

WD09 - Re-programming PDK Control Unit (Workshop Campaign)

Revisions: Revision 1: May 1, 2013 amends WD09 on pages 2 and 3 to read that the level of PIWIS tester software required is 12.000 rather than 11.900.

Revision 2: December 9, 2013 amends WD09 dated April 16, 2013 which includes numerous changes throughout.

Revision 3: December 11, 2013 amends WD09 to reflect that the correct version of PIWIS software is 13.100

Model Year: **As of 2012 up to 2014**

Important Note: **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 BE BETWEEN 13.5 VOLTS AND 14.5 VOLTS DURING THIS PROGRAMMING. OTHERWISE, THE PROGRAMMING COULD FAIL RESULTING IN DAMAGED CONTROL UNITS. CONTROL UNITS DAMAGED BY INADEQUATE 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. IT IS ALSO ADVISABLE TO MONITOR THE VEHICLE VOLTAGE DURING THE PROGRAMMING VIA THE INSTRUMENT CLUSTER. PLEASE REFER TO EQUIPMENT INFORMATION EQ-1105 FOR A LIST OF SUITABLE BATTERY CHARGERS/POWER SUPPLIES WHICH SHOULD BE USED TO MAINTAIN VEHICLE VOLTAGE.

Vehicle Type: **911 Carrera (991)/911 Carrera 4 (991)
911 Carrera S (991)/911 Carrera 4S (991)**

Equipment: Porsche Doppelkupplung (PDK), I-no. 250

Concerns: **PDK control unit**

Information: This is to inform you of a voluntary Workshop Campaign on the above-mentioned vehicles. **A shift rod movement at a shift gate that was not selected can be detected incorrectly on the affected vehicles due to a software error.**

As a result, fault code "P1767 – Hydraulic multiplexer fault" can be stored in the fault memory of the PDK control unit and the PDK transmission can switch to the reduced driving programme until the ignition is switched off and on again.

To prevent this from happening, the PDK control unit on the affected vehicles will be re-programmed with an updated data record.

On vehicles with Porsche Torque Vectoring Plus (I-no. 221), the updated data record was also used to optimise the adaptation behaviour of the rear-differential lock.

Action Required: Re-program PDK control unit.



Information

When the **PDK** control unit is programmed, the **DME** control unit and the instrument cluster are also reprogrammed automatically. Total programming time is approx. 28 minutes.



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.

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

This affects the following settings in the Vehicle menu, for example:

- Lowering of exterior mirror on passenger's side during parking manoeuvres
- Locking settings
- Light & Visibility settings
- Units (kilometers/miles, Celsius/Fahrenheit, ...)
- Language

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 9,357 vehicles in North America.

Tools: **9818 - PIWIS Tester II** with software version **13.100** (or higher) installed.
Battery Charger/Power Supply - Suitable for AGM Type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V. Refer to Equipment Information EQ-1105.

Work Procedure: See Attachment "A".

Claim Submission: See Attachment "B".

Attachment "A"

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 starting control unit programming, connect a battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V to the vehicle.

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

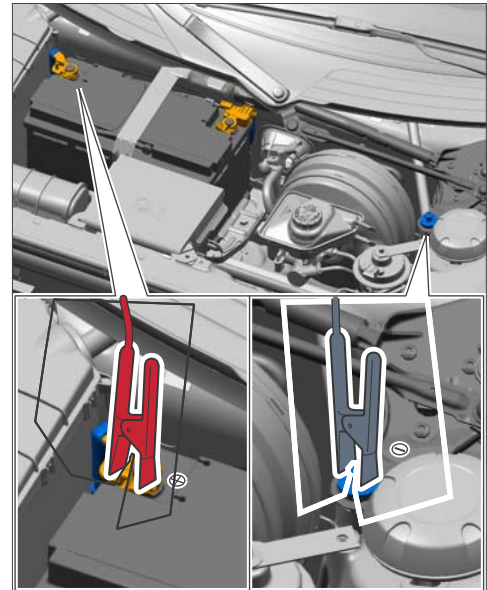
Control unit programming will be aborted if the vehicle key is not recognized

- 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:

NOTE: VEHICLE VOLTAGE MUST REMAIN BETWEEN 13.5 AND 14.5 VOLTS DURING THE ENTIRE WORK PROCEDURE.

- 1 Connect a battery charger or power supply, suitable for AGM type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.
First connect the positive cable of the charger to the positive terminal of the battery and then connect the negative cable of the charger to the ground point for jump-lead starting ⇒ *External power supply*.



External power supply

- 2 Switch on the ignition using the **original driver's key**. On vehicles with "Porsche Entry & Drive", do this by replacing the control panel in the ignition lock with the original driver's key if necessary.
- 3 **9818 - PIWIS Tester II** with software version **13.100** (or higher) installed 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.

Carrying out control unit programming



Information

The procedure described here is based on the PIWIS Tester II software version **13.100**.

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

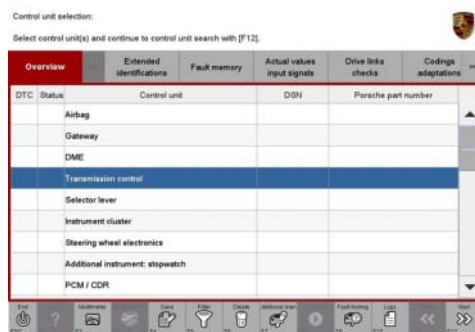
Work Procedure:

NOTE: VEHICLE VOLTAGE MUST REMAIN BETWEEN 13.5 AND 14.5 VOLTS DURING THE ENTIRE WORK PROCEDURE.

- 1 On the PIWIS Tester start screen, call up the ⇒ **'Diagnostics'** menu and select vehicle type ⇒ **'911' ⇒ '991'**.

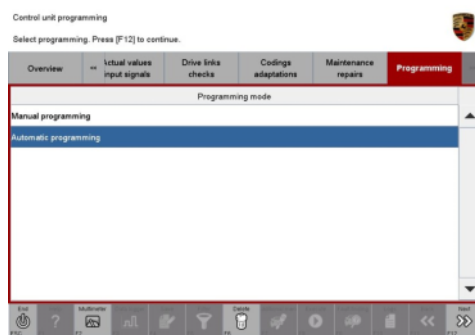
The diagnostic application is then started and the control unit selection screen is populated.

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



Control unit selection - Transmission control

- 3 When the question "Create Vehicle Analysis Log (VAL)?" appears, either press **•F12"** to create a VAL or press **•F11"** if you do not want to create a VAL.
- 4 Press **•>>"** to acknowledge the message informing you that campaigns for the vehicle are stored in the PIWIS information system.
- 5 Once the PDK control unit has been found, select the ⇒ **'Programming'** menu.
- 6 Select the ⇒ **'Automatic programming'** function and press **•>>"** to confirm your selection ⇒ *Automatic programming*.



Automatic programming



Information

Read and follow the **information and instructions on the PIWIS Tester** during the guided programming sequence. Then press •>>“ to continue.

First the **DME** control unit, then the **PDK** control unit and finally the **instrument cluster** is **programmed** with a new data record. Total programming time is **approx. 28 minutes**.

The control units are then **re-coded automatically**.

Do not interrupt programming and coding.

Once the control units have been re-coded, you will be prompted to switch the ignition off and then back on again after approx. 10 seconds.

When programming is complete, the message “Programming was completed successfully” will be displayed.

Once programming is completed successfully (message “Programming was completed successfully”), carry out the work described below.

- If programming is **interrupted** (e.g. due to a voltage drop or if communication is aborted, etc.) or if programming could **not be carried out successfully** (error message “Programming unsuccessful”), programming must be **repeated**.
 - If **coding** is not carried out successfully during the guided programming sequence, the DME and PDK control units as well as the instrument cluster must be **re-coded again separately** once the guided programming sequence is complete. To do this, select the control units “DME”, “Transmission control” and “Instrument cluster” in the control unit selection screen (“Overview” menu) and press •>>“ to confirm your selection. Once the relevant control units have been found, select the “**Codings/adaptations**” menu and re-code the control units using the “**Automatic coding**” function.
- 8 Once the control unit has been programmed and coded successfully, press •>>“ to continue.
 - 9 Select the ⇒ **'Overview'** menu and press •<<“ to return to the control unit selection screen ⇒ *Control unit selection*.

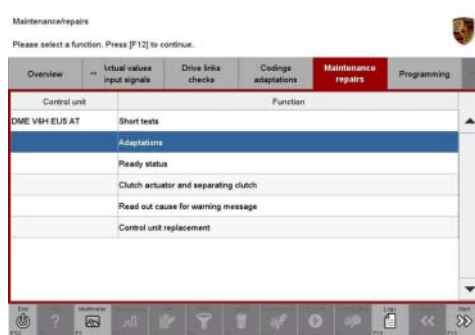


Control unit selection

Performing throttle valve adaptation

Work Procedure: **NOTE: VEHICLE VOLTAGE MUST REMAIN BETWEEN 13.5 AND 14.5 VOLTS DURING THE ENTIRE WORK PROCEDURE.**

- 1 Select the **'DME'** 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 ⇒ *DME - Adaptations*.



DME - Adaptations

- 4 Comply with the displayed preconditions
 - Engine off
 - Ignition on
 - Accelerator pedal not pressed
 - Parking brake on
 and press **•>>** to confirm.
- 5 Select the ⇒ **'Throttle valve'** function so that the corresponding text line turns blue and press **•F8** to start throttle valve adaptation ⇒ *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 on the PIWIS Tester display.

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

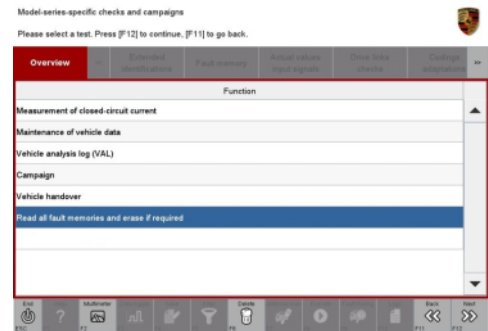
Reading out and erasing fault memories

Work
Procedure:

NOTE: VEHICLE VOLTAGE MUST REMAIN BETWEEN 13.5 AND 14.5 VOLTS DURING THE ENTIRE 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.



Erasing fault memories

- 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.

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



Information

If the fault memories of individual control units (e.g. DME, PDK, etc.) cannot be erased, start the engine briefly and then switch it off again. Wait for approx. 10 seconds before switching the ignition on again and re-establish the connection between the PIWIS Tester and the vehicle. Then read out and erase the fault memories of the affected control units again separately.

If the fault memory entries are still present, proceed as follows:

- Switch off ignition.
- Disconnect the PIWIS Tester diagnostic connector from the diagnostic socket.
- Lock the vehicle using the driver's key.
- Wait for approx. 1 minute before unlocking the vehicle again and then read out the fault memories of the control units again and erase them.

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.

- Once you have erased the fault memories, select the ⇒ **'Overview'** menu and press •<<“ to return to the control unit selection screen ⇒ *Control unit selection*.



Control unit selection

Subsequent work

Work Procedure: **NOTE: VEHICLE VOLTAGE MUST REMAIN BETWEEN 13.5 AND 14.5 VOLTS DURING THE ENTIRE WORK PROCEDURE.**

- Switch off ignition.
- Disconnect the PIWIS Tester from the vehicle.
- On vehicles with Porsche "Entry & Drive", replace the original driver's key in the ignition lock with the control panel again.
- Switch off and disconnect the battery charger.



Information

The values for the Tire Pressure Monitoring (TPM) system may be lost after coding 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 **15 mph (25 km/h)**).

To set the tire type and tire size, see ⇒ 'Tire Pressure Monitoring, TPM' in the "Instrument Cluster and Multi-Function Display" section of the Owner's Manual.

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

Attachment "B"

Claim Submission - Workshop Campaign WD09

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:

Working time:

Re-programming PDK control unit

Labor time: **50 TU**

- Includes:
- Re-programming DME control unit
 - Re-programming instrument cluster
 - Connecting and disconnecting battery charger
 - Connecting and disconnecting PIWIS Tester
 - Performing throttle valve adaptation
 - Reading out and erasing fault memories

⇒ **Damage code WD09 066 000 1**

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