

Replacement Requirements for Electronic Components - Follow Separate Procedure (87/21)

Model Line: **Taycan (Y1A/Y1B)**

Model Year: **As of 2020**

Concerns: **Spare parts requirements for:**

- Instrument cluster
- Display and operator control unit (central display)
- Display and operator control unit (front center console)
- Control unit for driver assistance systems
- High-voltage battery charger (OBC)
- Central computer
- Control unit for emergency call module and communication unit
- Amplifier
- Self-levelling system control unit
- High-voltage heating (PTC)
- Thermal management control unit
- Front/rear door control unit
- Rear-differential lock control unit
- Engine sound system booster, interior/exterior

Information: **Due to a software update for various control units that has taken place in the meantime, components with non-current software were blocked in the central parts warehouse (ZEL) for further use.**

In order to maintain supply capability should one of the affected electronic components require replacement even in the event of a part shortage, these electronic components have been released again subject to compliance with a separate procedure for software updating. Depending on the specific component concerned, control unit programming must also be carried out according to the procedure described below after installation.

Action required: Programme affected electronic components after installation in order to update the software to the required status.

In the section "Affected part number" you will find an overview of the affected parts.

**Information**

If the vehicle is affected by workshop campaign WMA5 or WMA6, but this has not yet been carried out:

- Carry out workshop campaign WMA5 ⇒ *Technical Information 'WMA500 WMA500 -WMA5 Workshop campaign - Update software of different control units'* or WMA6 ⇒ *Technical Information 'WMA600 WMA6 Workshop campaign - Update software of various control units'* after component replacement to update the components to the required software status. Then check software versions and ensure that the required software status is available on the components according to the corresponding information.

If the vehicle is not affected by workshop campaign WMA5 or WMA6, or the campaign has already been carried out:

- Carry out the procedure described below for control unit programming depending on the specific component replaced. Continue in the section "Affected part numbers". Then check software versions and ensure that the required software status is available on the components according to the corresponding information.

If the vehicle is affected by workshop campaign WMA5 or WMA6, delivery to the customer **must not take place** without previously completing the workshop campaign.

Affected part numbers

Parts Info: If one of the components mentioned below has been replaced on the vehicle, the programming must be carried out as described in section ⇒ *Technical Information 'WMA600 Control unit programming 1'*.

Component assignment 1

Designation	Part No.
Instrument cluster	<ul style="list-style-type: none"> • 9J1920911P 5Q0 • 9J1920913P 5Q0 • 9J1920901M IA6 • 9J1920903M IA6 • 9J1920901P IA6 • 9J1920903P IA6 • 9J1920901M IA7 • 9J1920903M IA7 • 9J1920901P IA7 • 9J1920903P IA7 • 9J1920901M IA8 • 9J1920903M IA8 • 9J1920901P IA8 • 9J1920903P IA8
Charger for high-voltage battery (OBC) 22 KW (For 11 KW charger see "Component assignment 5")	<ul style="list-style-type: none"> • 9J1915681AD

Control unit for self-levelling function	• 9J1907553L
Thermal management control unit	• PAB965429D
High-voltage heating (PTC)	• 9J1963507C
Rear-differential lock control unit	• 9J1927771C

If one of the components mentioned below has been replaced on the vehicle, the programming must be carried out as described in section ⇒ *Technical Information 'WMA600 Control unit programming 2'*.

Component assignment 2

Designation	Part No.
Control unit for emergency call module and communication unit	<ul style="list-style-type: none"> • 9J1035283C • 9JA035284C • 4K2035282B
Engine sound system booster (interior)	• 9J1035446D
Engine sound system booster (exterior)	• 9J1035335D
Front/rear door control unit	• PAB959795

If one of the components mentioned below has been replaced on the vehicle, the programming must be carried out as described in section ⇒ *Technical Information 'WMA600 Control unit programming - component assignment 3'*.

Component assignment 3

Designation	Part No.
Central computer	<ul style="list-style-type: none"> • 9J1035084M • 9J1035086M • 9J1035089M • 9J1035092M • 9J1035136M • 9J1035140N • 9J1035840N • 9J1035070T • 9J1035089T • 9J1035140T • 9J1035840T • 9J1035877T • 9J1035070TX • 9J1035089TX
Display and operator control unit (central display)	<ul style="list-style-type: none"> • 9J1919599F • 9J1919599G • 9J1919597H

Display and operator control unit (front center console)	<ul style="list-style-type: none"> • 9J1919610H • 9J1919611H
Amplifier	<ul style="list-style-type: none"> • 9J1035223E (for Burmester) • 9J1035223D (Bose)

If one of the components mentioned below has been replaced on the vehicle, the programming must be carried out as described in section ⇒ *Technical Information 'WMA600 Control unit programming - component assignment 4 new'*.

Component assignment 4

Designation	Part No.
Control unit for driver assistance systems	<ul style="list-style-type: none"> • PAD907107 • PAD907108 • PAD907117

If one of the components mentioned below has been replaced on the vehicle, the programming must be carried out as described in section ⇒ *Technical Information 'WMA600 Control unit programming - component assignment 5'*.

Component assignment 5

Designation	Part No.
Charger for high-voltage battery (OBC) 11 KW (For 22 KW charger see "Component assignment 1")	<ul style="list-style-type: none"> • PAB915684K

Required tools

Tools:



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'*.

- 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 PIWIS test software **version 40.250.040** (or higher) installed.

Control unit programming - component assignment 1

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

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.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.

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.

Work Work
Procedure:

This programming process is only intended for the following control units:

- Instrument cluster
- High-voltage battery charger (OBC), 22 kW
- Control unit for self-levelling function

- Thermal management control unit
 - Rear-differential lock control unit
- 1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"*.
 - 2 Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

- 3 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 -Arrow-*.



Emergency start tray

- 4 Connect **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.

- 5 Establish operational readiness (switch on ignition).

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

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

- 7 **Programming control unit**

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	40.250.040 (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

<p>Programming sequence:</p>	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>Do not interrupt programming and coding.</p> <p>A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.</p>										
<p>Depending on which control units are programmed during the programming session. Programming time (approx.):</p>	<p>15 min to max. 125 min</p>										
	<table border="1"> <tr> <td>• High-voltage charger (OBC) 22 kW</td> <td>1242</td> </tr> <tr> <td>• Rear-differential lock control unit</td> <td>2021</td> </tr> <tr> <td>• Thermal management control unit</td> <td>0323</td> </tr> <tr> <td>• High-voltage heating (PTC)</td> <td>0015</td> </tr> <tr> <td>• Instrument cluster</td> <td>0595</td> </tr> </table> <p>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.</p>	• High-voltage charger (OBC) 22 kW	1242	• Rear-differential lock control unit	2021	• Thermal management control unit	0323	• High-voltage heating (PTC)	0015	• Instrument cluster	0595
• High-voltage charger (OBC) 22 kW	1242										
• Rear-differential lock control unit	2021										
• Thermal management control unit	0323										
• High-voltage heating (PTC)	0015										
• Instrument cluster	0595										
<p>Procedure in the event of abnormal termination of control unit programming:</p>	<ul style="list-style-type: none"> • End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. • 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

- 8 Read out and erase the fault memories of all control units.
- 8.1 Press •F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.
- 8.2 Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm ⇒ *Erasing fault memories*.

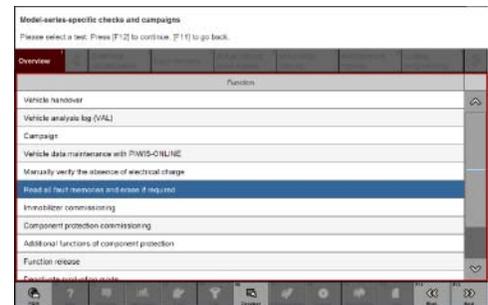
The fault memories of the control units are read out.

- 8.3 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 must be invoiced using a separate warranty claim.



Erasing fault memories

- 8.4 Press •F8" to delete fault memory entries.
- 8.5 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.



Information

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

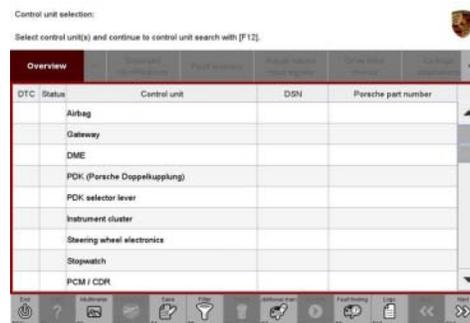
- End operational readiness (switch off ignition).
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key and remove the **driver's key from the proximity of the vehicle** (approx. 10 metres).
- **Wait approx. 15 minutes** before unlocking the vehicle again.
- 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.

- 8.6 Once you have erased the fault memories, select the **'Overview'** menu to return to the control unit selection screen ⇒ *Control unit selection*.



Information

The rear-differential lock control unit only has to be taught if it has been replaced.
If another component has been replaced, continue with step 10.



Control unit selection

- 9 Teach rear-differential lock again.
 - 9.1 Select the **Rear-differential lock** control unit in the control unit selection screen ("**Overview**" menu) and press •F12" ("Next") to confirm your selection.
 - 9.2 Once the rear-differential lock control unit has been found and is displayed in the overview, select the "**Maintenance/repairs**" menu.
 - 9.3 Select the "**Commissioning**" function and confirm with •F12" ("Next").
 - 9.4 Follow the instructions on the Tester to perform the commissioning process.
- 10 End operational readiness (switch off ignition).
- 11 Disconnect the PIWIS Tester from the vehicle.
- 12 Switch off and disconnect the battery charger.

Control unit programming - component assignment 2

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

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.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.

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.

Work Work
Procedure:

This programming process is only intended for the following control units:

- Front/rear door control unit
- Engine sound system booster, interior/exterior
- Control unit for emergency call module and communication unit

- 1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"*.
- 2 Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

3 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 -Arrow-*.

4 Connect **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.

5 Establish operational readiness (switch on ignition).

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

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

7 **Programming control unit**

Specific information on control unit programming in the context of this Technical Information:



Emergency start tray

Required PIWIS Tester software version:	40.250.040 (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.
Depending on which control units are programmed during the programming session. Programming time (approx.):	15 min to max. 130 min

	<ul style="list-style-type: none"> • Door control unit 0390 • Engine sound system booster (exterior) 0100 • Engine sound system booster (interior) 0290 • Control unit for emergency call module and communication unit 0236 or 0237 or 0238 or 0239 <p>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.</p>
Procedure in the event of abnormal termination of control unit programming:	<ul style="list-style-type: none"> • End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. • 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

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

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

8.2 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.

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



Erasing fault memories



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 must be invoiced using a separate warranty claim.

8.4 Press **•F8** to delete fault memory entries.

8.5 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.



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 metres).
- **Wait approx. 15 minutes** before unlocking the vehicle again.
- 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.

- 8.6 Once you have erased the fault memories, select the **'Overview'** menu to return to the control unit selection screen ⇒ *Control unit selection*.
- 9 Standardize power window mechanisms of **all** door windows.
For instructions, see:
⇒ *Workshop Manual '577355 Replacing front door control unit'*
or
⇒ *Workshop Manual '587355 Replacing rear door control unit'*
- 10 End operational readiness (switch off ignition).
- 11 Disconnect the PIWIS Tester from the vehicle.
- 12 Switch off and disconnect the battery charger.



Control unit selection

Control unit programming - component assignment 3

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

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.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.

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**

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 V04014999WW000 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***.

Additional tools:

Additional tools needed for this programming:

- **USB storage medium Type A+C 32 GB (for PCM update)**, e.g. Part No. V04014999WW000
- **USB storage medium, type C (for onboard Owner's Manual update)**, e.g. Part No. V04014999WW000

Overview of PiUS software versions – PCM update VR12.1.1		
Part No.*	Designation – Region	Vehicle allocation
9J1919360D	PCM update software – North America	I-no. ER3/ER4

Work
Procedure:

This programming process is only intended for the following control units:

- Central computer
- Display and operator control unit
- Display and operator control unit – center console
- Bose / Burmester amplifier

1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"*.

2 Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

3 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 -Arrow-*.



Emergency start tray

4 **9900 - PIWIS Tester 3** (required software version: **40.250.040** or higher) must be connected to the vehicle communication module (VCI) via the **USB cable**. Then, connect the communication module to the vehicle and switch on the PIWIS Tester.

5 Establish operational readiness (switch on ignition).

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

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

7 Re-program central computer (PCM).

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

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

- 7.3 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)'*.
- 7.4 Check whether **guest account** is selected in the central display (PCM) and **Privacy mode** is activated (available in some countries).
- 7.5 Start the central computer (PCM) software update using the PIWIS Tester.
- 7.6 Select the **PCM central computer** control unit in the control unit selection screen ('**Overview**' menu) and press •F12" ('Next') to confirm your selection.
- 7.7 Once the PCM central computer control unit has been found and is displayed in the 'Overview', select the '**Maintenance/repairs**' menu.

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

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

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

7.11 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*.

7.12 Press •F8" ('Start') to start.

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

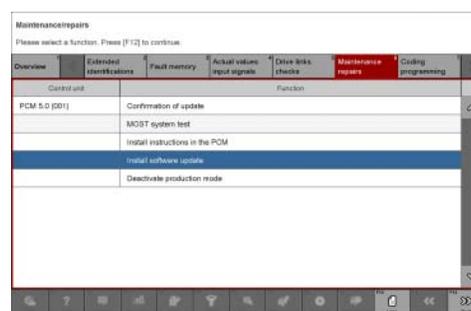
Once the update has started, the PCM is restarted in the Update menu and the individual components are then updated.

The update can take up to 60 minutes.

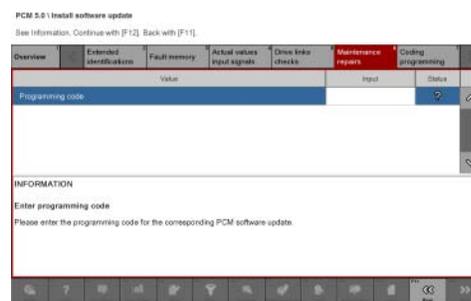
Read and follow the instructions displayed on the PIWIS Tester during the update. The PCM is restarted several times. **The PCM screen (central display) remains dark for a long time.**

7.14 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 programming:



Installing PCM 6.0 software update



Entering PCM 6.0 programming code

- Central computer (PCM): **3397**
- Front display and operator control unit (central display): **0210**
- Loudspeaker booster: **0150 (Bose), 0090 (Burmester)**
- Front display and operator control unit (passenger display): **0310**
- Display and operator control unit – 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.

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

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

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

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

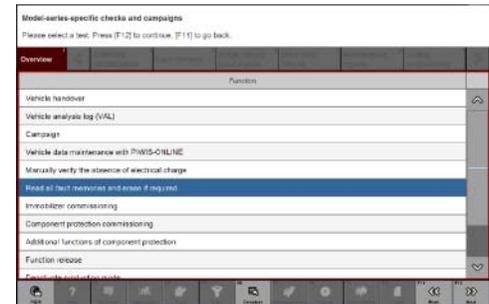
The fault memories of the control units are read out.

8.3 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 must be invoiced using a separate warranty claim.



Erasing fault memories

8.4 Press •F8“ to delete fault memory entries.

8.5 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.



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 metres).
- **Wait approx. 15 minutes** before unlocking the vehicle again.
- 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.

8.6 Once you have erased the fault memories, select the **'Overview'** menu to return to the control unit selection screen ⇒ *Control unit selection*.

- 9 Install onboard Owner's Manual.
For instructions, see:
⇒ *Workshop Manual '915255 Replacing central computer'*

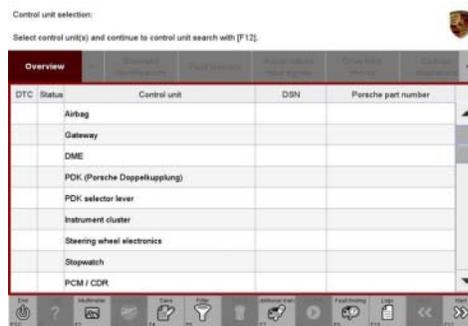


Information

In the course of programming, the operating instructions are overwritten. As a result, the onboard operating instructions must then be reinstalled.
In addition, the following subsequent work is required, which is also described in the Workshop Manual "Replacing central computer".

- Teaching component protection
- Restoring enabling function
- Teaching combination sensor

- 10 End operational readiness (switch off ignition).
11 Disconnect the PIWIS Tester from the vehicle.
12 Switch off and disconnect the battery charger.



Control unit selection

Control unit programming - component assignment 4

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

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.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.

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**

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 must be invoiced using a separate warranty claim.

**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 metres).
- **Wait approx. 15 minutes** before unlocking the vehicle again.
- 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.

Work Procedure:

This programming process is only intended for the following control unit:

- Control unit for driver assistance systems
- 1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"*.

- 2 Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

- 3 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 - Arrow -*.



Emergency start tray

- 4 Connect **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.

- 5 Establish operational readiness (switch on ignition).

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

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

7 Programming control unit - Sequence 1

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	40.250.040 (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:	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>Do not interrupt programming and coding.</p> <p>A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.</p>
Depending on which control units are programmed during the programming session. Programming time (approx.):	15 min to max. 100 min
	<ul style="list-style-type: none"> Control unit for driver assistance 0355 systems
	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:	<ul style="list-style-type: none"> End and restore operational readiness (switch ignition off and then on again). Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

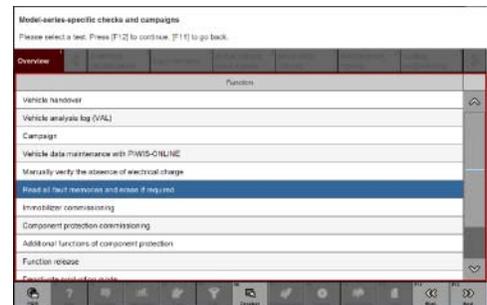
Programming control unit - Sequence 2

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	40.250.040 (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.
Depending on which control units are programmed during the programming session. Programming time (approx.):	15 min to max. 125 min
	<ul style="list-style-type: none"> Control unit for driver assistance 0365 systems
	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:	<ul style="list-style-type: none"> End and restore operational readiness (switch ignition off and then on again). Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

- 8 Read out and erase the fault memories of all control units.
- 8.1 Press •F7" in the control unit selection screen ('Overview' menu) to call up the Additional menu.
- 8.2 Select the function "Read all fault memories and erase if required" and press •F12" ('Next') to confirm ⇒ *Erasing fault memories*.



Erasing fault memories

- The fault memories of the control units are read out.
- 8.3 Once you have read out the fault memories, check the fault memory entries.
- 8.4 Press •F8" to delete fault memory entries.
- 8.5 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.
- 8.6 Once you have erased the fault memories, select the '**Overview**' menu to return to the control unit selection screen ⇒ *Control unit selection*.



Control unit selection

- 9 Teach component protection for driver assistance systems.
- 9.1 Press •F7" in the overview to switch to the **Additional menu**.
- 9.2 Select **Component protection start-up**. Follow instructions and procedure.
- 9.3 **Enter the PPN user name and password**. Press •F12" to continue.
- 9.4 Allow the Tester to run the procedure. Read and follow information and instructions.
- 9.5 Select **Gateway** (master) component protection. Press •F12" to continue.
- 9.6 Allow the Tester to run the procedure.
- 9.7 The Tester displays the message: **Component protection taught**. Press •F12" to continue.

- 9.8 Press **•F11** to return to the **Control unit overview**.
- 10 Teach combination sensor.
 - 10.1 Select the **Airbag** control unit in the **overview**.
 - 10.2 Select the **Maintenance/repairs** menu.
 - 10.3 **Teach combination sensor** must be selected. Press **•F12** to continue.
 - 10.4 Read and follow the warnings and instructions on the Tester. Press **•F8** to start.
- 11 Encode **all** control units automatically.
 - 11.1 In the **overview** of the control unit select **all control units**.
 - 11.2 Select the **Maintenance/repairs** menu.
 - 11.3 Select **Automatic coding**. Follow instructions and procedure.
 - 11.4 Press **•F11** to return to the **Control unit overview**.
- 12 End operational readiness (switch off ignition).
- 13 Disconnect the PIWIS Tester from the vehicle.
- 14 Switch off and disconnect the battery charger.

Control unit programming - component assignment 5

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

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.
- ⇒ Place the driver's key with the back facing down in the area in front of the storage compartment under the armrest (emergency start tray) in order to guarantee a permanent radio link between the vehicle and driver's key.

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**

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 must be invoiced using a separate warranty claim.

**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 metres).
- **Wait approx. 15 minutes** before unlocking the vehicle again.
- 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.

Work
Procedure:

This programming process is only intended for the following control unit:

- Control unit for driver assistance systems
- 1 Carry out general preliminary work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming - section on "Preliminary work"*.

2 Connect a suitable battery charger, e.g. **battery charger 90A**, to the jump-start terminals and switch it on.

3 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 -Arrow-*.



Emergency start tray

4 Connect **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.

5 Establish operational readiness (switch on ignition).

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

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

7 **Programming control unit - Sequence 1**

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	40.250.040 (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.
Depending on which control units are programmed during the programming session. Programming time (approx.):	15 min to max. 100 min

	<ul style="list-style-type: none"> High-voltage battery charger 1079 (OBC) 11KW
	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:	<ul style="list-style-type: none"> End and restore operational readiness (switch ignition off and then on again). Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. 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:	⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i> .

Programming control unit - Sequence 2

Specific information on control unit programming in the context of this Technical Information:

Required PIWIS Tester software version:	40.250.040 (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

<p>Programming sequence:</p>	<p>Read and follow the information and instructions on the PIWIS Tester during the guided programming sequence.</p> <p>Do not interrupt programming and coding.</p> <p>A backup documentation process for the re-programmed software versions starts as soon as programming and coding is complete.</p>
<p>Depending on which control units are programmed during the programming session. Programming time (approx.):</p>	<p>15 min to max. 125 min</p>
	<ul style="list-style-type: none"> • High-voltage charger (OBC) 1083 11 kW <p>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.</p>
<p>Procedure in the event of abnormal termination of control unit programming:</p>	<ul style="list-style-type: none"> • End and restore operational readiness (switch ignition off and then on again). • Read out and erase the fault memory ⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester'</i>. • 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.
<p>Procedure in the event of error messages appearing during the programming sequence:</p>	<p>⇒ <i>Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"</i>.</p>

- 8 Read out and erase the fault memories of all control units.
 - 8.1 Press •F7“ in the control unit selection screen ('Overview' menu) to call up the Additional menu.

- 8.2 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.

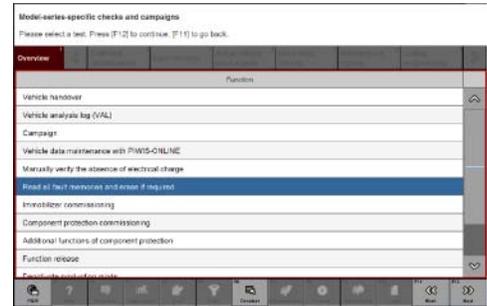
- 8.3 Once you have read out the fault memories, check the fault memory entries.

- 8.4 Press •F8“ to delete fault memory entries.

- 8.5 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.

- 8.6 Once you have erased the fault memories, select the '**Overview**' menu to return to the control unit selection screen ⇒ *Control unit selection.*



Erasing fault memories

- 9 End operational readiness (switch off ignition).
- 10 Disconnect the PIWIS Tester from the vehicle.
- 11 Switch off and disconnect the battery charger.



Control unit selection

Invoicing

Vehicle type: For documentation and warranty invoicing, enter the PQIS coding specified below in the warranty claim:

PQIS coding:

Location (FES5)	99000	Entire vehicle
Damage type (SA4)	9735	Repair in accordance with PAG instructions

Important Notice: Technical Bulletins issued by Porsche Cars North America, Inc. are intended only for use by professional automotive technicians who have attended Porsche service training courses. They are written to inform those technicians of conditions that may occur on some Porsche vehicles, or to provide information that could assist in the proper servicing of a vehicle. Porsche special tools may be necessary in order to perform certain operations identified in these bulletins. Use of tools and procedures other than those Porsche recommends in these bulletins may be detrimental to the safe operation of your vehicle, and may endanger the people working on it. Properly trained Porsche technicians have the equipment, tools, safety instructions, and know-how to do the job properly and safely. Part numbers listed in these bulletins are for reference only. The work procedures updated electronically in the Porsche PIWIS diagnostic and testing device take precedence and, in the event of a discrepancy, the work procedures in the PIWIS Tester are the ones that must be followed.

© 2021 Porsche Cars North America, Inc.