximity of the vehicle (approx. 10 meter/ 32.8 ft).

- Unlock the vehicle again after waiting for at least 15 minutes.

- Restore operational readiness (switch on ignition).

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

- Read out the fault memory again and delete any fault memory entries that are stored.
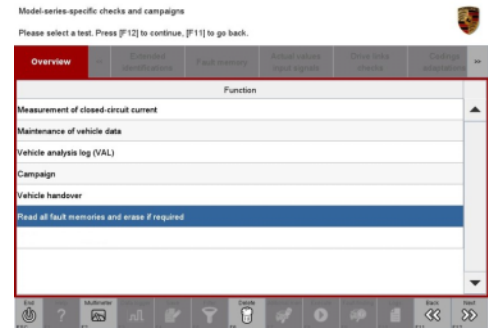
9.6 Once you have erased the fault memories, select the **'Overview'** menu to return to control unit selection ⇒ *Control unit selection*.

Control unit selection

10 Create vehicle analysis log (VAL) using the PIWIS Tester.
Mark the vehicle analysis log you have just created with the attribute "Final VAL" and after carrying out the campaign, return it using the PIWIS Tester.
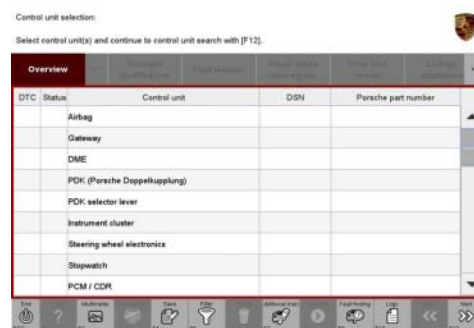
11 End operational readiness (switch off ignition).

12 Disconnect the PIWIS Tester from the vehicle.

ℹ️ **Information**

Connect the PIWIS Tester to a network as soon as possible and log into the PPN in order to transfer the backup documentation created during this campaign to the PAG systems.

13 Switch off and disconnect the battery charger.

14 Replace Taycan Owner's Manual with an updated Taycan Owner's Manual with order number WKD Y1A 00 xx**21** (xx = language code, e.g. 10, 20, 30, etc.).
Also remove the old Owner's Manual from the vehicle and dispose of it.

15 Enter the campaign in the Warranty and Maintenance booklet.

Overview of order numbers for Owner's Manuals

ℹ️ **Information**

Owner's Manuals with order numbers WKD Y1A 00 21 **20** (xx = language code, e.g. 10, 20, 30, etc.) that are still available must not be placed in new vehicles or used as replacement Owner's Manuals. Owner's Manuals with these order numbers that are still in stock must be disposed of.

From now on, **only** use the Owner's Manuals with the order number WKD Y1A 00 xx **21** for the **vehicles assigned to the campaign**. These reflect the technical status of the vehicles following the software update.

The order numbers for the various language versions of the updated Owner's Manual are provided in the following table. You can order the Owner's Manual in the quantity you need using the standard ordering process.

Parts Info:

Order No.:	Designation - Language	Ordering via		Onboard Owner's Manual
		PROS (Arvato)	Importer	
WKDY1A002121	Owner's Manual - **English - US**		■	■

Warranty processing

> **ⓘ Information**
>
> The specified working time was determined specifically for carrying out this campaign and includes all necessary preliminary and subsequent work.
> The working time may differ from the working times published in the Labor Operation List in the PCSS.

> **ⓘ 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
>
> • Random check of programming status
>
> 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.

Scope 1: **Updating various control units one after the other to software release VR8.6, VR8.7 and VR12.1.1**

Working time:

Updating various control units one after the other to software release VR8.6 and VR8.7

Labor time: **515 TU**

Includes: Connecting and disconnecting battery charger
    Connecting and disconnecting PIWIS Tester
    Commissioning power steering
    Retracting rear spoiler manually
    Standardising driver's and passenger's seat adjustment
    Calibrating high-voltage power electronics (front and rear axle)
    Reading out and erasing fault memories
    Creating vehicle analysis logs (VAL) before and after the campaign

Required materials:

| WMA50000001 | Owner's Manual* | 1 ea. |
| WMA50000002 | Shipping costs** | 1 ea. |

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter the Part No. **WMA50000001** with the designation "**Owner's Manual**" as **accessories** costing **$0.01**.

** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WMA50000002**, with the designation "**Shipping costs**" as an additional part. Maximum cost **$6.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage Code WMA5 066 000 1**

Scope 2 **Updating various control units one after the other to software release VR8.7 and VR12.1.1**

Working time:

Updating various control units one after the other to software release VR8.6 and VR8.7

Labor time: **490 TU**

Includes: Connecting and disconnecting battery charger
    Connecting and disconnecting PIWIS Tester
    Commissioning power steering
    Retracting rear spoiler manually
    Standardising driver's and passenger's seat adjustment
    Calibrating high-voltage power electronics (front and rear axle)
    Reading out and erasing fault memories

Creating vehicle analysis logs (VAL) before and after the
campaign

Required materials:

WMA50000001   Owner's Manual*   1 ea.

WMA50000002   Shipping costs**   1 ea.

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter
the Part No. **WMA50000001** with the designation "**Owner's Manual**" as **accessories** costing
$0.01.

** **If** you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these
costs under the Part No. **WMA50000002**, with the designation "**Shipping costs**" as an additional
part. Maximum cost **$6.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage Code WMA5 066 000 1**

Scope 3:   **Updating various control units to software release VR12.1.1**

Working time:

Updating software for various control units   Labor time: **447 TU**
Includes: Connecting and disconnecting battery charger
               Connecting and disconnecting PIWIS Tester
               Commissioning power steering
               Retracting rear spoiler manually
               Calibrating high-voltage power electronics (front and rear
               axle)
               Reading out and erasing fault memory
               Creating vehicle analysis logs (VAL) before and after the
               campaign

Required materials:

WMA50000001   Owner's Manual*   1 ea.

WMA50000002   Shipping costs**   1 ea.

* The cost of one Owner's Manual will be covered **for each vehicle**. For warranty processing, enter
the Part No. **WMA50000001** with the designation "**Owner's Manual**" as **accessories** costing
$0.01.

** If you incur **shipping costs** when ordering the Owner's Manual Supplement, please invoice these costs under the Part No. **WMA50000002**, with the designation "**Shipping costs**" as an additional part. Maximum cost **$6.25**. Please document a copy of the invoice for this in the warranty claim.

⇒ **Damage Code WMA5 066 000 1**

Overview of new features implemented by the software updates

Overview:

Function	Description	Software update		
		VR8.6	**VR8.7**	**VR12.1.1**
Navigation and infotainment: Porsche Communication Management (PCM)	• Quick filter "Charging stations" is permanently visible in the PCM in order to select charging stations as a destination	■		
	• Further improvements have been made to the navigation system, such as the display of online information directly on the map and lane-specific traffic information			■
	• Last destinations and favorites, such as "Home" and "Work", remain stored	■		
	• Saved satellite map settings are optimized	■		
	• Registration via Porsche ID is improved	■		
	• Wireless Apple Car Play is enabled. If an Apple ID is linked to your vehicle, the Apple Podcasts including video streaming and Apple Music Lyrics can be used.			■
	• Porsche Connect Care package with the breakdown call function is enabled for an inclusive period of 10 years.			■
	• The functionality of the navigation system is optimized and system stability is improved.			■
	• The starting behavior and performance of the central display are improved.			■

Assistance systems	• The functionality of Park Distance Control (PDC) is optimized and sporadic system failures that currently occur are corrected.		■	
	• Traffic sign recognition at double the time-dependent speed limits is further improved.			■
Charging	• A new charging cable with a cable length of 7.5 meter/ 24.6 ft can also be used in the future	■		
	• Calculation of the state of charge (SoC) of the high-voltage battery is further optimized. Incorrect calculation of the state of charge is avoided	■		■
	• At-home charging is improved. Stability during charging is improved and the timer charging function is further optimized.		■	■
	• The calculation of the battery capacity is optimized further		■	
	• Home charging with third-party charging equipment is improved. Discharge of the 12-volt vehicle electrical system battery during charging is prevented.			■
	• The Charging Planner functions are extended. For example, it is now possible to set the charge level at which your vehicle should reach the specified destination.			■
	• During a charging process with active route guidance, the vehicle and the app can also display the point at which the charge level needed for the rest of the route is reached and it is possible to resume driving.			■
	• With the new function for charging while preserving the battery, the charging power can be reduced from up to 270 kW to 200 kW if desired. The resulting lower battery temperature during charging further increases battery life.			■

Air conditioning	• The functionality of the air conditioning is optimized: Temperature settings in the rear air-conditioning control panel thus remain constant and sporadic failures of the air conditioning are corrected	■		
Chassis and driving comfort	• Starting comfort is further optimized	■		■
	• Possible chassis noises from the front axle area are reduced	■		
	• The lift function is improved. The set vehicle height is not lost after a restart		■	
	• With the new Smart Lift function, the Taycan can be programmed to lift automatically at certain points, such as speed bumps or garage driveways.			■
	• Further optimization of the suspension system application improves driving dynamics and race-track performance.			■
	• Software optimizations improve the functionality of the Porsche Stability Management (PSM) when driving downhill or during stop-and-go driving		■	
	• Any personalized settings are retained, even after a bus idle and account change.			■
	• Seat and ergonomic positions will now be stored even when using a guest profile and will available again after a restart.			■
Digital cockpit display (instrument cluster)	• Various software optimizations prevent the sporadic, short-lived display of various messages and thus improve the driving experience	■	■	■
	• The starting behavior and performance of the instrument cluster are further improved.			■
	• Sporadic loading spinners and resets are avoided.			■

Seat adjustment	• On vehicles in non-Connect markets, the chosen seat memory settings of the driver's seat will now also be preserved after the driving readiness is complete	■		
	• In future, when using a guest profile, seat and ergonomic positions will be stored and will not be lost after a restart.		■	

Additional instructions if programming is aborted

Information

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

You will also find further information and instructions specifically for the VR12.1.1 update in the table below:

Work Procedure:

Control unit:	Situation:	Action required:
Control unit for assistance systems (zFAS):	Fault memory entry **B170AF1** or **B200FF3** after coding and bus idle.	Perform Assistance systems drive link. • Select the Assistance systems control unit in the overview. • Select the Drive links/checks menu. • Select and start the **Data input, Step 2** drive link and then follow the instructions on the PIWIS Tester.
Front corner radar control unit:	Fault memory entry after bus idle due to incorrect calibration of front corner radar.	Calibrate front corner radar again ⇒ *Workshop Manual '916625 Calibrating front corner radar'*.

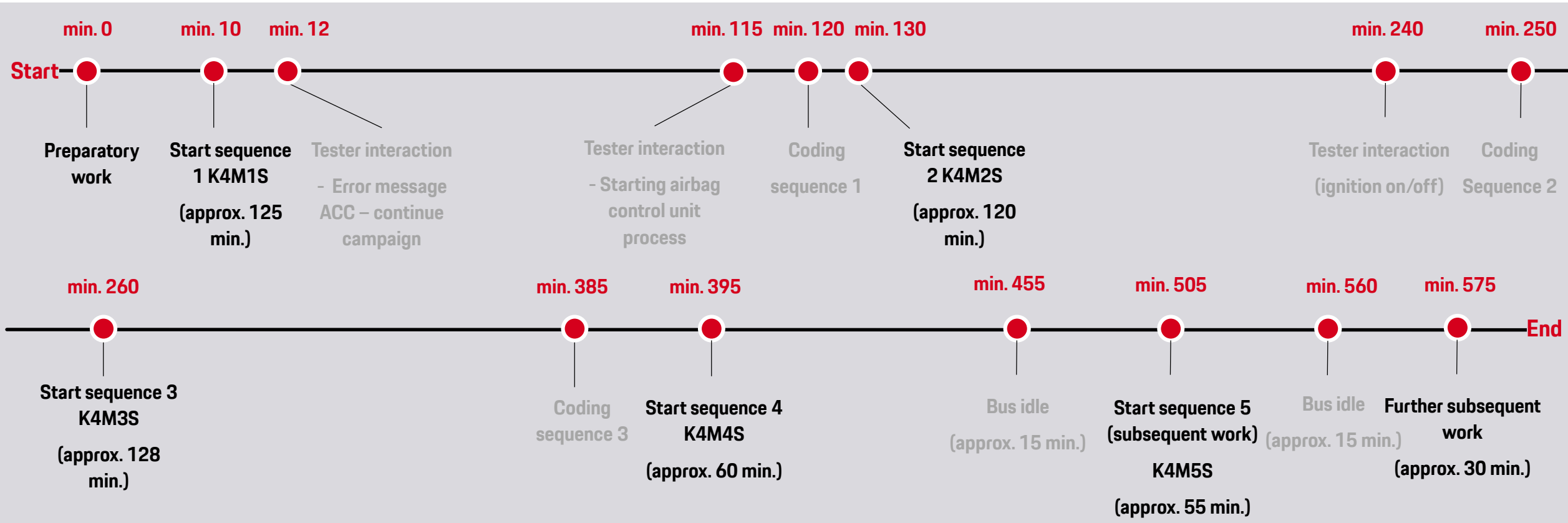| Component protection:	Component protection activation has failed.	• Start sequence 5 again. • If terminal 30 is aborted again, perform a terminal change. For instructions, see ⇒ *Workshop Manual '270619 Removing and installing vehicle electrical system battery'*. • After the terminal 30 change, start sequence 5 again.
	Activation of component protection for the control unit for external communication (connection box) has failed.	• Deactivate flight mode. For procedure, see ⇒ *Workshop Manual '903525 Deactivating flight mode'*. • Then, start sequence 5 again.
	Activation of component protection for assistance systems (zFAS) has failed.	• Teach component protection again. For manual procedure, see ⇒ *Workshop Manual '903555 Replacing gateway control unit'*. Select the gateway control unit during the PIWIS Tester procedure in order to teach component protection for all control units. • Perform terminal 30 change. • Enable functions. For instructions, see ⇒ *Workshop Manual '903555 Replacing gateway control unit'*. • Code all control units.
Parking brake (PSM):	Parking brake position lost after coding.	Read the information on the instrument cluster and follow the instructions on the central display: • Press the brake pedal completely.

		• Move selector lever to "N" and wait 5 seconds. • After a waiting time of 5 seconds, apply the parking brake. If the "Brake" warning light in the instrument cluster still comes on, perform calibration again and wait for longer.

Rough time schedule supplement for workshop campaign WMA5 – Scope 3

min. 0   **min. 10**   **min. 12**   **min. 115**   **min. 120**   **min. 130**   **min. 240**   **min. 250**

Start

Preparatory work

Start sequence 1 K4M1S

(approx. 125 min.)

Tester interaction

- Error message ACC – continue campaign

Tester interaction

- Starting airbag control unit process

Coding sequence 1

Start sequence 2 K4M2S

(approx. 120 min.)

Tester interaction (ignition on/off)

Coding Sequence 2

min. 260   **min. 385**   **min. 395**   **min. 455**   **min. 505**   **min. 560**   **min. 575**

End

Start sequence 3 K4M3S

(approx. 128 min.)

Coding sequence 3

Start sequence 4 K4M4S

(approx. 60 min.)

Bus idle (approx. 15 min.)

Start sequence 5 (subsequent work) K4M5S

(approx. 55 min.)

Bus idle (approx. 15 min.)

Further subsequent work

(approx. 30 min.)

Please note that this chart only represents a supplement to Technical Information WMA5 (TI 15/21). The listed times are for orientation purposes only and may vary depending on vehicle equipment.

The Porsche Mobile Charger Connect (WMA7) update must be performed promptly after carrying out campaign WMA5.

Note: this chart is for internal dealer use only

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