WLA0 - Re-Programming DME Control Unit (Workshop Campaign)

Important: **CRITICAL WARNING -**This campaign includes steps where control unit(s) in the vehicle will be programmed with the PIWIS Tester. The vehicle voltage must be maintained between 13.5 volts and 14.5 volts during this programming. Failure to maintain this voltage could result in damaged control unit(s). Damage caused by inadequate voltage during programming is not a warrantable defect. The technician must verify the actual vehicle voltage in the PIWIS Tester before starting the campaign and also document the actual voltage on the repair order.

Model Year: **As of 2015 up to 2018**

Vehicle type: **Macan S (95B)**
Macan Turbo with Performance package (95B)

Country/market: USA (C02)
Canada (C36)

Subject: **DME control unit**

Information: **When converting the engine power specification from kilowatts to horsepower for the affected vehicles, the conversion factor for the European unit (hp) was used instead of the unit that is normally used in the affected markets, SAE net horsepower (SAE hp).**

As a result, the engine power specification is on average approx. 1.4% higher than the actual engine power.

Remedial Action: Re-program the DME control unit using the PIWIS Tester with test software version 39.200.010 or a higher software version installed.

Information

With the updated data record for the DME control unit, the maximum engine power is increased by a slight adjustment to the boost pressure to the factory specification.
This adaptation does **not affect** the fuel consumption values, emissions or durability of the engine.

Information

When the **DME control unit** is programmed, the **PDK control unit** and the **all- wheel drive control unit** are **additionally** re-programmed automatically. It takes **approx. 13 minutes** in total to program the control units.

Before starting programming and after the control units have been programmed successfully, the procedure for sending **backup documentation** of the software versions installed on the control units to the Porsche After Sales systems will be started **automatically**.

Affected Vehicles: Only vehicles assigned to the campaign (see also PCSS Vehicle Information). This campaign affects 39,396 vehicles in North America.

Required tools

Tools:

- **9900 - PIWIS Tester 3** with PIWIS Tester software version **39.200.010** (or higher) installed
- Battery charger with a current rating of **at least 90 A**, e.g. **90 Amp Charger e.g. VAS 5908**

Preparatory work

NOTICE

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 commencing work, connect a suitable battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V to the jump-start terminals in the engine compartment.**

NOTICE

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

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

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

NOTICE

Control unit programming will be aborted if the vehicle key is not recognized

- **If the vehicle key is not recognized in vehicles with Porsche Entry & Drive, programming cannot be started or will be interrupted.**

⇒ **Switch on the ignition using the original vehicle key. To do this, replace the original vehicle key in the ignition lock with the plastic key fob if it was previously removed at the start of this procedure.**

Work Procedure: 1 Connect a battery charger with a current rating of **at least 90 A** (e.g. **90 Amp Charger e.g. VAS 5908**) 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”, replace the control panel in the ignition lock with the original driver’s key, if necessary.

3 **9900 - PIWIS Tester 3** 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.

4 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.

Re-programming DME control unit

NOTICE

Use of a PIWIS Tester software version that is older than the prescribed version

- **Measure is ineffective**

⇒ **Always use the prescribed version or a higher version of the PIWIS Tester software for control unit programming or coding.**

Information

The procedure described here is based on the PIWIS Tester 3 software version **39.200.010**.

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.

It is imperative that the PIWIS Tester remains online during control unit programming so that backup documentation of the software versions installed on the control units **before and after programming** is sent to the Porsche After Sales systems.

Work Procedure: 1 **Re-program DME 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"'*.

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

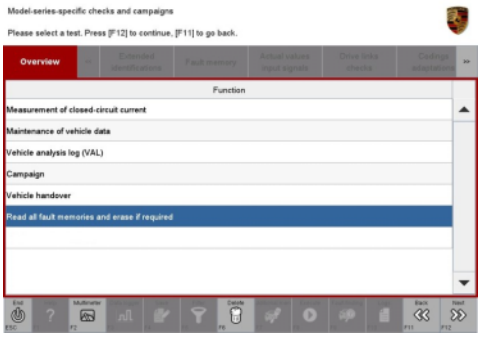
Required PIWIS Tester software version:	**39.200.010** (or higher)
Type of control unit programming:	Control unit programming using the **'Automatic programming'** function for the DME control unit. **DME control unit** – **'Programming'** menu – **'Automatic programming'** function.
Programming sequence:	Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. The **DME control unit**, the **PDK control unit** and the **all-wheel drive control unit** are **re-programmed** and then **re-codedautomatically** during the programming sequence. **Do not interrupt programming and coding.** Once the control units have been programmed and coded, you will be prompted to switch the ignition off and then back on again after a certain waiting time. Backup documentation of the new software versions is then performed.
Programming time (approx):	**13 minutes**
The data record programmed during this campaign (software part number and version) for the DME control unit depends on the relevant vehicle type:	**Porsche Macan S:** DME software version: **3687** DME software part number: **95B90653015**
	Porsche Macan Turbo Performance: DME software version: **3688** DME software part number: **95B90655003**
	Following control unit programming, the software part number and version of the programmed data record can be read out of the DME control unit in the ⇒ 'Extended identification' menu using the PIWIS Tester.
Procedure in the event of abnormal termination of control unit programming:	Repeat control unit programming by restarting programming.
Procedure in the event of error messages appearing during the programming sequence:	*⇒Workshop Manual '9X00IN Basic instructions and procedure for control unit programming using the PIWIS Tester - section on "Fault finding"'*.

Reading out and erasing fault memory

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 •F12 " ('Next') to confirm your selection ⇒*Erasing fault memories*.

The fault memories of the control units are read out.



Erasing fault memories

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

Information

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

4 Press •F8 " to delete fault memory entries.

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 the **fault code 'C10ACF0 - Power steering limit stops not taught'** is present in the fault memory, teach the power steering limit stops.
For relevant instructions, see ⇒*Workshop Manual '489025 Power-steering gear: Teaching steering lock settings'*.

Information

If the fault memories of individual control units cannot be erased, proceed as follows:

- Switch off the ignition.
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key.
- Wait approx. 1 minute before unlocking the vehicle again.
- 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.

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

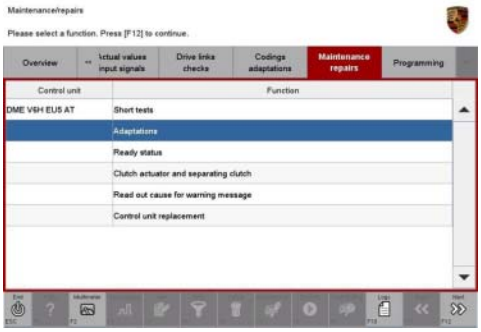
Control unit selection

Perform throttle valve adaptation

Work Procedure: 1 Select the **'DME'** control unit in the control unit selection screen ('Overview' menu) and press •F12 " ('Next') to confirm your selection.

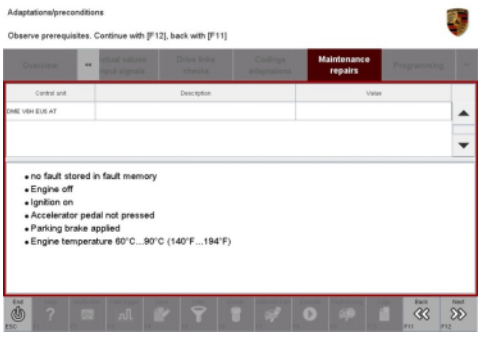
2 Once the DME control unit has been found and is displayed in the overview, select the **'Maintenance / repairs'** menu.

3 Select menu item **'Adaptations'** and confirm your selection by pressing •F12 " ('Next') ⇒*DME - Adaptations*.



DME - Adaptations

4 Comply with the displayed preconditions and press •F12 " ('Next') to confirm ⇒*Adaptation preconditions*.



Adaptation preconditions

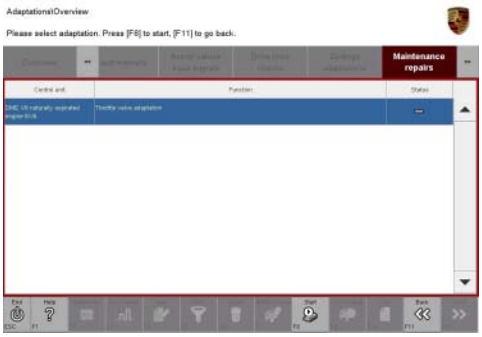
5 Select the **'Throttle valve adaptation'** function so that the corresponding text line turns blue and press •F8 “ (‘Start’) to start throttle valve adaptation ⇒*Throttle valve adaptation*.

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 in the PIWIS Tester display.

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

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



Throttle valve adaptation

Performing radiator shutter adaptation

Work Procedure: 1 Select the **'Radiator shutter adaptation'** function so that the corresponding text line turns blue and then press •F8 “ ('Start') to start radiator shutter adaptation ⇒*Radiator shutter adaptation*.

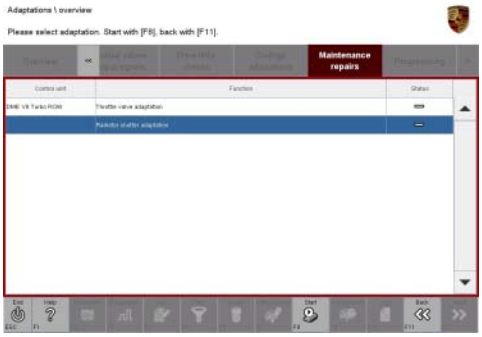
2 Follow the instructions on the PIWIS Tester while radiator shutter adaptation is being performed ⇒*PIWIS instructions*.

Once adaptation is complete, a tick will appear in the "Value" field on the PIWIS Tester display.

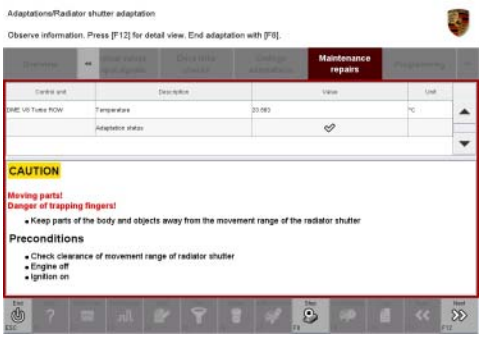
If radiator shutter adaptation is **not** completed successfully, the adaptation must be **repeated**.

3 End radiator shutter adaptation by pressing •F8 “ ('Stop').

4 Press •F11 “ ('Back') to return to the start page of the **'Maintenance / repairs'** menu.



Radiator shutter adaptation



PIWIS instructions

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

Control unit selection

Concluding work

Work Procedure: 1 Switch off the ignition.

2 Disconnect the PIWIS Tester from the vehicle.

3 Switch off and disconnect the battery charger.

4 On vehicles with Porsche Entry & Drive, replace the original vehicle key in the ignition lock with the control panel again.

Information

After programming the DME control unit, the vehicle can only be driven in **coasting mode** again after **approx. 5 overrun phases**.

Drive the vehicle in the required overrun phases during the **test drive** until coasting mode can be activated again. Coasting mode can be identified by the fact that the engine speed falls to idle speed level after initiating an overrun phase.

If it is not possible to reactivate coasting mode during the test drive, inform the customer about this.

5 Enter the campaign in the Warranty and Maintenance booklet.

Warranty processing

Scope 1: **Re-program DME control unit**

- Macan S (95B)
- Macan Turbo with Performance package (95B)

Working time:

Re-programming DME control unit		Labor time: **77 TU**
Includes:	Connecting and disconnecting battery charger	
	Connecting and disconnecting PIWIS Tester	
	Re-programming PDK control unit	
	Re-programming all-wheel drive control unit	
	Performing backup documentation before and after programming	
	Reading out and erasing fault memories	
	Performing throttle valve adaptation	
	Performing radiator shutter adaptation	

⇒ **Damage Code WLA0 66 000 1**