PORSCHE

Technical Information

Service
61/14 ENU WE37 9

WE37 - Updating Software for Various Control Equipment and Devices (Workshop Campaign)

Important: **CRITICAL WARNING** - THIS CAMPAIGN INCLUDES STEPS WHERE SEVERAL CONTROL UNITS IN THE VEHICLE WILL BE PROGRAMMED WITH THE PIWIS TESTER. IT IS CRITICAL THAT THE VEHICLE VOLTAGE IS 13.8 VOLTS DURING THIS PROGRAMMING. OTHERWISE, THE PROGRAMMING COULD FAIL RESULTING IN DAMAGED CONTROL UNITS. CONTROL UNITS DAMAGED BY INADEQUATE OR EXCESSIVE VOLTAGE WILL NOT BE COVERED UNDER WARRANTY. THE TECHNICIAN MUST VERIFY THE ACTUAL VEHICLE VOLTAGE IN THE INSTRUMENT CLUSTER OR IN THE PIWIS TESTER BEFORE STARTING THE CAMPAIGN AND ALSO DOCUMENT THE ACTUAL VOLTAGE ON THE REPAIR ORDER. PLEASE REFER TO EQUIPMENT INFORMATION EQ-1105 FOR A LIST OF SUITABLE BATTERY CHARGERS/POWER SUPPLIES WHICH SHOULD BE USED TO MAINTAIN VEHICLE VOLTAGE.

Model Year: **2015**

Vehicle Type: **918 Spyder**

Concerns: **Software update of the following control equipment and devices:**

- High-voltage battery
- Air conditioning
- Rear axle steering
- DME control unit
- PDK control unit
- Porsche Communication Management (PCM)
- Instrument cluster

Information: This is to inform you of a voluntary Workshop Campaign on the above-mentioned vehicles.

New software is available for the specified control equipment and devices.

The new software will correct the problems described below and implement improvements and function enhancements:

- **High-voltage battery and air conditioning control units**

At outside temperatures below 41° F (5° C), a component protection function, which is used to reduce the performance of the air-conditioning compressor, is active for the air-conditioning compressor.

Due to the diagnostic strategy in the vehicle system, however, this can be detected as a fault in some cases. As a result, implausible fault memory entries are stored and the Check Engine light is activated.

To prevent this from happening, the control units will be re-programmed using an updated data record.

- **Control units for rear axle steering**

With the previous software used for the control units for rear axle steering, there is a possibility that the error message "Fault rear steering Possible to drive on" will be displayed immediately after switching on

the ignition. If this happens, the rear axle steering actuators will be locked at zero position. The vehicle then behaves like a vehicle with conventional toe control arms.

The rear axle steering function is fully available again after switching the ignition off and on again.

To prevent the rear axle steering from malfunctioning, the control units for the rear axle steering will be re-programmed using an updated data record.

- **DME and PDK control unit**

New data records, which increase engine running comfort and driving comfort in certain driving situations, are available for the DME and PDK control units.

- **Porsche Communication Management (PCM)**

With the previous PCM software, the PCM system can restart automatically at times during continuous operation and intensive use of all PCM functions (e.g. when using the navigation system and displaying the weather chart at the same time).

To prevent this from happening, the PCM software will be updated.

- **Instrument cluster**

For standardization reasons, changes were made to the warning messages that appear on the instrument cluster when the language option Russian is selected (no more English warning texts appear when Russian is selected). When Russian is selected as the required language, this only affects how warning messages are displayed on the instrument cluster; English is still the system language.

Information

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

It is important, therefore, to ask the customer during **vehicle acceptance** about his/her **individual settings implemented in the instrument cluster** and **restore these after carrying out the campaign** if necessary.

Action Required:

Update the software for the affected control equipment and devices.

Information

It takes approx. **90 minutes in total** to **program** the various **control equipment and devices**.

Once the software has been updated, the following steps must also be carried out in the specified sequence:

- Reading out and erasing fault memories
- Performing throttle valve adaptation
- Calibrating electric machine

- Adapting the decoupler/separating clutch*

* For adapting the decoupler, the **state of charge of the high-voltage battery must be at least 20%**.

Please check the **state of charge of the high-voltage batterybefore carrying out the campaign**.

The state of charge of the high-voltage battery is shown in the "Car & Info" display on the instrument panel or can be read out from the DME control unit using the PIWIS Tester:
'**DME 918S Hybrid**' > menu ⇒ '**Actual values / input signals**' >> value group "**Y_Hybrid**" >>> value "**Y161_Hybrid battery, absolute SoC actual value**."

Charge the high-voltage battery before carrying out the campaign if necessary to ensure that the **state of charge is at least 20%** and the decoupler can be adapted.

Affected Vehicles:

The VIN(s) can be checked by using PIWIS Vehicle Information link to verify if the campaign affects the vehicle. This campaign is scope specific to the VIN! Failure to verify in PIWIS may result in an improper repair. This campaign affects 70 vehicles in North America.

Parts Info:

Part No.	Designation	Qty.
918.642.901.00	⇒ SD card for PCM update	1 ea.*

* Every Porsche dealership responsible for looking after a vehicle affected by the campaign is provided with **one** SD card for the PCM update.

Only **one** SD card must therefore be ordered for every Porsche dealership responsible for looking after a vehicle affected by the campaign. This SD card remains available as a **tool** in the relevant Porsche dealership.

Tools:

- **Battery Charger / Power Supply** - Suitable for Lithium Ion type batteries, recommended current rating of 70A fixed voltage 13.8V. Refer to Equipment bulletin EQ-1105.
- **9818 - PIWIS Tester II** with PIWIS Tester software version **14.700** (or higher) installed.

Work Procedure:

See Attachment "A".

Claim Submission:

See Attachment "B".

Procedure:

Information

The software for the affected control equipment and devices should be updated in the **sequence specified below** if at all possible.

The sequence has been tested and optimized. Waiting times caused by programming and carrying out the required on-board diagnosis of the high-voltage system will be reduced if this sequence and the PCM and instrument cluster software updates, which are carried out partly in parallel, are observed.

Sequence	Control equipment / device	Programming time (approx.)	Software update performed using
1	High-voltage battery and air conditioning control (combined programming sequence)	8 minutes	**PIWIS Tester** with software version **14.700** (or higher) installed
2	Rear axle steering	4 minutes	
3	DME and PDK control unit (combined programming sequence)	12 minutes	
4	Porsche Communication Management (PCM)*	20 minutes	**SD card**, Porsche part number **918.642.901.00**
5	Instrument cluster*	50 minutes	**PIWIS Tester** with software version **14.700** (or higher) installed

* The PCM update and the programming procedure for the instrument cluster can be performed partly in parallel: Once the PCM update has started, the instrument cluster can be re-programmed in parallel using the PIWIS Tester.

The procedure described here is based on the sequence described in the table.

Attachment "A"

NOTICE

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

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

⇒ **During control unit programming, always connect PIWIS Tester II 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 PIWIS Tester and the vehicle communication module (VCI) without tension to prevent the line from slipping out of the USB connection on the PIWIS Tester.**

⇒ **Lock connecting lines on the vehicle communication module (VCI) using the bayonet lock.**

⇒ **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 mains power supply if necessary.**

Information

Depending on the control unit to be programmed, there is a possibility that the battery management system will open the high-voltage contactors for safety reasons, thereby disconnecting the high-voltage battery from the vehicle electrically.
If this happens, the low-voltage vehicle electrical system will no longer be backed up by the high-voltage battery or the high-voltage charger.

- During control unit programming, connect the low-voltage vehicle electrical system to an external backup system with 13.8 V (charging current limit: 70 A).

Information

The required work must only be carried out by **high voltage technicians (HVT)** with relevant qualifications for working on the 918 Spyder.

Employees **without the corresponding qualifications** must **not** carry out these tasks.

The **high-voltage vehicle electrical system** does **not have to be isolated from the power supply** in order to carry out control unit programming and software updates.

Observe general warning notes for working on the high-voltage vehicle electrical system ⇒*Workshop Manual '2X00IN General warning notes for working on the high-voltage electrical system'*.

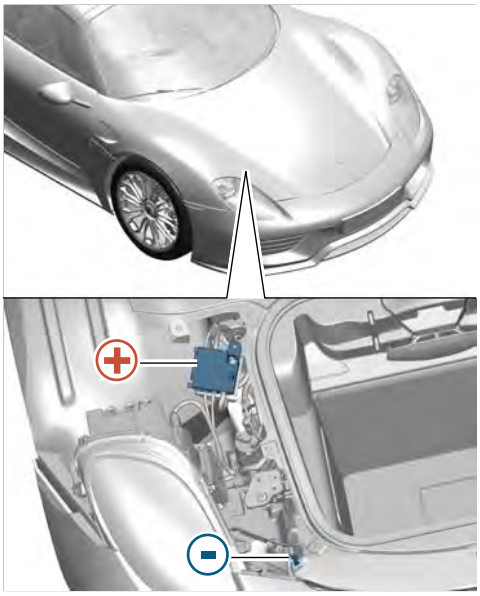
Important: **Fault entry in the fault memory and control unit programming aborted due to low voltage.**
> Increased current draw during diagnosis or control unit programming can cause a drop in voltage, which can result in one or more fault entries and the abnormal termination of the programming process.
> Before starting control unit programming, connect a battery charger or power supply, suitable for Lithium Ion type batteries, recommended current rating of 70A fixed voltage 13.8V.

Work Procedure: 1 Connect the Shumacher INC-700A to the jump-start terminals in the luggage compartment, set the charger to "Flash Reprogram" and adjust the charging voltage to 13.8 V.

For further details, see ⇒*Workshop Manual '9X00IN Battery trickle charging'*.

2 **9818 - PIWIS Tester II** 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.

3 Switch on ignition.



Installation position of external power connection

Performing software update

Information

The procedure described here is based on the PIWIS Tester II test software version **14.700**.

Work Procedure: 1 **Re-programming control units for high-voltage battery and air conditioning control using the PIWIS Tester**.

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

Specific information on control unit programming during this campaign:

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:	**B3X6X**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. During the programming sequence, first the 'high-voltage battery' control unit and then the 'air conditioning control' control unit is **re-programmed** and then **re-codedautomatically**. **Do not interrupt programming and coding.** Once the control units have been programmed and coded, the PIWIS Tester will prompt you to switch the ignition off and then back on again after a **waiting time of approx. 1 minute**. Any instructions relating to required subsequent work that may be displayed on the **PIWIS Tester display can be ignored** as all required subsequent work must only be carried out after all control units to be programmed during this campaign have been programmed. The required subsequent work is described at the end of the control unit programming instructions. **The description in this Technical Information takes precedence over the subsequent work instructions displayed on the PIWIS Tester.**
Programming time (approx.):	**8 minutes**
Software versions programmed during this campaign:	• 'High-voltage battery' control unit: **0560** • 'Air conditioning' control unit: **0550** Following control unit programming, the software version can be read out of the 'high-voltage battery' and 'air conditioning control' control units in the ⇒ '**Extended identification**' menu using the PIWIS Tester.

Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"*'.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by entering the programming code again.

2 **Re-programming control units for rear axle steering using the PIWIS Tester**.

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

Specific information on control unit programming during this campaign:

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:	**L9M5Z**
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. During the programming sequence, the control unit for **left rear axle steering** is re-programmed first, then the control unit for **right rear axle steering** is re-programmed **automatically**. Once programming is complete, both control units are **re-codedautomatically**. **Do not interrupt programming and coding.** Once the control units have been programmed and coded, the PIWIS Tester will prompt you to switch the ignition off and then back on again after a **waiting time of approx. 1 minute**. Any instructions relating to required subsequent work that may be displayed on the **PIWIS Tester display can be ignored** as all required subsequent work must only be carried out after all control units to be programmed during this campaign have been programmed. The required subsequent work is described at the end of the control unit programming instructions. **The description in this Technical Information takes precedence over the subsequent work instructions displayed on the PIWIS Tester.**

Programming time (approx.):	**4 minutes**
Software version programmed during this campaign:	**1008** Following control unit programming, the software version can be read out of the control units for rear axle steering in the ⇒ '**Extended identification**' menu using the PIWIS Tester.
Procedure in the event of error messages appearing during the programming sequence:	⇒*Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"*'.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by entering the programming code again.

3 **Re-programming the DME and PDK control unit.**

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

Specific information on control unit programming during this campaign:

Type of control unit programming:	Control unit programming using the **'Automatic programming'** function for the DME control unit. Control unit ⇒ '**DME 918S Hybrid**' > menu ⇒ **'Programming'** >> function **'Automatic programming'**.
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. During the programming sequence, the **DME control unit** - as well as the **PDK control unit** - is **re-programmed** and then **re-codedautomatically**. **Do not interrupt programming and coding.** Once the control units have been programmed and coded, the PIWIS Tester will prompt you to switch the ignition off and then back on again after a **waiting time of approx. 10 seconds**. Any instructions relating to required subsequent work that may be displayed on the **PIWIS Tester display can be ignored** as all required subsequent work must only be carried out after all control units

	to be programmed during this campaign have been programmed. The required subsequent work is described at the end of the control unit programming instructions. **The description in this Technical Information takes precedence over the subsequent work instructions displayed on the PIWIS Tester.**
Programming time (approx.):	**12 minutes**
Data records (Porsche part number) programmed as part of this campaign:	• DME control unit: 918.618.61x.**07** • PDK control unit: 918.618.38x.**13**
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"*.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by restarting programming.

4 **Performing software update for Porsche Communication Management (PCM)**.

Information

The **PCM update** is performed using an **SD card**, which is inserted into the PCM card reader instead of the SD card for the navigation data.

The SD card for the PCM update (Part No. 918.642.901.00) must be used **once** for each Porsche Centre responsible for looking after a **vehicle affected by the campaign**.
As soon as the PCM update has been performed, the SD card for the PCM update must be removed from the PCM card reader and the SD card for the navigation data must be re-inserted into the card reader.

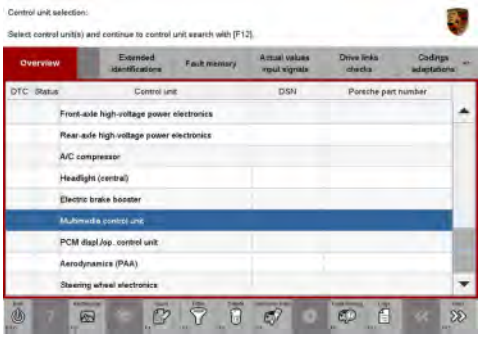
The SD card for the PCM update remains in the Porsche Centre.

To perform the PCM update using the SD card, the **operating mode** for the multimedia control unit must first be **changed using the PIWIS Tester** as described below and must be **reset to the standard setting** again when the update is complete.

4.1 Switch on Porsche Communication Management (PCM).

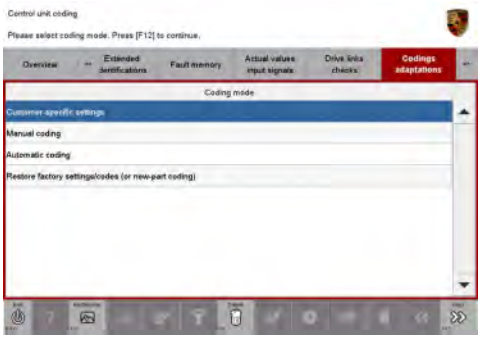
4.2 Use the **PIWIS Tester** to select the ⇒ '**Multimedia control unit**' in the control unit selection screen (⇒ 'Overview' menu) and press •>> “ to confirm your selection ⇒*Multimedia control unit*.

4.3 Once the ⇒ ‘Multimedia’ control unit has been found and is displayed in the overview, select the ⇒ '**Codings / adaptations**' menu.



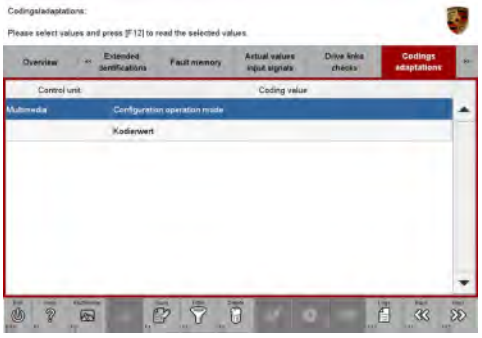
Multimedia control unit

4.4 Select the function ⇒ **'Customer-specific settings'** and press •>> “ to confirm your selection ⇒*Multimedia control unit - Customer-specific settings*.



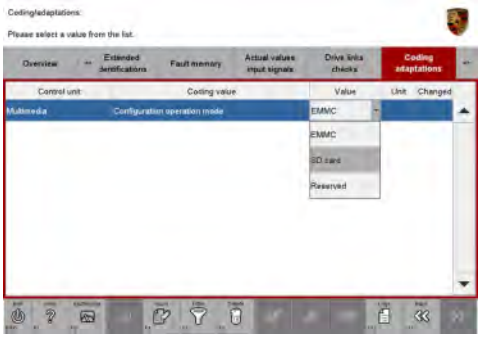
Multimedia control unit - Customer-specific settings

4.5 Select the function ⇒ **'Operating mode configuration'** and press •>> “ to confirm ⇒*Multimedia control unit - Operating mode configuration*.



Multimedia control unit - Operating mode configuration

4.6 Change the operating mode in the ⇒ **'Value'** column from '**EMMC**' to '**SD card**' (⇒*Changing operating mode to SD card*) and press •F8 " ("Write") to save the change. The message "Coding has been written successfully" then appears in the upper status line.



Changing operating mode to SD card

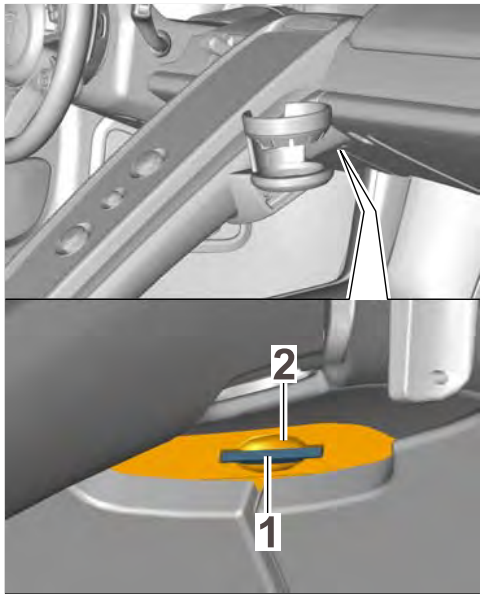
4.7 Once the operating mode has been changed, press •<< " to return to the start page of the ⇒ '**Codings / adaptations**' menu.

4.8 Select the ⇒ **'Overview'** menu and press •<< " to return to the control unit selection screen.

4.9 Remove SD card ⇒*Removing SD card* **-1-** containing the navigation map data from the card slot in the PCM system ⇒*Removing SD card* **-2-**.

The card slot in the PCM system is in the cut-out below the centre console ⇒*Removing SD card* at the same height as the button for opening the glove box.

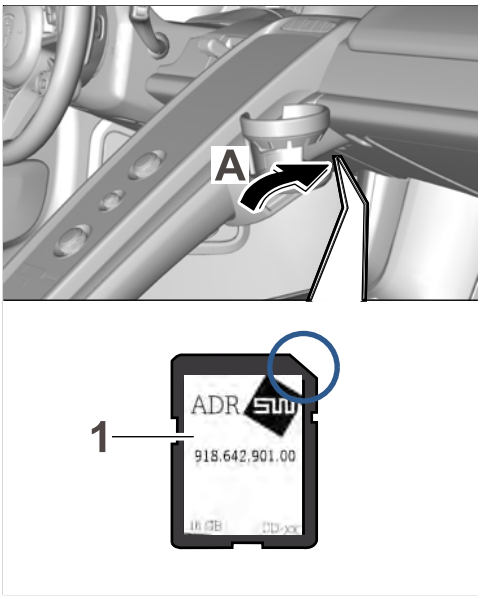
To remove the SD card from the card slot, press the SD card in first with your finger and then let it go so that the SD card is released. Then pull the SD card out of the card slot. Keep the SD card in a safe place.



Removing SD card

4.10 Insert SD card for the software update, Part No. 918.642.901.00 ⇒*Inserting SD card* **-1-**, into the card slot in the PCM system.

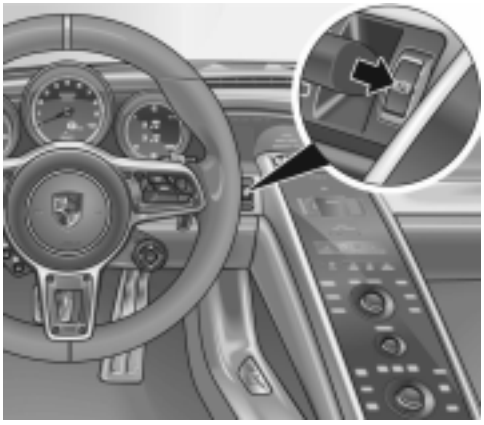
Make sure that the bevelled edge of the SD card is at the front right ⇒*Inserting SD card* **-circle-**.



Inserting SD card

4.11 Switch off ignition, remove ignition key and lock the vehicle.
Leave the vehicle locked until the red light on the button for the electric parking brake ⇒*Button for electric parking brake* **-arrow-** goes out.

4.12 Unlock the vehicle, insert ignition key into the ignition lock and switch on ignition.

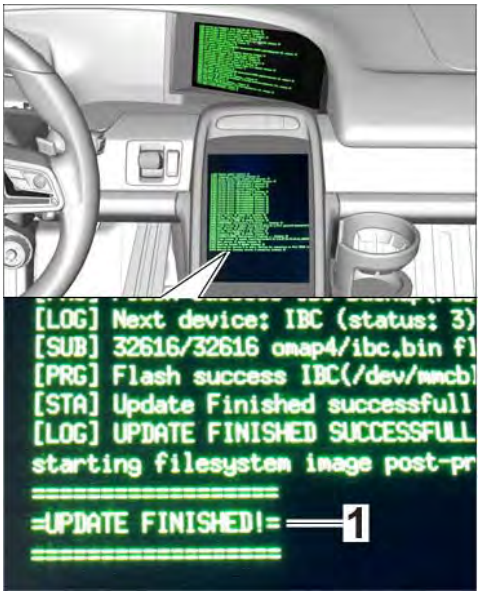


Button for electric parking brake

The PCM update starts automatically after a short time. The update status is displayed as a progress report in green lettering on the PCM operator control unit display in the center console as well as in the display unit (central display) on the dashboard and is updated continuously ⇒*PCM update*.

The update is performed **in two steps**: The CAN controller is updated if necessary in the first step. (This takes approx. 5 minutes). The system is then restarted automatically. The display switches off for a short while and then comes back on again.
The applications (tuner, navigation system, etc.) are updated in the second step. (This takes approx. 15 minutes).

Total time required for the PCM update: approx. 20 minutes.



PCM update

Software version after the software update: **X120**.

As soon as the PCM update has been started and the progress report in green lettering appears on the PCM operator control unit display in the centre console as well as in the display unit (central display) on the dashboard, the **instrument cluster** can be **re-programmed in parallel**. For a description of the procedure, see Step 5.

When the PCM update is complete, the message "=Update finished!=" ⇒*PCM update* **-1-** appears on the PCM operator control unit display in the center console.

5 **Re-programming instrument cluster using the PIWIS Tester**.

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

Specific information on control unit programming during this campaign:

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:	**G8X9Q**

Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. During the programming sequence, the instrument cluster is **re-programmed** and then **re-codedautomatically**. The display in the instrument cluster is switched off during programming. The green LEDs showing the state of charge of the high-voltage battery and the red LEDs on the fuel supply indicator flicker. The ignition is still active in the background. **Never switch the ignition off and then on again because if you do, programming will be interrupted and will then have to be restarted.** The display in the instrument cluster will be switched on again automatically as soon as programming is complete. Once programming and coding is complete, the PIWIS Tester will prompt you to switch the ignition off and then back on again after a **waiting time of approx. 6 minutes**. The 6-minute waiting time with the ignition switched off is necessary so that **on-board diagnosis of the high-voltage system** can be performed and completed as required after control unit programming. **Fault memory entries that were entered as a result of control unit programming can only be deleted after on-board diagnosis has been completed successfully.** Any instructions relating to required subsequent work that may be displayed on the **PIWIS Tester display can be ignored** as all required subsequent work must only be carried out after all control units to be programmed during this campaign have been programmed. The required subsequent work is described at the end of the control unit programming instructions. **The description in this Technical Information takes precedence over the subsequent work instructions displayed on the PIWIS Tester.**
Programming time (approx.):	**50 minutes**

Software version programmed during this campaign:	**1540** Following control unit programming, the software version can be read out of the instrument cluster in the ⇒ '**Extended identification**' menu using the PIWIS Tester.
Procedure in the event of error messages appearing during the programming sequence:	⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Troubleshooting"'*.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by entering the programming code again.

Replacing SD card and resetting PCM operating mode to the standard setting

Work Procedure:

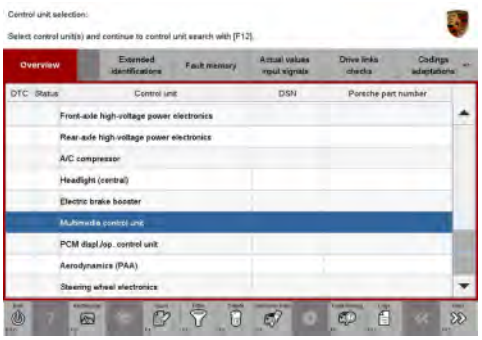
NOTE: VEHICLE VOLTAGE MUST BE 13.8 VOLTS DURING THE ENTIRE WORK PROCEDURE.

1 After programming the instrument cluster and PCM, remove the SD card for the software update from the card slot in the PCM system and insert the SD card containing the navigation map data back into the card slot in the PCM system.
Make sure that the bevelled edge of the SD card is at the front right.

2 Reset the operating mode for the multimedia control unit to the standard setting again using the PIWIS Tester.

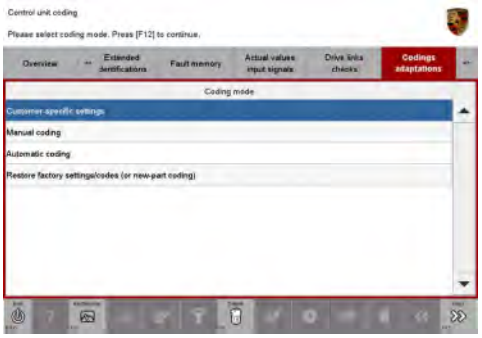
2.1 Use the **PIWIS Tester** to select the ⇒ '**Multimedia control unit**' in the control unit selection screen (⇒ 'Overview' menu) and press •>> “ to confirm your selection ⇒ *Multimedia control unit*.

2.2 Once the ⇒ ‘Multimedia’ control unit has been found and is displayed in the overview, select the ⇒ '**Codings / adaptations**' menu.



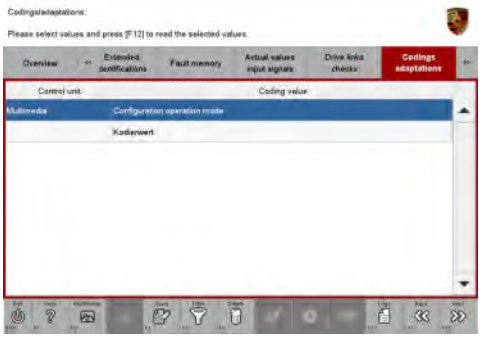
Multimedia control unit

2.3 Select the function ⇒ **'Customer-specific settings'** and press •>> “ to confirm your selection ⇒ *Multimedia control unit - Customer-specific settings*.



Multimedia control unit - Customer-specific settings

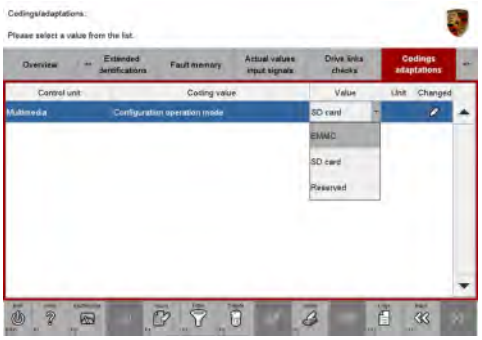
2.4 Select the function ⇒ **'Operating mode configuration'** and press •>> “ to confirm ⇒ *Multimedia control unit - Operating mode configuration*.



Multimedia control unit - Operating mode configuration

2.5 Change the operating mode in the ⇒ **‘Value’** column from ‘**SD card**’ to ‘**EMMC**’ (⇒ *Changing operating mode*) and press •F8 “ (“Write”) to save the change. The message "Coding has been written successfully" then appears in the upper status line.

2.6 Once the operating mode has been changed, press •<< “ to return to the start page of the ⇒ 'Codings/adaptations' menu.



Changing operating mode

2.7 Select the ⇒ **'Overview'** menu and press •<< “ to return to the control unit selection screen.

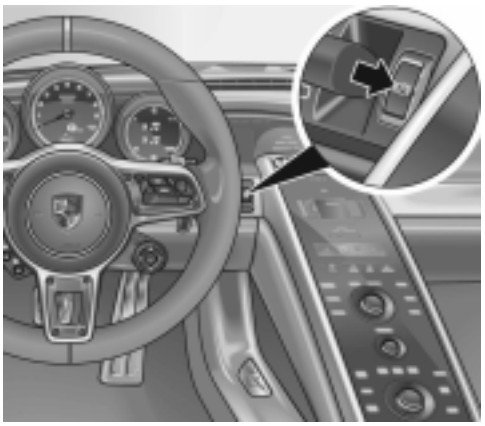
3 Switch off ignition, remove ignition key and lock the vehicle.

Leave the vehicle locked until the red light on the button for the electric parking brake ⇒*Button for electric parking brake* **-arrow-** goes out.

4 Unlock the vehicle, insert ignition key into the ignition lock and switch on ignition.

5 Restore communication between the PIWIS Tester and the vehicle.

6 Select the ⇒ **'Overview'** menu to call up the control unit selection screen.



Button for electric parking brake

Reading out and erasing fault memories

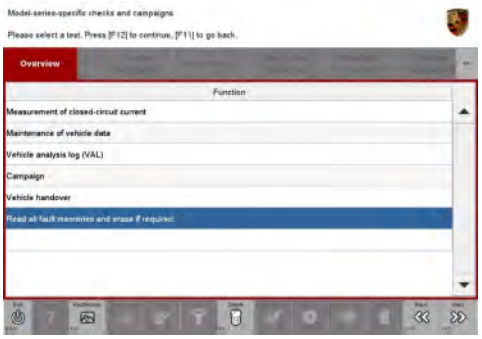
Work Procedure: 1 In the control unit selection screen (⇒ **'Overview'** menu), press •F7 “ to call up the Additional menu.

2 Select the function “Read all fault memories and erase if required” and press •>> “ to confirm ⇒*Erasing fault memories*.

The fault memories of the control units are read out.

3 Once you have read out the fault memories, delete the fault memory entries by pressing •F8 “ .

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



Erasing fault memories

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

5 Use the **PIWIS Tester** to select the **'Multimedia control unit'** in the control unit selection screen ('Overview' menu) and press •>>“ to confirm your selection “Multimedia control unit.” .

5.1 Once the **‘Multimedia’** control unit has been found and is displayed in the overview, menu. select the **'Codings / adaptations'**

5.2 Perform automatic coding

Information

If the fault memories of individual control units for the hybrid system (e.g. high-voltage battery control unit, etc.) cannot be erased, the reason for this may be that **on-board diagnosis of the hybrid system was not completed fully**.
Proceed as follows in this case:

- Switch off ignition.
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key.
- Unlock the vehicle again after a waiting time of at least **10 minutes**.
- Plug the PIWIS Tester diagnostic connector into the diagnostic socket again and restore communication with the vehicle.
- Read out the fault memories of these control units again and erase the fault memories separately.

If control units are found to have faults which cannot be erased and are not caused by control unit programming, these faults must be found and corrected. This work **cannot** be invoiced under the workshop campaign number.

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

Performing throttle valve adaptation

Work Procedure:

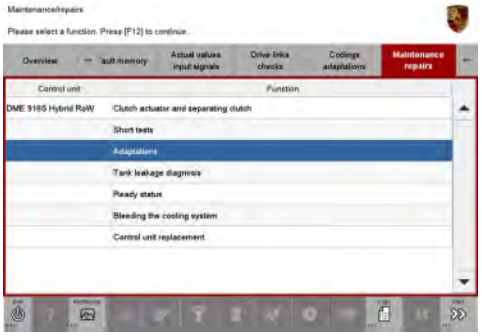
NOTE: VEHICLE VOLTAGE MUST BE 13.8 VOLTS DURING THE ENTIRE WORK PROCEDURE.

1 Select the ⇒ **'DME 918S Hybrid'** control unit in the control unit selection screen (⇒ **'Overview'** menu) and press •>> " to confirm your selection.

2 Once the DME control unit has been found and is displayed in the overview, select the ⇒ **'Maintenance / repairs'** menu.

3 Select menu item ⇒ **'Adaptations'** and press •>> “ to confirm your selection.

4 Comply with the displayed preconditions and press •>> “ to confirm.

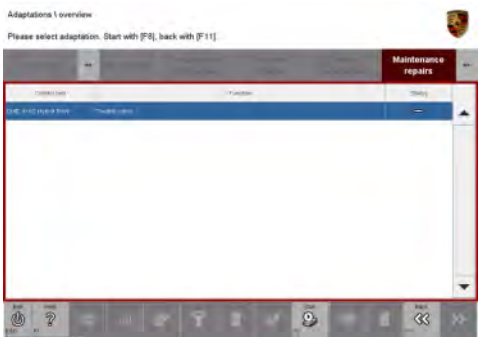


DME - Adaptations

5 Select the ⇒ **'Throttle valve'** function so that the corresponding text line turns blue and press •F8 “ to start throttle valve adaptation.

6 Follow the instructions on the PIWIS Tester while throttle valve adaptation is being performed.

Once throttle valve adaptation is complete, a tick will appear in the "Value" field on the PIWIS Tester display. This is a clear indication that the adaptation was carried out successfully. Any other text can be ignored.



Throttle valve adaptation

If throttle valve adaptation is **not** completed successfully, adaptation must be **repeated**.

7 Press •F8 “ (“Stop”) to end throttle valve adaptation.

8 Press •<< “ to return to the start page of the ⇒ **'Maintenance / repairs'** menu.

Adapting cooling-air flaps

Work Procedure:

NOTE: VEHICLE VOLTAGE MUST BE 13.8 VOLTS DURING THE ENTIRE WORK PROCEDURE.

1 Switch to the DME menu ⇒ **'Drive links / checks'**.

2 Select the ⇒ **'Drive links'** sub-menu and press •>> " to confirm ⇒*DME drive links*.

DME drive links

3 Adapt cooling-air flaps on the **driver's side**.

3.1 Select **'Radiator shutter on driver's side, reference run'** and press •>> " to confirm ⇒*Radiator shutter on driver's side, reference run*.

3.2 Start the reference run by pressing •F8 " .

After you press •F8 " , the reference run for the radiator shutter starts, but no separate information about this appears on the PIWIS Tester display.

Radiator shutter on driver's side, reference run

Do not press •F8 " a second time because if you do, an error message will appear on the PIWIS Tester display.

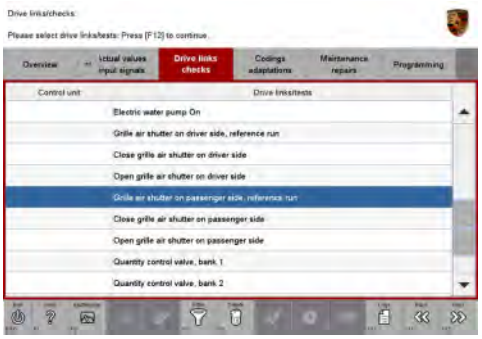
The cooling-air flaps are opened and closed during the reference run. Check that the cooling-air flaps in the front apron open and close correctly.

As soon as the cooling-air flaps have opened fully once and then closed again, stop the reference run by pressing •<< " .

4 Adapt cooling-air flaps on the **passenger's side**.

4.1 Select **'Radiator shutter on passenger's side, reference run'** and press •>> " to confirm ⇒*Radiator shutter on passenger's side, reference run*.

4.2 Carry out the reference run in the same way as described in **Step 3.2** .



Radiator shutter on passenger's side, reference run

5 Press •<< " to return to the start page of the ⇒ **'Drive links / checks'** menu.

6 Select the ⇒ **'Overview'** menu to return to the control unit selection screen.

Calibrating electric machines

Information

The electric machines must generally be calibrated after the fault memories of the OBD-relevant control units or the fault memories of all control units have been erased.

When calibrating the electric machines, the relevant rotor position (phase angle) of the two electric machines is stored.
The process is performed synchronously for both electric machines and must only be performed once in accordance with the description provided below.

Work Procedure:

NOTE: VEHICLE VOLTAGE MUST BE 13.8 VOLTS DURING THE ENTIRE WORK PROCEDURE.

1 Press the brake pedal and keep it pressed during the entire calibration process.

2 Turn the ignition key in the ignition lock to position 2 (terminal 50 – 'engine start') and hold it at this position for about 2 to 3 seconds.
Calibration of the electric machines is clearly audible. Calibration is complete once the calibration noise can no longer be heard.

3 Release the ignition key and switch off ignition.

Adapting the separating clutch / decoupler

Information

For adapting the separating clutch/decoupler, the **state of charge of the high-voltage battery must be at least 20%**.

Please check the **state of charge of the high-voltage batterybefore starting the adaptation process**.

The state of charge of the high-voltage battery is shown in the "Car & Info" display on the instrument panel or can be read out from the DME control unit using the PIWIS Tester:
'**DME 918S Hybrid**' > menu ⇒ '**Actual values / input signals**' >> value group "**Y_Hybrid**" >>> value "**Y161_Hybrid battery, absolute SoC actual value**."

If the state of charge of the high-voltage battery is too low, the high-voltage battery must be charged before starting the adaptation process in order to ensure that the **state of charge is at least 20%** and adaptation of the separateing clutch/decoupler can be carried out.

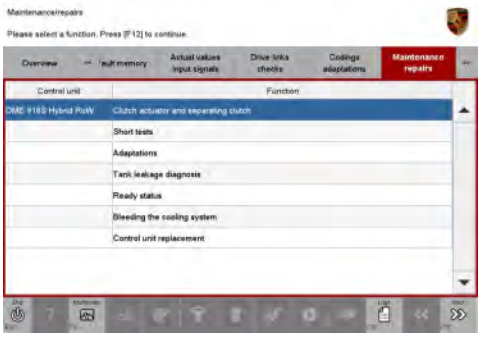
Work Procedure: 1 Switch the ignition back on again after a waiting time of at least 3 seconds.
Restore communication between PIWIS Tester II and the vehicle by pressing •F12 " .

2 Select the ⇒ '**DME 918S Hybrid**' control unit in the control unit selection screen (⇒ 'Overview' menu) and press •>> " to confirm your selection.

3 Once the DME control unit has been found and is displayed in the overview, select the ⇒ **'Maintenance / repairs'** menu.

4 Select the menu item ⇒ **'Clutch actuator and separating clutch** and press •>> “ to confirm your selection ⇒ *Clutch actuator and separating clutch*.

5 Read and comply with the preconditions for the state of charge of the high-voltage battery and confirm by pressing •>> “ .



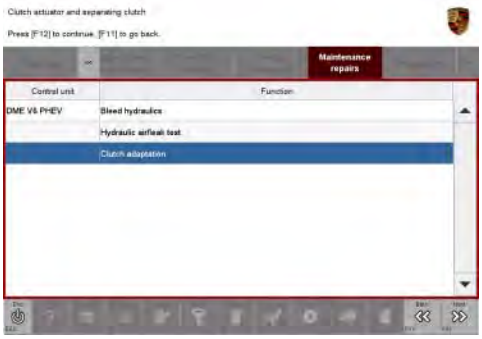
Clutch actuator and separating clutch

6 Select the ⇒ **'Clutch adaptation'** function and press •>> “ to confirm your selection ⇒ *Decoupler adaptation*.

7 Confirm the query as to whether the electric machines are already calibrated by pressing •F12 “ ("Yes").

8 Read and follow the instructions for starting the electric motor and performing adaptation.
Press the brake pedal and then press •>> “ .

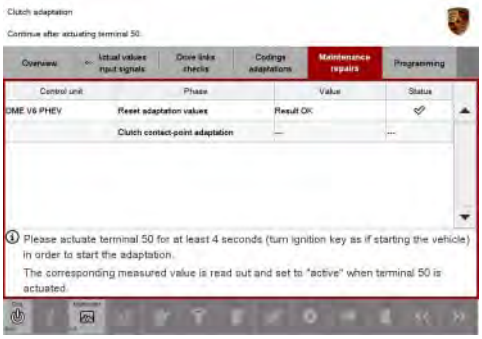
9 Start the adaptation by pressing •F8 “ .



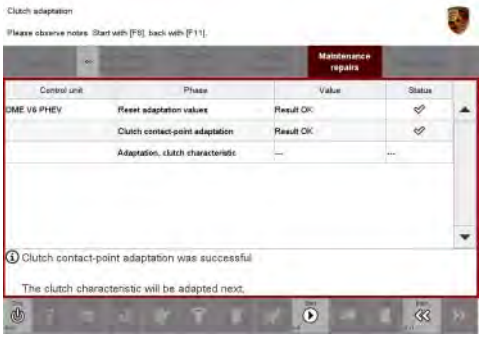
Decoupler adaptation

10 During adaptation, the adaptation values will first be deleted ⇒ *Resetting adaptation values*.
The clutch contact point and the clutch characteristic will then be adapted ⇒ *Adapting contact point* and ⇒ *Adapting characteristic*.
Start each step by pressing •F8 “ and follow the instructions on the PIWIS Tester.

Resetting adaptation values



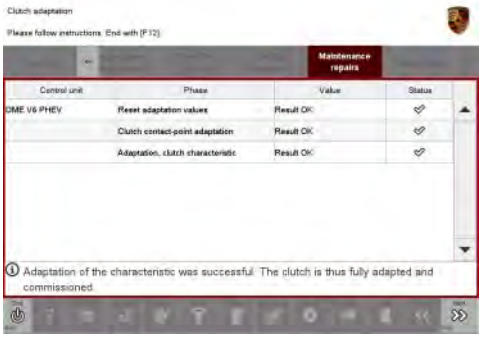
Adapting contact point



Adapting characteristic

11 Once the separating clutch adaptation is complete, a tick will appear in the “Status” field in the PIWIS Tester display ⇒*Adaptation successful*.
Press •>> “ to continue.

If the separating clutch adaptation is **not** completed successfully, the process must be **repeated**.
To do this, first erase the fault memories of all control units and calibrate the electric machines. Then carry out the separating clutch adaptation again.



Adaptation successful

12 Once the separating clutch has been adapted, you will be prompted to switch the ignition off and then on again.
The start page of the ⇒ **"Maintenance / repairs"** menu is then displayed.

13 Select the ⇒ **'Overview'** menu and press •<< “ to return to the control unit selection screen.

Subsequent work

Work Procedure:

NOTE: VEHICLE VOLTAGE MUST BE 13.8 VOLTS DURING THE ENTIRE WORK PROCEDURE.

1 Check that the electric machines were calibrated successfully by starting the combustion engine.

Information

After the ignition is switched on, "E-power" driving mode is activated automatically if the state of charge of the high-voltage battery is high enough (SoC > 35%). Given that purely electric driving is the preferred driving style in this driving mode, the combustion engine is not started when terminal 50 (engine start) is actuated.

To check whether calibration of the electric machines was successful and that the combustion engine can be started, the “Sport Hybrid” or “Race Hybrid” driving mode must first be selected using the MAP switch on the steering wheel.

1.1 Switch on ignition.

1.2 Select “Sport Hybrid” or “Race Hybrid” driving mode. To do this, turn the MAP switch (driving mode controls) on the steering wheel until the LED corresponding to the letter "S" or "R" in the MAP switch lights up.
The display "Sport mode" or "Race mode" also appears in the information display on the instrument cluster.

1.3 Turn the ignition key in the ignition lock to position 2 (terminal 50 – 'engine start') to check whether the combustion engine starts.

1.4 Then stop the combustion engine again.

2 Switch off ignition.

3 Disconnect the PIWIS Tester from the vehicle.

4 Switch off and disconnect the battery charger.

Information

The values for the Tire Pressure Monitoring (TPM) system may be lost during re-coding of the instrument cluster.

If the Tire Pressure Monitoring (TPM) system is reset, you must select **Main menu** > **Tire pressure** > **Settings** in the instrument cluster to reset the **tire type** and **tire size**. The wheel position values will then be re-taught in the control unit during the **test drive** (at a speed of over **25 km/h** or **15 mph**).

To set the tire type and tire size, see ⇒ Owner’s Manual, chapter Instrument Panel and Multi-Function Display - ‘Tire Pressure Monitoring, TPM’.

5 Enter the workshop campaign in the Warranty and Maintenance booklet.

Attachment "B"

Claim Submission - Workshop Campaign WE37
Warranty claims should be submitted via WWS/PQIS.

Open campaigns may be checked by using either the PIWIS Vehicle Information system or through PQIS Job Creation.
Labor, parts, and sublet will be automatically inserted when Technician is selected in WWS/PQIS. If necessary, the required part numbers will need to be manually entered into warranty system by the dealer administrator.

Scope 1:

Working time:

Updating software for various control equipment and devices		Labor time: **133 TU**
Includes:	Connecting and disconnecting battery charger	
	Connecting and disconnecting PIWIS Tester	
	Re-programming high-voltage battery control unit	
	Re-programming air conditioning control unit	
	Re-programming control units for rear axle steering	
	Re-programming DME control unit	
	Re-programming PDK control unit	
	Performing PCM update	
	Re-programming instrument cluster	
	Reading out and erasing fault memories	
	Performing throttle valve adaptation	
	Adapting cooling-air flaps	
	Calibrating electric machines	
	Calibrating the separating clutch/decoupler	

Required tools:

918.642.901.00	SD card for PCM update	1 ea.*

* The SD card for the PCM update must only be invoiced **once** for the first vehicle during **warranty processing** in each Porsche dealership.
Only the **working time** must be invoiced in the campaign claim for the remaining vehicles on which work is carried out as part of this campaign in the Porsche dealership.

⇒ **Damage code WE37 066 000 1**

Dealership	Service Manager	_____	Shop Foreman	_____	Service Technician	_____	_____	_____	_____
Distribution									
Routing	Asst. Manager	_____	Warranty Admin.	_____	Service Technician	_____	_____	_____	_____