

WA40 - Re-programming DME, PDK and PSM Control Unit (Workshop Campaign)

Vehicle Type: **Panamera S/Panamera 4S/Panamera Turbo**

Model Year: **2010**

Concerns: **DME, PDK and PSM control unit**

Revision 2: July 9, 2012 — WA40A – Programming DME and PDK control unit and WA40B – Programming PSM control unit) **no longer applies**, bulletin was revised accordingly.

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

New data records are available for the DME, PDK and PSM control units.

The new data records will significantly enhance performance in the following driving situations:

- Drive-off performance with Start Stop system activated (“Quickstart”) and engine cold
- Hold function with Start Stop system activated (“Quickstart”)
- Engine running behaviour during warm-up phase after cold start
- Responsiveness during manoeuvring
- Gearshift and acceleration behaviour when cruise control is active
- Gear shifts while coasting
- Gearshift behaviour during load changes while changing gear

Action Required: Re-program the DME and PSM control unit.

In the case of vehicles with Porsche Doppelkupplung (PDK), the PDK control unit also needs to be re-programmed.

The **total time required for programming and coding** is **approx. 20 minutes**.



Information

With PIWIS Tester software version **10.100** (or higher), the programming sequence for this campaign is much easier:

- From now on, the control units are programmed and coded in **one** programming step (**WA40**).
- The previous **division into two programming steps** (WA40A – Programming DME and PDK control unit and WA40B – Programming PSM control unit) **no longer applies**.
- If the control unit causes programming to be aborted, programming will be restarted automatically up to twice.

From now on, please carry out control unit programming using PIWIS Tester software version **10.100** (or higher).

The description in this Technical Information has been changed accordingly.

- Once the PSM control unit has been programmed, the ignition must be switched off and the **fuse for the PSM control unit** (fuse box, left side of dashboard, second row from bottom, slot 41, 10 amp fuse) must be removed and then re-inserted.
- The **fault memories** of all control units must then be **read out and erased** and the DME, PDK (if installed) and PSM control units must be **re-coded** using the “Automatic coding” function.
- Finally, a **throttle valve adaptation** must be performed, as well as an **engine torque loss adaptation** in the case of vehicles with PDK transmission.

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.



Information

This campaign must be carried out even if workshop campaign WA19 has already been carried out on the vehicle.

Tools:

PIWIS Tester II 9818 with **test software version 10.100** (or higher) installed

Battery charger (**current rating of at least 40 A**)

Work
Procedure:

See Attachment “A”.

Claim
Submission:

See Attachment “B”.

Attachment "A": **Work Procedure**

- USA and Canadian Vehicles — Procedure for vehicles with PDK transmission, see ⇒ *Technical Information 'WA4000 Scope 1 - Vehicles with PDK transmission'*
- Only for RoW Vehicles — Procedure for vehicles with 6-speed manual transmission, see ⇒ *Technical Information 'WA4000 Scope 2 - Vehicles with 6-speed manual transmission'*

Scope 1 - Vehicles with PDK transmission

Procedure:

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 with a current rating of at least continuous 40 A to the jump-start terminals in the engine compartment. For further information please refer to Panamera ATI bulletin, Group 9, #1002.**

- 1 Connect a battery charger with a current rating of at least 40 A to the jump-start terminals in the engine compartment.
- 2 Disconnect electric plug connection (⇒ *Figure 1 -item 1-*) for the fan blower (⇒ *Figure 1 -arrow-*) to prevent the blower from coming on during control unit programming. Operation of the fan and the resulting increased current draw can cause a voltage drop, which can cause control unit programming to be aborted.

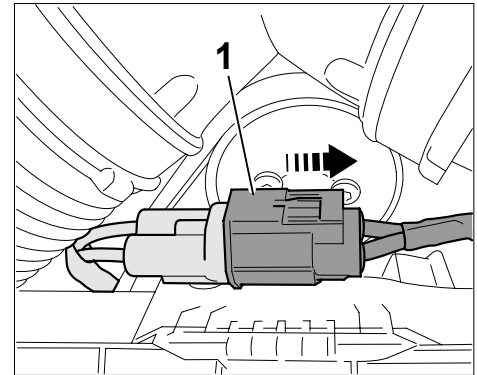


Figure 1

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.**

- 3 PIWIS Tester II 9818 with test software version **10.100** (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.
- 4 Switch on the ignition using the **original vehicle key**.
- 5 Call up the ⇒ 'Diagnostics' menu and select vehicle type ⇒ 'Panamera'.
The diagnostic application starts and the control unit overview screen ('Overview' menu) is displayed.
- 6 **Carry out control unit programming using PIWIS Tester II with test software version 10.100 (or higher) installed.**

**Information**

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.

- 6.1 Press **[F7]** to switch to the ⇒ **'Additional' menu**.
- 6.2 Select the ⇒ **'Campaign'** function and confirm your selection by pressing **[>>]** .
You are then prompted to enter a campaign number.
- 6.3 To enter the campaign number, click in the relevant text box so that the cursor starts to flash.
- 6.4 Enter campaign number **WA40** and confirm your entry by pressing **[Enter]** .
The text box turns blue.
- 6.5 Press **[>>]** to continue.

The names of the control units to be programmed (in this case: PDK, DME and PSM) as well as the data records to be programmed and the Porsche part number and status will be displayed.

**Information**

It is possible that the displayed status will not always be transferred correctly from the control unit to the PIWIS Tester.

As a result, after you have programmed the control unit and re-entered the campaign number, the status "Not current" may appear, for example, when the control unit to be programmed is displayed although programming has already been carried out successfully.

If in doubt, read out and check the program versions of the control units in the ⇒ 'Extended identification' menu.

- **Once the DME control unit** has been programmed, the **index** (last two digits) of the Porsche part number that was read out using the PIWIS Tester in the "Extended identification" menu must be **12** (or higher).
 - **Once the PDK control unit** has been programmed, the **index** (last two digits) of the Porsche part number that was read out using the PIWIS Tester in the "Extended identification" menu must be **25** (or higher).
 - **Once the PSM control unit** has been programmed, the **index** (last two digits) of the Porsche part number that was read out using the PIWIS Tester in the "Extended identification" menu must be **13** (or higher).
- 6.6 Press **[F8]** ("Execute") to start programming.



Information

If programming does not start, the campaign number WA40 must be entered again and programming must be restarted.

For this purpose, repeat Steps 6.3 to 6.6 until programming starts.



Information

If programming does not start and the error message “The actual values for the ... control unit do not correspond” appears in the PIWIS Tester display, the software version of one or more control units may already be up-to-date (Current software versions following programming, see Step 6.5).

If this is not the case and the error message specified above is displayed, the values stored in the vehicle data must be checked and corrected if necessary using the PIWIS Tester as described below.

- Press **<<** to return to the **Additional menu function selection screen**.
- Select the ⇒ **'Maintenance of vehicle data'** function.
- Check that the values for **Model year** and **Product code** shown on the **first menu page** match the actual vehicle data.
- If the values stored for **Model year** and **Product code** are different from the actual vehicle data, these must be corrected.
- Select the value to be corrected (“Value” column). A selection menu appears.
- Select the correct value from the selection menu.
- Press **F8** to save the corrected value.
- Once you have corrected the product code/model year, press **>>** to continue and skip the other menu pages for maintaining vehicle data (“Color and material”, “X numbers”, “M numbers”). No changes are required here.
- Once you have run through all the menus for maintaining vehicle data, press **F8** to save your data.
- Press **<<** to return to the Additional menu function selection screen.
- Restart programming again according to Steps 6.2 to 6.6.

Several bars, showing the progress of the programming process, appear consecutively during programming.

The programming procedure runs completely automatically (programming takes approx 20 minutes in total).

Do not interrupt programming.

**Information**

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"), the **ignition must be switched off** and the **fuse for the PSM control unit** must be removed and then re-inserted as described in Steps 7.1 to 7.1.5.

After the ignition is switched on, programming must be **repeated** by re-entering campaign number **WA40** (additional menu > Campaign >> enter campaign number). It is not possible to program the PSM control unit manually.

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

- 6.7 Once programming is completed successfully, press to continue.
- 6.8 Press to return to the control unit overview ('Overview' menu).

7 Concluding work**7.1 Remove the fuse for the PSM control unit, then re-insert it.****Information**

The fuse for the PSM control unit must always be removed after

- the PSM control unit has been programmed successfully
- or
- if programming is interrupted

7.1.1 Switch off the ignition.

7.1.2 Remove the cover of the fuse box on the left of the dashboard. Carefully lever off the cover with a screwdriver and remove it.

7.1.3 Carefully remove the fuse (10 amp) for the PSM control unit (second row from the bottom, slot 41) with the plastic clip.

7.1.4 Re-insert the fuse for the PSM control unit in its slot.

7.1.5 Install the cover for the fuse box on the left of the dashboard.

7.2 Plug in electric plug connection for the fan blower.

7.3 Read out and erase fault memory.

7.3.1 Switch on ignition and restore the connection between the PIWIS Tester and the vehicle.

7.3.2 Call up the control unit overview ('Overview' menu).

7.3.3 Press to start the control unit search.

7.3.4 After the control unit search is complete, press **[F8]** to select all control units with fault memory entries.

The control units with fault memory entries are highlighted in blue.

7.3.5 Select the ⇒ **'Fault memory'** menu.

The fault memories of the various control units are read out.

7.3.6 Press **[F8]** to delete fault memory entries.

7.3.7 Confirm with **[F12]** ("Yes") that you wish to delete all fault codes.

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

If the fault memories of individual control units (e.g. DME, PDK) cannot be erased, switch the ignition off and then on again and erase the fault memories of these control units 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 located and corrected. This work **cannot** be invoiced under the workshop campaign number.

7.3.8 Once you have erased the fault memories, select ⇒ **'Overview'** to return to the control unit overview.

7.3.9 Press **[F6]** ("Delete") to undo the control unit selection (blue marking).

7.4 Perform throttle valve adaptation using the PIWIS Tester.

7.4.1 Select the control unit **'DME'** in the control unit overview screen ('Overview' menu) and select the ⇒ **'Maintenance/repairs'** menu.

7.4.2 Select menu item ⇒ **'Adaptations'** and confirm by pressing **[>>]**.

7.4.3 Note the preconditions displayed (engine off, ignition on, do not press the accelerator pedal) and confirm with **[>>]**.

7.4.4 Select the ⇒ **'Throttle valve adaptation'** function and confirm your selection by pressing **[>>]**.

7.4.5 Follow the instructions of the PIWIS Tester to carry out the throttle valve adaptation. Confirm the instructions by pressing **[>>]**.

Once throttle valve adaptation is complete, the message "Throttle valve adaptation was successful" appears on the PIWIS Tester display.

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

7.4.6 After successful throttle valve adaptation, press **[<<]** to return to the control unit overview ('Overview' menu).



WARNING

Exhaust gases

- **Risk of Carbon Monoxide (CO) Poisoning**
- ⇒ **Before starting the engine, position an exhaust extraction system behind the vehicle's exhaust pipes and switch it on.**

7.5 Perform engine torque loss adaptation.

To obtain the engine temperature required for engine torque loss adaptation 176° F(80 °C), leave the engine running in selector lever position "P" until the required temperature is reached.

Conditions/procedure for engine torque loss adaptation:

- Engine temperature is at least 176° F (80° C) (the engine temperature can be read out in the "Actual values" menu using the PIWIS Tester).
- Position steering wheel straight ahead.
- PDK selector lever in position P.
- Allow engine to run at idle speed for 3 minutes with air conditioning switched off.
- Then allow engine to run at idle speed for 3 minutes with air conditioning switched on (normal load)

7.6 Disconnect the PIWIS Tester from the vehicle.

7.7 Switch off the ignition.

7.8 Switch off and disconnect the battery charger.

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

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

Attachment "B": **Claim Submission** - Workshop Campaign WA40

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.

Working Time:

Re-programming DME, PDK and PSM control units

Labor time: **70 TU**

Includes:

- Connecting and disconnecting the battery charger
- Connecting and disconnecting the PIWIS Tester
- Disconnecting and connecting electric plug connection for the fan blower
- Removing and re-inserting fuse for the PSM control unit
- Reading out and erasing fault memories
- Coding the DME, PDK and PSM control units
- Performing throttle valve adaptation

Performing engine torque loss adaptation

⇒ **Damage code WA40 066 000 1**

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