Technical Information

Complaint - Various Software Errors: Re-Programming Central Computer (PCM) Using SD Card (39/21)

Vehicle Type:	**Macan (95B)/Macan S (95B)**

Model Year:	**2019**

Concerns:	**Central computer (PCM 5.1)**

Information: Optimized software is available for the Porsche Communication Management (PCM) system.

The following optimizations will be implemented after programming:

- "Avoid vignette" function does not function after parking the vehicle
- "Sport Chrono" function is more robust
- Fan noise from central computer (PCM)

Action required: In the event of a customer complaint, re-program the central computer using an SD card.

ℹ Information

The total time required for control unit programming is **approx. 40 minutes**.

Software:

Control unit	SW (old)	SW (new)	Vehicle assignment
Central computer	2478 or 2491	9830	ER1/ER2/ER3/ER4
Central computer	2478 or 2491	9831	ER5/ER6/ER7/ER8

Required tools and parts

Parts Info:

Information

The PCM update is performed using a SD memory card. You can create the SD card yourself.
To do this, **download** the software using the SD card tool **PiUS** (Porsche integrated Update Service) and **install** it on a blank SD card.

To use PiUS you can order blank 16GB SD cards with the part number **000 721 990 WW 999**.

Pay particular attention to the following:

- Choose the part number that corresponds to the M-no. (ER1 – ER8) in the table.

- For using the software tool, **one** blank or re-writable SD card is required for **each** software.

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

The software (SD cards) mentioned here must only be used on vehicles with the **(old) software 2478 or 2491**.
Damage to the control unit cannot be ruled out if the SD cards are 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**".

Information

If you are **unable** to download the software using the SD card tool **PiUS** (Porsche integrated Update Service) and install it on a blank SD card, the specified SD memory card below can be ordered.

The SD memory card for the PCM update must be re-used as part of the workshop equipment and remains at the Porsche dealer. The SD memory card must not therefore be left in the vehicle or handed over to the customer.

Part No.	Designation	Vehicle assignment	Software
95B919360C	SD card	M-no. **ER3** (NAR)	9830

Tools:

- Battery charger with a current rating of **at least 90 A** and, if required, **also** with a **current and voltage-controlled charge map** for lithium starter batteries, e.g. **VAS 5908 battery charger 90A**

- **9900 - PIWIS Tester 3** with PIWIS Tester software version **40.000.010** (or higher) installed

- **SD memory cards for PCM update**

Preparatory work

> **NOTICE**
>
> **Fault entry in the fault memory and control unit programming aborted due to low voltage.**
>
> - **Increased power consumption during diagnosis can cause a drop in voltage, which can result in one or more fault entries and abortion of the diagnostic process.**
> - ⇒ **Before starting control unit diagnosis, 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 WLAN connection is unstable.**
>
> - **An unstable WiFi connection can interrupt communication between the PIWIS Tester and the vehicle communication module (VCI). As a result, control unit diagnosis may be aborted.**
> - ⇒ **During control unit diagnosis, always connect the PIWIS Tester to the vehicle communication module (VCI) via the USB cable.**

i Information

The procedure described here is based on the PIWIS Tester 3 software version **39.900.015**.

The PIWIS Tester instructions take precedence and in the event of a discrepancy, these are the instructions that must be followed.
A discrepancy may arise with later software versions for example.

1   Connect a battery charger with a current rating of **at least 90 A**, e.g. **battery charger 90A**, to the jump-start terminals in the engine compartment and switch it on.

2   Switch on the ignition using the **original driver's key**.

   For vehicles with "Porsche Entry & Drive", do this by replacing the component in the ignition lock with the original vehicle key if necessary.

3   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.

4   Switch on ignition.

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

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

6   Read out the fault memory of the PCM and delete it if necessary.

Programming central computer (PCM)

> **NOTICE**

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

- **Risk of damage to control unit**

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

Work Procedure: 1   Insert **SD card** for the **PCM update** into the **SD card slot**.

i **Information**

If the software update is interrupted or if **error messages** are displayed (e.g. as a result of read errors), the update must be **repeated**.

2   Start the PCM software update using the PIWIS Tester.

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

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

Installing PCM software update

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

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

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

Entering PCM programming code

2.6   Enter the programming code **N9S7H** in the relevant column ⇒ *Entering PCM programming code* and press •F12" ('Next') to confirm ⇒ *Entering PCM programming code*.

2.7   Press •F8" ('Start') to start.

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

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

The PCM is restarted several times during the update.

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

Software version programmed during this campaign:

- ER1 – ER4: **9830**
- ER5 – ER8: **9831**

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

3 Remove inserted SD card from the SD card slot.

Concluding work

1 Carry out general subsequent work for control unit programming as described in ⇒ *Workshop Manual '9X00IN Basic instructions and procedure for control unit programming'* under ⇒ *Workshop Manual '9X00IN General subsequent work'*.

Invoicing

For documentation and warranty invoicing, enter the labor operations and PQIS coding specified below in the warranty claim:

APOS	Labour operation	I No.
91522590	Programming central computer	

PQIS coding:

Location (FES5)	91520	Central computer
Damage type (SA4)	1612	Does not function in some cases